

StdAir

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## 1 StdAir Documentation

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- [Installation](#)
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- [Users Guide](#)
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### 1.2 StdAir at SourceForge

- [Project page](#)
- [Download StdAir](#)
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### 1.3 StdAir Development

- [Git Repository](#) (Subversion is deprecated)
- [Coding Rules](#)
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### 1.4 External Libraries

- [Boost](#) (C++ STL extensions)
- [ZeroMQ](#) (networking made easy)
- [Python](#)
- [MySQL client](#)
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### 1.5 Support StdAir

### 1.6 About StdAir

StdAir is a C++ library of classes and functions modeling typical airline IT business objects. For instance, it is used by the C++ Revenue Management Open Library project (<http://sourceforge.net/projects/rmol/>). StdAir mainly targets simulation purposes. [N](#)

StdAir makes an extensive use of existing open-source libraries for increased functionality, speed and accuracy. In particular [Boost](#) (*C++ STL Extensions*) library is used.

The StdAir library originates from the department of Operational Research and Innovation at [Amadeus](#), Sophia Antipolis, France. StdAir is released under the terms of the [GNU Lesser General Public License](#) (LGPLv2.1) for you to enjoy.

StdAir should work on [GNU/Linux](#), [Sun Solaris](#), Microsoft Windows (with [Cygwin](#), [MinGW/MSYS](#), or [Microsoft Visual C++ .NET](#)) and [Mac OS X](#) operating systems.

#### Note

(N) - The StdAir library is **NOT** intended, in any way, to be used by airlines for production systems. If you want to report issue, bug or feature request, or if you just want to give feedback, have a look on the right-hand side of this page for the preferred reporting methods. In any case, please do not contact Amadeus directly for any matter related to StdAir.

## 2 C++ Utility Class Browsing and Dumping the StdAir BOM Tree

```

*/
// ////////////////////////////////////////
// Import section
// ////////////////////////////////////////
// STL
#include <cassert>
#include <ostream>
// StdAir
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/FareFeatures.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
#include <stdair/bom/Bucket.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/OnDDate.hpp>

namespace stdair {

    struct FlagSaver {
    public:
        FlagSaver (std::ostream& oStream)
            : _oStream (oStream), _streamFlags (oStream.flags()) {
        }

        ~FlagSaver() {
            // Reset formatting flags of the given output stream
            _oStream.flags (_streamFlags);
        }

    private:
        std::ostream& _oStream;
        std::ios::fmtflags _streamFlags;
    };

    // ////////////////////////////////////////
    std::string BomDisplay::csvDisplay (const EventQueue& iEventQueue) {
        std::ostringstream oStream;

        oStream << std::endl;
        oStream << "=====
            << std::endl;
        oStream << "EventQueue: " << iEventQueue.describeKey() << std::endl;
        oStream << "=====

```

```

        << std::endl;

    return oStream.str();
}

// ////////////////////////////////////////
void BomDisplay::list (std::ostream& oStream, const BomRoot& iBomRoot,
                     const AirlineCode_T& iAirlineCode,
                     const FlightNumber_T& iFlightNumber) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Check whether there are Inventory objects
    if (BomManager::hasList<Inventory> (iBomRoot) == false) {
        return;
    }

    // Browse the inventories
    unsigned short invIdx = 1;
    const InventoryList_T& lInventoryList =
        BomManager::getList<Inventory> (iBomRoot);
    for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
         itInv != lInventoryList.end(); ++itInv, ++invIdx) {
        const Inventory* lInv_ptr = *itInv;
        assert (lInv_ptr != NULL);

        // Retrieve the inventory key (airline code)
        const AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();

        // Display only the requested inventories
        if (iAirlineCode == "all" || iAirlineCode == lAirlineCode) {
            // Get the list of flight-dates for that inventory
            list (oStream, *lInv_ptr, invIdx, iFlightNumber);
        }
    }
}

// ////////////////////////////////////////
void BomDisplay::list (std::ostream& oStream, const Inventory& iInventory,
                     const unsigned short iInventoryIndex,
                     const FlightNumber_T& iFlightNumber) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Check whether there are FlightDate objects
    if (BomManager::hasMap<FlightDate> (iInventory) == false) {
        return;
    }

    //
    const AirlineCode_T& lAirlineCode = iInventory.getAirlineCode();
    oStream << iInventoryIndex << ". " << lAirlineCode << std::endl;

    // Browse the flight-dates
    unsigned short lCurrentFlightNumber = 0;
    unsigned short flightNumberIdx = 0;
    unsigned short departureDateIdx = 1;
    const FlightDateMap_T& lFlightDateList =
        BomManager::getMap<FlightDate> (iInventory);
    for (FlightDateMap_T::const_iterator itFD = lFlightDateList.begin();
         itFD != lFlightDateList.end(); ++itFD, ++departureDateIdx) {
        const FlightDate* lFD_ptr = itFD->second;

```

```

    assert (lFD_ptr != NULL);

    // Retrieve the key of the flight-date
    const FlightNumber_T& lFlightNumber = lFD_ptr->getFlightNumber();
    const Date_T& lFlightDateDate = lFD_ptr->getDepartureDate();

    // Display only the requested flight number
    if (iFlightNumber == 0 || iFlightNumber == lFlightNumber) {
        //
        if (lCurrentFlightNumber != lFlightNumber) {
            lCurrentFlightNumber = lFlightNumber;
            ++flightNumberIdx; departureDateIdx = 1;
            oStream << " " << iInventoryIndex << "." << flightNumberIdx << ". "
                << lAirlineCode << lFlightNumber << std::endl;
        }

        oStream << " " << iInventoryIndex << "." << flightNumberIdx
            << "." << departureDateIdx << ". "
            << lAirlineCode << lFlightNumber << " / " << lFlightDateDate
            << std::endl;
    }
}

// ////////////////////////////////////////
void BomDisplay::listAirportPairDateRange (std::ostream& oStream,
                                           const BomRoot& iBomRoot) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Check whether there are AirportPair objects
    if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
        return;
    }

    const AirportPairList_T& lAirportPairList =
        BomManager::getList<AirportPair> (iBomRoot);
    for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
         itAir != lAirportPairList.end(); ++itAir) {
        const AirportPair* lAir_ptr = *itAir;
        assert (lAir_ptr != NULL);

        // Check whether there are date-period objects
        assert (BomManager::hasList<DatePeriod> (*lAir_ptr) == true);

        // Browse the date-period objects
        const DatePeriodList_T& lDatePeriodList =
            BomManager::getList<DatePeriod> (*lAir_ptr);

        for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
             itDP != lDatePeriodList.end(); ++itDP) {
            const DatePeriod* lDP_ptr = *itDP;
            assert (lDP_ptr != NULL);

            // Display the date-period object
            oStream << lAir_ptr->describeKey()
                << " / " << lDP_ptr->describeKey() << std::endl;
        }
    }
}

```

```

// //////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
                           const BomRoot& iBomRoot) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << std::endl;
    oStream << "====="
              << std::endl;
    oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
    oStream << "====="
              << std::endl;

    // Check whether there are Inventory objects
    if (BomManager::hasList<Inventory> (iBomRoot) == false) {
        return;
    }

    // Browse the inventories
    const InventoryList_T& lInventoryList =
        BomManager::getList<Inventory> (iBomRoot);
    for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
         itInv != lInventoryList.end(); ++itInv) {
        const Inventory* lInv_ptr = *itInv;
        assert (lInv_ptr != NULL);

        // Display the inventory
        csvDisplay (oStream, *lInv_ptr);
    }
}

// //////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
                           const Inventory& iInventory) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "+++++" << std::endl;
    oStream << "Inventory: " << iInventory.describeKey() << std::endl;
    oStream << "+++++" << std::endl;

    // Check whether there are FlightDate objects
    if (BomManager::hasList<FlightDate> (iInventory) == false) {
        return;
    }

    // Browse the flight-dates
    const FlightDateList_T& lFlightDateList =
        BomManager::getList<FlightDate> (iInventory);
    for (FlightDateList_T::const_iterator itFD = lFlightDateList.begin();
         itFD != lFlightDateList.end(); ++itFD) {
        const FlightDate* lFD_ptr = *itFD;
        assert (lFD_ptr != NULL);

        // Display the flight-date
        csvDisplay (oStream, *lFD_ptr);
    }

    // Check if the inventory contains a list of partners

    if (BomManager::hasList<Inventory> (iInventory)){

```

```

// Browse the partner's inventories
const InventoryList_T& lPartnerInventoryList =
    BomManager::getList<Inventory> (iInventory);

for (InventoryList_T::const_iterator itInv = lPartnerInventoryList.begin();
     itInv != lPartnerInventoryList.end(); ++itInv) {

    oStream << "-----" << std::endl;
    oStream << "Partner inventory:" << std::endl;
    oStream << "-----" << std::endl;
    const Inventory* lInv_ptr = *itInv;
    assert (lInv_ptr != NULL);

    // Display the inventory
    csvDisplay (oStream, *lInv_ptr);
}
oStream << "*****" << std::endl;
oStream << std::endl;
}

// Check if the inventory contains a list of O&D dates
if (BomManager::hasList<OnDDate> (iInventory)){

    //Browse the O&Ds
    const OnDDateList_T& lOnDDateList =
        BomManager::getList<OnDDate> (iInventory);

    for (OnDDateList_T::const_iterator itOnD = lOnDDateList.begin();
         itOnD != lOnDDateList.end(); ++itOnD) {
        oStream << "*****" << std::endl;
        oStream << "O&D-Date:" << std::endl;
        oStream << "-----" << std::endl;
        oStream << "Airline, Date, Origin-Destination, Segments, " << std::endl;

        const OnDDate* lOnDDate_ptr = *itOnD;
        assert (lOnDDate_ptr != NULL);

        // Display the O&D date
        csvDisplay (oStream, *lOnDDate_ptr);
    }
    oStream << "*****" << std::endl;
}

// //////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
                             const OnDDate& iOnDDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    const AirlineCode_T& lAirlineCode = iOnDDate.getAirlineCode();
    const Date_T& lDate = iOnDDate.getDate();
    const AirportCode_T& lOrigin = iOnDDate.getOrigin();
    const AirportCode_T& lDestination = iOnDDate.getDestination();

    oStream << lAirlineCode << ", " << lDate << ", " << lOrigin << "-"
        << lDestination << ", " << iOnDDate.describeKey() << ", "
        << std::endl;
}

```

```

const StringDemandStructMap_T& lDemandInfoMap =
    iOnDDate.getDemandInfoMap();

// Check if the map contains information.
const bool isInfoMapEmpty = lDemandInfoMap.empty();
if (isInfoMapEmpty) {
    return;
}
assert (lDemandInfoMap.empty() ==false);

oStream << "-----" << std::endl;
oStream << "Cabin-Class path, Demand mean, Demand std dev, Yield, "
    << std::endl;

for (StringDemandStructMap_T::const_iterator itDI = lDemandInfoMap.begin();
    itDI != lDemandInfoMap.end(); ++itDI) {

    const std::string& lCabinClassPath = itDI->first;
    const YieldDemandPair_T lYieldDemandPair =
        itDI->second;
    const Yield_T lYield = lYieldDemandPair.first;
    const MeanStdDevPair_T lMeanStdDevPair =
        lYieldDemandPair.second;
    const MeanValue_T lDemandMean = lMeanStdDevPair.first;
    const StdDevValue_T lDemandStdDev = lMeanStdDevPair.second;

    oStream << lCabinClassPath << ", "
        << lDemandMean << ", "
        << lDemandStdDev << ", "
        << lYield << ", "
        << std::endl;
}

}

// ////////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,
    const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    oStream << "*****" << std::endl;
    oStream << "FlightDate: " << lAirlineCode << iFlightDate.describeKey()
        << std::endl;
    oStream << "*****" << std::endl;

    //
    csvSegmentDateDisplay (oStream, iFlightDate);
    //
    csvLegDateDisplay (oStream, iFlightDate);

    //
    csvLegCabinDisplay (oStream, iFlightDate);

    //
    csvBucketDisplay (oStream, iFlightDate);

    //
    csvFareFamilyDisplay (oStream, iFlightDate);

```



```

    //
    csvBookingClassDisplay (oStream, iFlightDate);
}

// //////////////////////////////////////
void BomDisplay::csvLegDateDisplay (std::ostream& oStream,
                                   const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "*****" << std::endl;
    oStream << "Leg-Dates:" << std::endl
    << "-----" << std::endl;
    oStream << "Flight, Leg, BoardDate, BoardTime, "
    << "OffDate, OffTime, Date Offset, Time Offset, Elapsed, "
    << "Distance, Capacity, " << std::endl;

    // Retrieve the key of the flight-date
    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
    const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

    // Check whether there are LegDate objects
    if (BomManager::hasList<LegDate> (iFlightDate) == false) {
        return;
    }

    // Browse the leg-dates
    const LegDateList_T& lLegDateList =
        BomManager::getList<LegDate> (iFlightDate);
    for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
         itLD != lLegDateList.end(); ++itLD) {
        const LegDate* lLD_ptr = *itLD;
        assert (lLD_ptr != NULL);

        oStream << lAirlineCode << lFlightNumber << " "
        << lFlightDateDate << ", ";

        oStream << lLD_ptr->getBoardingPoint() << "-"
        << lLD_ptr->getOffPoint() << ", "
        << lLD_ptr->getBoardingDate() << ", "
        << lLD_ptr->getBoardingTime() << ", "
        << lLD_ptr->getOffDate() << ", "
        << lLD_ptr->getOffTime() << ", "
        << lLD_ptr->getElapsedTime() << ", "
        << lLD_ptr->getDateOffset().days() << ", "
        << lLD_ptr->getTimeOffset() << ", "
        << lLD_ptr->getDistance() << ", "
        << lLD_ptr->getCapacity() << ", " << std::endl;
    }
    oStream << "*****" << std::endl;
}

// //////////////////////////////////////
void BomDisplay::csvSegmentDateDisplay (std::ostream& oStream,
                                        const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "*****" << std::endl;
    oStream << "SegmentDates:" << std::endl
    << "-----" << std::endl;

```

```

oStream << "Flight, Segment, Date"
        << std::endl;

// Retrieve the key of the flight-date
const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

// Check whether there are SegmentDate objects
if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
    return;
}

// Browse the segment-dates
const SegmentDateList_T& lSegmentDateList =
    BomManager::getList<SegmentDate> (iFlightDate);
for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
     itSD != lSegmentDateList.end(); ++itSD) {
    const SegmentDate* lSD_ptr = *itSD;
    assert (lSD_ptr != NULL);

    // Retrieve the key of the segment-date, as well as its dates
    const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
    const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
    const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
    oStream << lAirlineCode << lFlightNumber << " " << lFlightDateDate << ", "
            << lBoardPoint << "-" << lOffPoint << ", " << lSegmentDateDate << s
td::endl;

    // Check if the current segment has corresponding marketing segments.
    const bool isMarketingSDListEmpty = BomManager::hasList<SegmentDate>(*lSD_ptr);
    if (isMarketingSDListEmpty == false) {
        //
        const SegmentDateList_T& lMarketingSDList = BomManager::getList<SegmentDate>(*lSD_ptr);

        oStream << " *** Marketed by ";
        for (SegmentDateList_T::const_iterator itMarketingSD = lMarketingSDList.begin();
             itMarketingSD != lMarketingSDList.end(); ++itMarketingSD) {
            SegmentDate* lMarketingSD_ptr = *itMarketingSD;
            FlightDate* lMarketingFD_ptr = BomManager::getParentPtr<FlightDate>(*lMarketingSD_ptr);
            Inventory* lMarketingInv_ptr = BomManager::getParentPtr<Inventory>(*lMarketingFD_ptr);
            oStream << lMarketingInv_ptr->toString() << lMarketingFD_ptr->toString()
                << " * ";
        }

        // Check if the current segment is operated by another segment date.
        const SegmentDate* lOperatingSD_ptr = lSD_ptr->getOperatingSegmentDate ();
        if (lOperatingSD_ptr != NULL) {
            const FlightDate* lOperatingFD_ptr = BomManager::getParentPtr<FlightDate>(*lOperatingSD_ptr);
            const Inventory* lOperatingInv_ptr = BomManager::getParentPtr<Inventory>(*lOperatingFD_ptr);
            oStream << " *** Operated by " << lOperatingInv_ptr->toString()
                << lOperatingFD_ptr->toString() << std::endl;
        }
    }
}

```

```

        oStream << std::endl;
    }
}

// ////////////////////////////////////////
void BomDisplay::csvLegCabinDisplay (std::ostream& oStream,
                                     const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "*****" << std::endl;
    oStream << "LegCabins:" << std::endl
              << "-----" << std::endl;
    oStream << "Flight, Leg, Cabin, "
              << "OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, "
              << "CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice, "
              << std::endl;

    // Retrieve the key of the flight-date
    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
    const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

    // Check whether there are LegDate objects
    if (BomManager::hasList<LegDate> (iFlightDate) == false) {
        return;
    }

    // Browse the leg-dates
    const LegDateList_T& lLegDateList =
        BomManager::getList<LegDate> (iFlightDate);
    for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
         itLD != lLegDateList.end(); ++itLD) {
        const LegDate* lLD_ptr = *itLD;
        assert (lLD_ptr != NULL);

        // Retrieve the key of the leg-date, as well as its off point
        const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
        const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
        const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();

        // Browse the leg-cabins
        const LegCabinList_T& lLegCabinList =
            BomManager::getList<LegCabin> (*lLD_ptr);
        for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
             itLC != lLegCabinList.end(); ++itLC) {
            const LegCabin* lLC_ptr = *itLC;
            assert (lLC_ptr != NULL);

            oStream << lAirlineCode << lFlightNumber << " "
                    << lFlightDateDate << ", ";

            oStream << lBoardPoint << "-" << lOffPoint
                    << " " << lLegDateDate << ", ";

            oStream << lLC_ptr->getCabinCode() << ", ";

            oStream << lLC_ptr->getOfferedCapacity() << ", "
                    << lLC_ptr->getPhysicalCapacity() << ", "
                    << lLC_ptr->getRegradeAdjustment() << ", "
                    << lLC_ptr->getAuthorizationLevel() << ", "

```

```

        << lLC_ptr->getUPR() << ", "
        << lLC_ptr->getSoldSeat() << ", "
        << lLC_ptr->getStaffNbOfSeats() << ", "
        << lLC_ptr->getWLNbOfSeats() << ", "
        << lLC_ptr->getGroupNbOfSeats() << ", "
        << lLC_ptr->getCommittedSpace() << ", "
        << lLC_ptr->getAvailabilityPool() << ", "
        << lLC_ptr->getAvailability() << ", "
        << lLC_ptr->getNetAvailability() << ", "
        << lLC_ptr->getGrossAvailability() << ", "
        << lLC_ptr->getAvgCancellationPercentage() << ", "
        << lLC_ptr->getETB() << ", "
        << lLC_ptr->getCurrentBidPrice() << ", "
        << std::endl;
    }
}
oStream << "*****" << std::endl;
}

// ////////////////////////////////////////
void BomDisplay::csvSegmentCabinDisplay (std::ostream& oStream,
                                         const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

}

// ////////////////////////////////////////
void BomDisplay::csvFareFamilyDisplay (std::ostream& oStream,
                                       const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "*****" << std::endl;
    oStream << "SegmentCabins:" << std::endl
        << "-----" << std::endl;
    oStream << "Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, "
        << "CommSpace, AvPool, BP, " << std::endl;

    // Retrieve the key of the flight-date
    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
    const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

    // Check whether there are SegmentDate objects
    if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
        return;
    }

    // Browse the segment-dates
    const SegmentDateList_T& lSegmentDateList =
        BomManager::getList<SegmentDate> (iFlightDate);
    for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
         itSD != lSegmentDateList.end(); ++itSD) {
        const SegmentDate* lSD_ptr = *itSD;
        assert (lSD_ptr != NULL);

        // Retrieve the key of the segment-date, as well as its dates
        const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
        const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
        const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();

```

```

// Browse the segment-cabins
const SegmentCabinList_T& lSegmentCabinList =
    BomManager::getList<SegmentCabin> (*lSD_ptr);
for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
     itSC != lSegmentCabinList.end(); ++itSC) {
    const SegmentCabin* lSC_ptr = *itSC;
    assert (lSC_ptr != NULL);

    // Retrieve the key of the segment-cabin
    const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();

    // Check whether there are fare family objects
    if (BomManager::hasList<FareFamily> (*lSC_ptr) == false) {
        continue;
    }

    // Browse the fare families
    const FareFamilyList_T& lFareFamilyList =
        BomManager::getList<FareFamily> (*lSC_ptr);
    for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
         itFF != lFareFamilyList.end(); ++itFF) {
        const FareFamily* lFF_ptr = *itFF;
        assert (lFF_ptr != NULL);

        ostream << lAirlineCode << lFlightNumber << " "
                  << lFlightDateDate << ", ";

        ostream << lBoardPoint << "-" << lOffPoint << " "
                  << lSegmentDateDate << ", ";

        ostream << lCabinCode << ", " << lFF_ptr->getFamilyCode() << ", ";

        ostream << lSC_ptr->getBookingCounter() << ", "
                  << lSC_ptr->getMIN() << ", "
                  << lSC_ptr->getUPR() << ", "
                  << lSC_ptr->getCommittedSpace() << ", "
                  << lSC_ptr->getAvailabilityPool() << ", "
                  << lSC_ptr->getCurrentBidPrice() << ", "
                  << std::endl;
    }
}
ostream << "*****" << std::endl;
}

// ////////////////////////////////////////
void BomDisplay::csvBucketDisplay (std::ostream& ostream,
                                   const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (ostream);

    ostream << "*****" << std::endl;
    ostream << "Buckets:" << std::endl;
    ostream << "-----" << std::endl;
    ostream << "Flight, Leg, Cabin, Yield, AU/SI, SS, AV, "
              << std::endl;

    // Retrieve the key of the flight-date
    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
    const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

```

```

// Check whether there are LegDate objects
if (BomManager::hasList<LegDate> (iFlightDate) == false) {
    return;
}

// Browse the leg-dates
const LegDateList_T& lLegDateList =
    BomManager::getList<LegDate> (iFlightDate);
for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
     itLD != lLegDateList.end(); ++itLD) {
    const LegDate* lLD_ptr = *itLD;
    assert (lLD_ptr != NULL);

    // Retrieve the key of the leg-date, as well as its off point
    const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
    const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
    const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();

    // Browse the leg-cabins
    const LegCabinList_T& lLegCabinList =
        BomManager::getList<LegCabin> (*lLD_ptr);
    for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
         itLC != lLegCabinList.end(); ++itLC) {
        const LegCabin* lLC_ptr = *itLC;
        assert (lLC_ptr != NULL);

        // Check whether there are bucket objects
        if (BomManager::hasList<Bucket> (*lLC_ptr) == false) {
            continue;
        }

        // Retrieve the key of the leg-cabin
        const CabinCode_T& lCabinCode = lLC_ptr->getCabinCode();

        // Browse the buckets
        const BucketList_T& lBucketList = BomManager::getList<Bucket> (*lLC_ptr);

        for (BucketList_T::const_iterator itBuck = lBucketList.begin();
             itBuck != lBucketList.end(); ++itBuck) {
            const Bucket* lBucket_ptr = *itBuck;
            assert (lBucket_ptr != NULL);

            ostream << lAirlineCode << lFlightNumber << " "
                << lFlightDateDate << ", ";

            ostream << lBoardPoint << "-" << lOffPoint << " "
                << lLegDateDate << ", " << lCabinCode << ", ";

            ostream << lBucket_ptr->getYieldRangeUpperValue() << ", "
                << lBucket_ptr->getSeatIndex() << ", "
                << lBucket_ptr->getSoldSeats() << ", "
                << lBucket_ptr->getAvailability() << ", ";
            ostream << std::endl;
        }
    }
}
ostream << "*****" << std::endl;
}

// //////////////////////////////////////
void BomDisplay::csvBookingClassDisplay (std::ostream& ostream,
                                         const BookingClass& iBookingClass,

```

```

        const std::string& iLeadingString) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << iLeadingString << iBookingClass.getClassCode();

    if (iBookingClass.getSubclassCode() == 0) {
        oStream << ", ";
    } else {
        oStream << iBookingClass.getSubclassCode() << ", ";
    }
    oStream << iBookingClass.getAuthorizationLevel() << " ("
        << iBookingClass.getProtection() << "), "
        << iBookingClass.getNegotiatedSpace() << ", "
        << iBookingClass.getNoShowPercentage() << ", "
        << iBookingClass.getCancellationPercentage() << ", "
        << iBookingClass.getNbOfBookings() << ", "
        << iBookingClass.getNbOfGroupBookings() << " ("
        << iBookingClass.getNbOfPendingGroupBookings() << "), "
        << iBookingClass.getNbOfStaffBookings() << ", "
        << iBookingClass.getNbOfWLBookings() << ", "
        << iBookingClass.getETB() << ", "
        << iBookingClass.getNetClassAvailability() << ", "
        << iBookingClass.getNetRevenueAvailability() << ", "
        << iBookingClass.getSegmentAvailability() << ", "
        << std::endl;
}

// ////////////////////////////////////////
void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
        const FlightDate& iFlightDate) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Headers
    oStream << "*****" << std::endl;
    oStream << "Subclasses:" << std::endl
        << "-----" << std::endl;
    oStream << "Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), "
        << "Negotiated Space, "
        << "Bkgs, GrpBks (pdg), StfBkgs, WLBookings, ETB, "
        << "ClassAvl, RevAvl, SegAvl, "
        << std::endl;

    // Retrieve the key of the flight-date
    const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
    const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
    const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();

    // Check whether there are SegmentDate objects
    if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
        return;
    }

    // Browse the segment-dates
    const SegmentDateList_T& lSegmentDateList =
        BomManager::getList<SegmentDate> (iFlightDate);
    for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
        itSD != lSegmentDateList.end(); ++itSD) {
        const SegmentDate* lSD_ptr = *itSD;
        assert (lSD_ptr != NULL);
    }
}

```

```

// Retrieve the key of the segment-date, as well as its dates
const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();

// Browse the segment-cabins
const SegmentCabinList_T& lSegmentCabinList =
    BomManager::getList<SegmentCabin> (*lSD_ptr);
for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
     itSC != lSegmentCabinList.end(); ++itSC) {
    const SegmentCabin* lSC_ptr = *itSC;
    assert (lSC_ptr != NULL);

    // Retrieve the key of the segment-cabin
    const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();

    // Build the leading string to be displayed
    std::ostringstream oSCLeadingStr;
    oSCLeadingStr << lAirlineCode << lFlightNumber << " "
        << lFlightDateDate << ", "
        << lBoardPoint << "-" << lOffPoint << " "
        << lSegmentDateDate << ", "
        << lCabinCode << ", ";

    // Default Fare Family code, when there are no FF
    FamilyCode_T lFamilyCode ("NoFF");

    // Check whether there are FareFamily objects
    if (BomManager::hasList<FareFamily> (*lSC_ptr) == true) {

        // Browse the fare families
        const FareFamilyList_T& lFareFamilyList =
            BomManager::getList<FareFamily> (*lSC_ptr);
        for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
             itFF != lFareFamilyList.end(); ++itFF) {
            const FareFamily* lFF_ptr = *itFF;
            assert (lFF_ptr != NULL);

            // Retrieve the key of the segment-cabin
            lFamilyCode = lFF_ptr->getFamilyCode();

            // Complete the leading string to be displayed
            std::ostringstream oFFLeadingStr;
            oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";

            // Browse the booking-classes
            const BookingClassList_T& lBookingClassList =
                BomManager::getList<BookingClass> (*lFF_ptr);
            for (BookingClassList_T::const_iterator itBC =
                 lBookingClassList.begin();
                 itBC != lBookingClassList.end(); ++itBC) {
                const BookingClass* lBC_ptr = *itBC;
                assert (lBC_ptr != NULL);

                //
                csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
            }
        }

        // Go on to the next segment-cabin
        continue;
    }
}

```



```

    assert (BomManager::hasList<FareFamily> (*lSC_ptr) == false);

    // The fare family code is a fake one ('NoFF'), and therefore
    // does not vary
    std::ostringstream oFFLeadingStr;
    oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";

    // Browse the booking-classes, directly from the segment-cabin object
    const BookingClassList_T& lBookingClassList =
        BomManager::getList<BookingClass> (*lSC_ptr);
    for (BookingClassList_T::const_iterator itBC =
        lBookingClassList.begin();
        itBC != lBookingClassList.end(); ++itBC) {
        const BookingClass* lBC_ptr = *itBC;
        assert (lBC_ptr != NULL);

        //
        csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
    }
}
}
oStream << "*****" << std::endl;
}

// ////////////////////////////////////////
void BomDisplay::
csvDisplay (std::ostream& oStream,
            const TravelSolutionList_T& iTravelSolutionList) {

    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "Travel solutions:";
    unsigned short idx = 0;
    for (TravelSolutionList_T::const_iterator itTS =
        iTravelSolutionList.begin();
        itTS != iTravelSolutionList.end(); ++itTS, ++idx) {
        const TravelSolutionStruct& lTS = *itTS;

        oStream << std::endl;
        oStream << "    [" << idx << "] " << lTS.display();
    }
}

// ////////////////////////////////////////
void BomDisplay::
csvDisplay (std::ostream& oStream,
            const DatePeriodList_T& iDatePeriodList) {

    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Browse the date-period objects
    for (DatePeriodList_T::const_iterator itDP = iDatePeriodList.begin();
        itDP != iDatePeriodList.end(); ++itDP) {
        const DatePeriod* lDP_ptr = *itDP;
        assert (lDP_ptr != NULL);

        // Display the date-period object
        csvDateDisplay (oStream, *lDP_ptr);
    }
}
}

```

```

// //////////////////////////////////////
void BomDisplay::csvSimFQTAirRACDisplay (std::ostream& oStream,
                                         const BomRoot& iBomRoot) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << std::endl;
    oStream << "=====
    << std::endl;
    oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
    oStream << "=====
    << std::endl;

    // Check whether there are airport-pair objects
    if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
        return;
    }

    // Browse the airport-pair objects
    const AirportPairList_T& lAirportPairList =
        BomManager::getList<AirportPair> (iBomRoot);
    for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
         itAir != lAirportPairList.end(); ++itAir) {
        const AirportPair* lAir_ptr = *itAir;
        assert (lAir_ptr != NULL);

        // Display the airport pair object
        csvAirportPairDisplay (oStream, *lAir_ptr);
    }
}

// //////////////////////////////////////
void BomDisplay::csvAirportPairDisplay (std::ostream& oStream,
                                         const AirportPair& iAirportPair) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "+++++" << std::endl;
    oStream << "AirportPair: " << iAirportPair.describeKey() << std::endl;
    oStream << "+++++" << std::endl;

    // Check whether there are date-period objects
    if (BomManager::hasList<DatePeriod> (iAirportPair) == false) {
        return;
    }

    // Browse the date-period objects
    const DatePeriodList_T& lDatePeriodList =
        BomManager::getList<DatePeriod> (iAirportPair);
    for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
         itDP != lDatePeriodList.end(); ++itDP) {
        const DatePeriod* lDP_ptr = *itDP;
        assert (lDP_ptr != NULL);

        // Display the date-period object
        csvDateDisplay (oStream, *lDP_ptr);
    }
}

// //////////////////////////////////////
void BomDisplay::csvDateDisplay (std::ostream& oStream,

```

```

        const DatePeriod& iDatePeriod) {

    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "-----" << std::endl;
    oStream << "DatePeriod: " << iDatePeriod.describeKey() << std::endl;
    oStream << "-----" << std::endl;

    // Check whether there are pos-channel objects
    if (BomManager::hasList<PosChannel> (iDatePeriod) == false) {
        return;
    }

    // Browse the pos-channel objects
    const PosChannelList_T& lPosChannelList =
        BomManager::getList<PosChannel> (iDatePeriod);
    for (PosChannelList_T::const_iterator itPC = lPosChannelList.begin();
        itPC != lPosChannelList.end(); ++itPC) {
        const PosChannel* lPC_ptr = *itPC;
        assert (lPC_ptr != NULL);

        // Display the pos-channel object
        csvPosChannelDisplay (oStream, *lPC_ptr);
    }
}

// ////////////////////////////////////////
void BomDisplay::csvPosChannelDisplay (std::ostream& oStream,
        const PosChannel& iPosChannel) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "*****" << std::endl;
    oStream << "PosChannel: " << iPosChannel.describeKey() << std::endl;
    oStream << "*****" << std::endl;

    // Check whether there are time-period objects
    if (BomManager::hasList<TimePeriod> (iPosChannel) == false) {
        return;
    }

    // Browse the time-period objects
    const TimePeriodList_T& lTimePeriodList =
        BomManager::getList<TimePeriod> (iPosChannel);
    for (TimePeriodList_T::const_iterator itTP = lTimePeriodList.begin();
        itTP != lTimePeriodList.end(); ++itTP) {
        const TimePeriod* lTP_ptr = *itTP;
        assert (lTP_ptr != NULL);

        // Display the time-period object
        csvTimeDisplay (oStream, *lTP_ptr);
    }
}

// ////////////////////////////////////////
void BomDisplay::csvTimeDisplay (std::ostream& oStream,
        const TimePeriod& iTimePeriod) {

    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

```

```

oStream << "-----" << std::endl;
oStream << "TimePeriod: " << iTimePeriod.describeKey() << std::endl;
oStream << "-----" << std::endl;

// Only one of the fare/yield feature list exists. Each of the following
// two methods will check for the existence of the list. So, only the
// existing list will be actually displayed.
csvFeatureListDisplay<FareFeatures> (oStream, iTimePeriod);
csvFeatureListDisplay<YieldFeatures> (oStream, iTimePeriod);
}

// ////////////////////////////////////////
template <typename FEATURE_TYPE>
void BomDisplay::csvFeatureListDisplay (std::ostream& oStream,
                                       const TimePeriod& iTimePeriod) {

    // Check whether there are fare/yield-feature objects
    if (BomManager::hasList<FEATURE_TYPE> (iTimePeriod) == false) {
        return;
    }

    // Browse the fare/yield-feature objects
    typedef typename BomHolder<FEATURE_TYPE>::BomList_T FeaturesList_T;
    const FeaturesList_T& lFeaturesList =
        BomManager::getList<FEATURE_TYPE> (iTimePeriod);
    for (typename FeaturesList_T::const_iterator itFF = lFeaturesList.begin();
         itFF != lFeaturesList.end(); ++itFF) {
        const FEATURE_TYPE* lFF_ptr = *itFF;
        assert (lFF_ptr != NULL);

        // Display the fare-features object
        csvFeaturesDisplay (oStream, *lFF_ptr);
    }
}

// ////////////////////////////////////////
template <typename FEATURE_TYPE>
void BomDisplay::csvFeaturesDisplay (std::ostream& oStream,
                                    const FEATURE_TYPE& iFeatures) {

    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "-----" << std::endl;
    oStream << "Fare/yield-Features: " << iFeatures.describeKey() << std::endl;
    oStream << "-----" << std::endl;

    // Check whether there are airlineClassList objects
    if (BomManager::hasList<AirlineClassList> (iFeatures) == false) {
        return;
    }

    // Browse the airlineClassList objects
    const AirlineClassListList_T& lAirlineClassListList =
        BomManager::getList<AirlineClassList> (iFeatures);
    for (AirlineClassListList_T::const_iterator itACL =
         lAirlineClassListList.begin();
         itACL != lAirlineClassListList.end(); ++itACL) {
        const AirlineClassList* lACL_ptr = *itACL;
        assert (lACL_ptr != NULL);

        // Display the airlineClassList object
        csvAirlineClassDisplay(oStream, *lACL_ptr);
    }
}

```

```

    }
}

// ////////////////////////////////////////
void BomDisplay::
csvAirlineClassDisplay (std::ostream& oStream,
                       const AirlineClassList& iAirlineClassList) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    oStream << "-----" << std::endl;
    oStream << "AirlineClassList: "
              << iAirlineClassList.describeKey() << std::endl;
    oStream << "-----" << std::endl;
}

}

/*!

```

### 3 C++ Class Building Sample StdAir BOM Trees

```

*/
// ////////////////////////////////////////
// Import section
// ////////////////////////////////////////
// STL
#include <cassert>
#include <sstream>
// StdAir
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomRetriever.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/FareFeatures.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/command/CmdBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/OnDDate.hpp>
#include <stdair/bom/SegmentPeriod.hpp>

```

```

#include <stdair/bom/FlightPeriod.hpp>

namespace stdair {

// ////////////////////////////////////////
void CmdBomManager::buildSampleBom (BomRoot& ioBomRoot) {

    // DEBUG
    STDAIR_LOG_DEBUG ("StdAir is building the BOM tree from built-in "
        << "specifications.");

    // ////////////////////////////////////////
    // Build the inventory (flight-dates) and the schedule (flight period) parts.

    buildSampleInventorySchedule (ioBomRoot);

    // Build the pricing (fare rules) and revenue accounting (yields) parts.
    buildSamplePricing (ioBomRoot);

    // ////////////////////////////////////////
    // Build the inventory (flight-dates) and the schedule (flight period) parts.

    buildPartnershipsSampleInventoryAndRM (ioBomRoot);

    // Build the pricing (fare rules) and revenue accounting (yields) parts.
    buildPartnershipsSamplePricing (ioBomRoot);

    // Build a dummy inventory, needed by RMOL.
    buildCompleteDummyInventory (ioBomRoot);
}

// ////////////////////////////////////////
void CmdBomManager::buildSampleInventorySchedule (BomRoot& ioBomRoot) {

    // Inventory
    // Step 0.1: Inventory level
    // Create an Inventory for BA
    const InventoryKey lBAKey ("BA");
    Inventory& lBAInv = FacBom<Inventory>::instance().create (lBAKey);
    FacBomManager::addToListAndMap (ioBomRoot, lBAInv);
    FacBomManager::linkWithParent (ioBomRoot, lBAInv);

    // Create an Inventory for AF
    const InventoryKey lAFKey ("AF");
    Inventory& lAFInv = FacBom<Inventory>::instance().create (lAFKey);
    FacBomManager::addToListAndMap (ioBomRoot, lAFInv);
    FacBomManager::linkWithParent (ioBomRoot, lAFInv);

    // BA
    // Step 0.2: Flight-date level
    // Create a FlightDate (BA9/10-JUN-2011) for BA's Inventory
    FlightNumber_T lFlightNumber = 9;
    Date_T lDate (2011, 6, 10);
    FlightDateKey lFlightDateKey (lFlightNumber, lDate);

    FlightDate& lBA9_20110610_FD =
        FacBom<FlightDate>::instance().create (lFlightDateKey);
    FacBomManager::addToListAndMap (lBAInv, lBA9_20110610_FD);
    FacBomManager::linkWithParent (lBAInv, lBA9_20110610_FD);

    // Display the flight-date
    // STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());
}
}

```

```

// Step 0.3: Segment-date level
// Create a first SegmentDate (LHR-SYD) for BA's Inventory
// See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
//   arrier=BA&FlightNumber=0009&from=LHR&to=SYD&depDate=100611&SellingClass=O
const AirportCode_T lLHR ("LHR");
const AirportCode_T lSYD ("SYD");
const DateOffset_T l1Day (1);
const DateOffset_T l2Days (2);
const Duration_T l2135 (21, 45, 0);
const Duration_T l10610 (6, 10, 0);
const Duration_T l2205 (22, 05, 0);
SegmentDateKey lSegmentDateKey (lLHR, lSYD);

SegmentDate& lLHRSYDSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRSYDSegment);
FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRSYDSegment);

// Fill the SegmentDate content
lLHRSYDSegment.setBoardingDate (lDate);
lLHRSYDSegment.setOffDate (lDate + l2Days);
lLHRSYDSegment.setBoardingTime (l2135);
lLHRSYDSegment.setOffTime (l10610);
lLHRSYDSegment.setElapsedTime (l2135);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRSYDSegment);

// Create a second SegmentDate (LHR-BKK) for BA's Inventory
// See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
//   arrier=BA&FlightNumber=0009&from=LHR&to=BKK&depDate=100611&SellingClass=O
const AirportCode_T lBKK ("BKK");
const Duration_T l1540 (15, 40, 0);
const Duration_T l1105 (11, 5, 0);
lSegmentDateKey = SegmentDateKey (lLHR, lBKK);

SegmentDate& lLHRBKKSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRBKKSegment);
FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRBKKSegment);

// Fill the SegmentDate content
lLHRBKKSegment.setBoardingDate (lDate);
lLHRBKKSegment.setOffDate (lDate + l1Day);
lLHRBKKSegment.setBoardingTime (l2135);
lLHRBKKSegment.setOffTime (l1540);
lLHRBKKSegment.setElapsedTime (l1105);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRBKKSegment);

// Create a third SegmentDate (BKK-SYD) for BA's Inventory
// See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
//   arrier=BA&FlightNumber=0009&from=BKK&to=SYD&depDate=110611&SellingClass=O
const Duration_T l1705 (17, 5, 0);
const Duration_T l10905 (9, 5, 0);
lSegmentDateKey = SegmentDateKey (lBKK, lSYD);

SegmentDate& lBKKSYSYDSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKSYSYDSegment);

```

```

FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKSYSYDSegment);

// Fill the SegmentDate content
lBKKSYSYDSegment.setBoardingDate (lDate + l1Day);
lBKKSYSYDSegment.setOffDate (lDate + l2Days);
lBKKSYSYDSegment.setBoardingTime (l1705);
lBKKSYSYDSegment.setOffTime (l1540);
lBKKSYSYDSegment.setElapsedTime (l0905);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lBKKSYSYDSegment);

// Step 0.4: Leg-date level
// Create a first LegDate (LHR) for BA's Inventory
LegDateKey lLegDateKey (lLHR);

LegDate& lLHRLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRLeg);
FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRLeg);

// Fill the LegDate content
lLHRLeg.setOffPoint (lBKK);
lLHRLeg.setBoardingDate (lDate);
lLHRLeg.setOffDate (lDate + l1Day);
lLHRLeg.setBoardingTime (l2135);
lLHRLeg.setOffTime (l1540);
lLHRLeg.setElapsedTime (l1105);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lLHRLeg.toString());

// Create a second LegDate (BKK)
lLegDateKey = LegDateKey (lBKK);

LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKLeg);
FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKLeg);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lBKKLeg.toString());

// Fill the LegDate content
lBKKLeg.setOffPoint (lSYD);
lBKKLeg.setBoardingDate (lDate + l1Day);
lBKKLeg.setOffDate (lDate + l2Days);
lBKKLeg.setBoardingTime (l1705);
lBKKLeg.setOffTime (l1540);
lBKKLeg.setElapsedTime (l0905);

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lLHRLeg, lLHRSYDSegment);
FacBomManager::addToListAndMap (lLHRLeg, lLHRBKKSegment);
FacBomManager::addToListAndMap (lBKKLeg, lLHRSYDSegment);
FacBomManager::addToListAndMap (lBKKLeg, lBKKSYSYDSegment);
FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRLeg);
FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRLeg);
FacBomManager::addToListAndMap (lLHRSYDSegment, lBKKLeg);
FacBomManager::addToListAndMap (lBKKSYSYDSegment, lBKKLeg);

// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment LHR-BKK of BA's Inventory

```



```

const CabinCode_T lY ("Y");
SegmentCabinKey lYSegmentCabinKey (lY);

SegmentCabin& lLHRBKKSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRBKKSegmentYCabin);
FacBomManager::linkWithParent (lLHRBKKSegment, lLHRBKKSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRBKKSegmentYCabin.toString());

// Create a SegmentCabin (Y) of the Segment BKK-SYD;
SegmentCabin& lBKKSYSYDSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lBKKSYSYDSegment, lBKKSYSYDSegmentYCabin);
FacBomManager::linkWithParent (lBKKSYSYDSegment, lBKKSYSYDSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lBKKSYSYDSegmentYCabin.toString());

// Create a SegmentCabin (Y) of the Segment LHR-SYD;
SegmentCabin& lLHRSYDSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRSYDSegmentYCabin);
FacBomManager::linkWithParent (lLHRSYDSegment, lLHRSYDSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRSYDSegmentYCabin.toString());

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg LHR-BKK on BA's Inventory
LegCabinKey lYLegCabinKey (lY);

LegCabin& lLHRLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lLHRLeg, lLHRLegYCabin);
FacBomManager::linkWithParent (lLHRLeg, lLHRLegYCabin);

// Display the leg-cabin
// STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());

// Create a LegCabin (Y) for the Leg BKK-SYD
LegCabin& lBKKLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);
// Display the leg-cabin
// STDAIR_LOG_DEBUG ("LegCabin: " << lBKKLegYCabin.toString());

FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRBKKSegmentYCabin,
                                lLHRBKKSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKLegYCabin, lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKSYSYDSegmentYCabin,
                                lBKKSYSYDSegmentYCabin.getFullerKey());

FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lLHRLegYCabin,
                                lLHRLegYCabin.getFullerKey());
FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin, lLHRLegYCabin,

```

```

                                lLHRLegYCabin.getFullerKey());
FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lBKKLegYCabin,
                                lBKKLegYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKSYSYDSegmentYCabin, lBKKLegYCabin,
                                lBKKLegYCabin.getFullerKey());

// Step 0.7: fare family level
// Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
const FamilyCode_T l1 ("EcoSaver");
FareFamilyKey l1FareFamilyKey (l1);

FareFamily& lLHRBKKSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
                                lLHRBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lLHRBKKSegmentYCabin,
                                lLHRBKKSegmentYCabin1Family);

// Display the booking class
// STDAIR_LOG_DEBUG ("FareFamily: "
//                  << lLHRBKKSegmentYCabin1Family.toString());

// Create a FareFamily (1) for the Segment BKK-SYD, cabin Y on BA's Inv
FareFamily& lBKKSYSYDSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lBKKSYSYDSegmentYCabin,
                                lBKKSYSYDSegmentYCabin1Family);
FacBomManager::linkWithParent (lBKKSYSYDSegmentYCabin,
                                lBKKSYSYDSegmentYCabin1Family);

// Display the booking class
// STDAIR_LOG_DEBUG ("FareFamily: "
//                  << lLHRBKKSegmentYCabin1Family.toString());

// Create a FareFamily (1) for the Segment LHR-SYD, cabin Y on BA's Inv
FareFamily& lLHRSYDSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin1Family);
FacBomManager::linkWithParent (lLHRSYDSegmentYCabin,
                                lLHRSYDSegmentYCabin1Family);

// Display the booking class
// STDAIR_LOG_DEBUG ("FareFamily: "
//                  << lLHRBKKSegmentYCabin1Family.toString());

// Step 0.8: booking class level
// Create a BookingClass (Q) for the Segment LHR-BKK, cabin Y,
// fare family 1 on BA's Inv
const ClassCode_T lQ ("Q");
BookingClassKey lQBookingClassKey (lQ);

BookingClass& lLHRBKKSegmentYCabin1FamilyQClass =
    FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin1Family,
                                lLHRBKKSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lLHRBKKSegmentYCabin1Family,
                                lLHRBKKSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,

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```

                                lLHRBKKSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lLHRBKKSegment,
                                lLHRBKKSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                  << lLHRBKKSegmentYCabin1FamilyQClass.toString());

// Create a BookingClass (Q) for the Segment BKK-SYD, cabin Y,
// fare family 1 on BA's Inv
BookingClass& lBKKSYSYDSegmentYCabin1FamilyQClass =
    FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lBKKSYSYDSegmentYCabin1Family,
                                lBKKSYSYDSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lBKKSYSYDSegmentYCabin1Family,
                                lBKKSYSYDSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lBKKSYSYDSegmentYCabin,
                                lBKKSYSYDSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lBKKSYSYDSegment,
                                lBKKSYSYDSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                  << lLHRBKKSegmentYCabin1FamilyQClass.toString());

// Create a BookingClass (Q) for the Segment LHR-SYD, cabin Y,
// fare family 1 on BA's Inv
BookingClass& lLHRSYSYDSegmentYCabin1FamilyQClass =
    FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lLHRSYSYDSegmentYCabin1Family,
                                lLHRSYSYDSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lLHRSYSYDSegmentYCabin1Family,
                                lLHRSYSYDSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lLHRSYSYDSegmentYCabin,
                                lLHRSYSYDSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lLHRSYSYDSegment,
                                lLHRSYSYDSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                  << lLHRBKKSegmentYCabin1FamilyQClass.toString());

// ===== AF =====
// Step 0.2: Flight-date level
// Create a FlightDate (AF084/20-MAR-2011) for AF's Inventory
lFlightNumber = 84;
lDate = Date_T (2011, 3, 20);
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lAF084_20110320_FD =
    FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lAFInv, lAF084_20110320_FD);
FacBomManager::linkWithParent (lAFInv, lAF084_20110320_FD);

// Display the flight-date
// STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());

// Step 0.3: Segment-date level
// Create a SegmentDate (CDG-SFO) for AF's Inventory

```

```

const AirportCode_T lCDG ("CDG");
const AirportCode_T lSFO ("SFO");
const Duration_T l1040 (10, 40, 0);
const Duration_T l1250 (12, 50, 0);
const Duration_T l1110 (11, 10, 0);
lSegmentDateKey = SegmentDateKey (lCDG, lSFO);

SegmentDate& lCDGSFOSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGSFOSegment);
FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGSFOSegment);

// Display the segment-date
// STDAIR_LOG_DEBUG ("SegmentDate: " << lCDGSFOSegment.toString());

// Fill the SegmentDate content
lCDGSFOSegment.setBoardingDate (lDate);
lCDGSFOSegment.setOffDate (lDate);
lCDGSFOSegment.setBoardingTime (l1040);
lCDGSFOSegment.setOffTime (l1250);
lCDGSFOSegment.setElapsedTime (l1110);

// Step 0.4: Leg-date level
// Create a LegDate (CDG) for AF's Inventory
lLegDateKey = LegDateKey (lCDG);

LegDate& lCDGLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGLeg);
FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGLeg);

// Fill the LegDate content
lCDGLeg.setOffPoint (lSFO);
lCDGLeg.setBoardingDate (lDate);
lCDGLeg.setOffDate (lDate);
lCDGLeg.setBoardingTime (l1040);
lCDGLeg.setOffTime (l1250);
lCDGLeg.setElapsedTime (l1110);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lCDGLeg, lCDGSFOSegment);
FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGLeg);

// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment CDG-SFO of AF's Inventory
SegmentCabin& lCDGSFOSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGSFOSegmentYCabin);
FacBomManager::linkWithParent (lCDGSFOSegment, lCDGSFOSegmentYCabin);

// Display the segment-cabin
// STDAIR_LOG_DEBUG ("SegmentCabin: " << lCDGSFOSegmentYCabin.toString());

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg CDG-SFO on AF's Inventory
LegCabin& lCDGLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lCDGLeg, lCDGLegYCabin);
FacBomManager::linkWithParent (lCDGLeg, lCDGLegYCabin);

```

```

// Display the leg-cabin
// STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lCDGLegYCabin, lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin, lCDGLegYCabin,
                                lCDGLegYCabin.getFullerKey());

// Step 0.7: fare family level
// Create a fareFamily (1) for the Segment CDG-SFO, cabin Y on AF's Inv
FareFamily& lCDGSFOSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (1lFareFamilyKey);
FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin1Family);
FacBomManager::linkWithParent (lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin1Family);

// Display the fare family
// STDAIR_LOG_DEBUG ("fareFamily: "
//
//                    << lCDGSFOSegmentYCabin1Family.toString());

// Step 0.8: booking class level Create a BookingClass (Q) for the
// Segment CDG-SFO, cabin Y, fare family 1 on AF's Inv
BookingClass& lCDGSFOSegmentYCabin1FamilyQClass =
    FacBom<BookingClass>::instance().create (1QBookingClassKey);
FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin1Family,
                                lCDGSFOSegmentYCabin1FamilyQClass);
FacBomManager::linkWithParent (lCDGSFOSegmentYCabin1Family,
                                lCDGSFOSegmentYCabin1FamilyQClass);

FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
                                lCDGSFOSegmentYCabin1FamilyQClass);
FacBomManager::addToListAndMap (lCDGSFOSegment,
                                lCDGSFOSegmentYCabin1FamilyQClass);

// Display the booking class
// STDAIR_LOG_DEBUG ("BookingClass: "
//                    << lCDGSFOSegmentYCabin1FamilyQClass.toString());

/*=====
=====
=====
=====*/
// Schedule:
// BA:
// Step 1: flight period level
// Create a flight period for BA9:
const DoWStruct lDoWSrtuct ("1111111");
const Date_T lBA9DateRangeStart (2010, boost::gregorian::Jun, 6);
const Date_T lBA9DateRangeEnd (2010, boost::gregorian::Jun, 7);
const DatePeriod_T lBA9DatePeriod (lBA9DateRangeStart, lBA9DateRangeEnd);
const PeriodStruct lBA9PeriodStruct (lBA9DatePeriod, lDoWSrtuct);

lFlightNumber = FlightNumber_T (9);

FlightPeriodKey lBA9FlightPeriodKey (lFlightNumber, lBA9PeriodStruct);

```

```

FlightPeriod& lBA9FlightPeriod =
    FacBom<FlightPeriod>::instance().create (lBA9FlightPeriodKey);
FacBomManager::addToListAndMap (lBAInv, lBA9FlightPeriod);
FacBomManager::linkWithParent (lBAInv, lBA9FlightPeriod);

// Step 2: segment period level
// Create a segment period for SIN-BKK:

SegmentPeriodKey lLHRSYDSegmentPeriodKey (lLHR, lSYD);

SegmentPeriod& lLHRSYDSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lLHRSYDSegmentPeriodKey);
FacBomManager::addToListAndMap (lBA9FlightPeriod, lLHRSYDSegmentPeriod);
FacBomManager::linkWithParent (lBA9FlightPeriod, lLHRSYDSegmentPeriod);

lLHRSYDSegmentPeriod.setBoardingTime (l2135);
lLHRSYDSegmentPeriod.setOffTime (l1540);
lLHRSYDSegmentPeriod.setElapsedTime (l1105);
ClassList_String_T lYM ("YM");
lLHRSYDSegmentPeriod.addCabinBookingClassList (lY,lYM);

// AF:
// Step 1: flight period level
// Create a flight period for AF84:
const Date_T lAF84DateRangeStart (2011, boost::gregorian::Mar, 20);
const Date_T lAF84DateRangeEnd (2011, boost::gregorian::Mar, 21);
const DatePeriod_T lAF84DatePeriod (lAF84DateRangeStart, lAF84DateRangeEnd);
const PeriodStruct lAF84PeriodStruct (lAF84DatePeriod, lDoWSrtuct);

lFlightNumber = FlightNumber_T (84);

FlightPeriodKey lAF84FlightPeriodKey (lFlightNumber, lAF84PeriodStruct);

FlightPeriod& lAF84FlightPeriod =
    FacBom<FlightPeriod>::instance().create (lAF84FlightPeriodKey);
FacBomManager::addToListAndMap (lAFInv, lAF84FlightPeriod);
FacBomManager::linkWithParent (lAFInv, lAF84FlightPeriod);

// Step 2: segment period level
// Create a segment period for SIN-BKK:

SegmentPeriodKey lCDGSFOSegmentPeriodKey (lCDG, lSFO);

SegmentPeriod& lCDGSFOSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lCDGSFOSegmentPeriodKey);
FacBomManager::addToListAndMap (lAF84FlightPeriod, lCDGSFOSegmentPeriod);
FacBomManager::linkWithParent (lAF84FlightPeriod, lCDGSFOSegmentPeriod);

lCDGSFOSegmentPeriod.setBoardingTime (l1040);
lCDGSFOSegmentPeriod.setOffTime (l1250);
lCDGSFOSegmentPeriod.setElapsedTime (l1110);
lCDGSFOSegmentPeriod.addCabinBookingClassList (lY,lYM);

/*=====
=====
=====
=====
=====*/
// O&D
// Create an O&D Date (BA;9,2010-Jun-06;LHR,SYD) for BA's Inventory

```

```

OnDString_T lBALHRSYDOnDStr = "BA;9,2010-Jun-06;LHR,SYD";
OnDStringList_T lBAOnDStrList;
lBAOnDStrList.push_back (lBALHRSYDOnDStr);

OnDDateKey lBAOnDDateKey (lBAOnDStrList);
OnDDate& lBA_LHRSYD_OnDDate =
    FacBom<OnDDate>::instance().create (lBAOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lBAInv, lBA_LHRSYD_OnDDate);
FacBomManager::linkWithParent (lBAInv, lBA_LHRSYD_OnDDate);

// Add the segment
FacBomManager::addToListAndMap (lBA_LHRSYD_OnDDate, lLHRSYDSegment);

// Add total forecast info for cabin Y.
const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
const WTP_T lWTP750 = 750.0;
const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
lBA_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

// Create an O&D Date (AF;84,2011-Mar-21;CDG,SFO) for AF's Inventory
OnDString_T lAFLHRSYDOnDStr = "AF;9,2011-Mar-20;CDG,SFO";
OnDStringList_T lAFOnDStrList;
lAFOnDStrList.push_back (lAFLHRSYDOnDStr);

OnDDateKey lAFOnDDateKey (lAFOnDStrList);
OnDDate& lAF_LHRSYD_OnDDate =
    FacBom<OnDDate>::instance().create (lAFOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lAFInv, lAF_LHRSYD_OnDDate);
FacBomManager::linkWithParent (lAFInv, lAF_LHRSYD_OnDDate);

// Add the segment
FacBomManager::addToListAndMap (lAF_LHRSYD_OnDDate, lLHRSYDSegment);

// Add total forecast info for cabin Y.
lAF_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
}
// //////////////////////////////////////
void CmdBomManager::buildCompleteDummyInventory (BomRoot& ioBomRoot) {

    // Build a dummy inventory, containing a dummy flight-date with a
    // single segment-cabin and a single leg-cabin.
    const CabinCapacity_T lCapacity = DEFAULT_CABIN_CAPACITY;
    buildDummyInventory (ioBomRoot, lCapacity);

    // Retrieve the (sample) segment-cabin.
    SegmentCabin& lDummySegmentCabin =
        BomRetriever::retrieveDummySegmentCabin (ioBomRoot);

    // Retrieve the (sample) leg-cabin.
    LegCabin& lDummyLegCabin =
        BomRetriever::retrieveDummyLegCabin (ioBomRoot);

    // Add some booking classes to the dummy segment-cabin and some
    // virtual ones to the dummy leg-cabin.
    // First booking class yield and demand information.
    Yield_T lYield = 100;
    MeanValue_T lMean = 20;
    StdDevValue_T lStdDev = 9;
    BookingClassKey lBCKey (DEFAULT_CLASS_CODE);

```

```

BookingClass& lDummyBookingClass =
    FacBom<BookingClass>::instance().create (lBCKey);
lDummyBookingClass.setYield (lYield);
lDummyBookingClass.setMean (lMean);
lDummyBookingClass.setStdDev (lStdDev);
// Add a booking class to the segment-cabin.
FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);

VirtualClassStruct lDummyVirtualClass (lDummyBookingClass);
lDummyVirtualClass.setYield (lYield);
lDummyVirtualClass.setMean (lMean);
lDummyVirtualClass.setStdDev (lStdDev);
// Add the corresponding virtual class to the leg-cabin.
lDummyLegCabin.addVirtualClass (lDummyVirtualClass);

// Second booking class yield and demand information.
lYield = 70;
lMean = 45;
lStdDev= 12;
lDummyBookingClass.setYield (lYield);
lDummyBookingClass.setMean (lMean);
lDummyBookingClass.setStdDev (lStdDev);
// Add a booking class to the segment-cabin.
FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);

lDummyVirtualClass.setYield (lYield);
lDummyVirtualClass.setMean (lMean);
lDummyVirtualClass.setStdDev (lStdDev);
// Add the corresponding virtual class to the leg-cabin.
lDummyLegCabin.addVirtualClass (lDummyVirtualClass);

// Third booking class yield and demand information.
lYield = 42;
lMean = 80;
lStdDev= 16;
lDummyBookingClass.setYield (lYield);
lDummyBookingClass.setMean (lMean);
lDummyBookingClass.setStdDev (lStdDev);
// Add a booking class to the segment-cabin.
FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);

lDummyVirtualClass.setYield (lYield);
lDummyVirtualClass.setMean (lMean);
lDummyVirtualClass.setStdDev (lStdDev);
// Add the corresponding virtual class to the leg-cabin.
lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
}

// ////////////////////////////////////////
void CmdBomManager::buildDummyInventory (BomRoot& ioBomRoot,
                                         const CabinCapacity_T& iCapacity) {
    // Inventory
    const InventoryKey lInventoryKey (DEFAULT_AIRLINE_CODE);
    Inventory& lInv = FacBom<Inventory>::instance().create (lInventoryKey);
    FacBomManager::addToListAndMap (ioBomRoot, lInv);
    FacBomManager::linkWithParent (ioBomRoot, lInv);

    // Flight-date
    FlightDateKey lFlightDateKey (DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE);
    FlightDate& lFlightDate =

```



```

    FacBom<FlightDate>::instance().create (lFlightDateKey);
    FacBomManager::addToListAndMap (lInv, lFlightDate);
    FacBomManager::linkWithParent (lInv, lFlightDate);

    // Leg-date
    LegDateKey lLegDateKey (DEFAULT_ORIGIN);
    LegDate& lLeg = FacBom<LegDate>::instance().create (lLegDateKey);
    FacBomManager::addToListAndMap (lFlightDate, lLeg);
    FacBomManager::linkWithParent (lFlightDate, lLeg);

    // Fill the LegDate content
    lLeg.setOffPoint (DEFAULT_DESTINATION);
    lLeg.setBoardingDate (DEFAULT_DEPARTURE_DATE);
    lLeg.setOffDate (DEFAULT_DEPARTURE_DATE);
    lLeg.setBoardingTime (Duration_T (14, 0, 0));
    lLeg.setOffTime (Duration_T (16, 0, 0));
    lLeg.setElapsedTime (Duration_T (8, 0, 0));

    // Leg-cabin
    LegCabinKey lLegCabinKey (DEFAULT_CABIN_CODE);
    LegCabin& lLegCabin = FacBom<LegCabin>::instance().create (lLegCabinKey);
    FacBomManager::addToListAndMap (lLeg, lLegCabin);
    FacBomManager::linkWithParent (lLeg, lLegCabin);

    lLegCabin.setCapacities (iCapacity);
    lLegCabin.setAvailabilityPool (iCapacity);

    // Segment-date
    SegmentDateKey lSegmentDateKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
    SegmentDate& lSegment =
        FacBom<SegmentDate>::instance().create (lSegmentDateKey);
    FacBomManager::addToListAndMap (lFlightDate, lSegment);
    FacBomManager::linkWithParent (lFlightDate, lSegment);

    // Links between the segment-date and the leg-date
    FacBomManager::addToListAndMap (lLeg, lSegment);
    FacBomManager::addToListAndMap (lSegment, lLeg);

    // Fill the SegmentDate content
    lSegment.setBoardingDate (DEFAULT_DEPARTURE_DATE);
    lSegment.setOffDate (DEFAULT_DEPARTURE_DATE);
    lSegment.setBoardingTime (Duration_T (14, 0, 0));
    lSegment.setOffTime (Duration_T (16, 0, 0));
    lSegment.setElapsedTime (Duration_T (8, 0, 0));

    // Segment-cabin
    SegmentCabinKey lSegmentCabinKey (DEFAULT_CABIN_CODE);
    SegmentCabin& lSegmentCabin =
        FacBom<SegmentCabin>::instance().create (lSegmentCabinKey);
    FacBomManager::addToListAndMap (lSegment, lSegmentCabin);
    FacBomManager::linkWithParent (lSegment, lSegmentCabin);

    // Links between the segment-cabin and the leg-cabin
    FacBomManager::addToListAndMap (lLegCabin, lSegmentCabin,
                                    lSegmentCabin.getFullerKey());
    FacBomManager::addToListAndMap (lSegmentCabin, lLegCabin,
                                    lLegCabin.getFullerKey());

    // Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
    const FamilyCode_T l1 ("EcoSaver");
    FareFamilyKey l1FareFamilyKey (l1);

```

```

FareFamily& lSegmentYCabinlFamily =
    FacBom<FareFamily>::instance().create (lFareFamilyKey);
FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabinlFamily);
FacBomManager::linkWithParent (lSegmentCabin, lSegmentYCabinlFamily);

// Create a booking-class
const ClassCode_T lQ ("Q");
BookingClassKey lQBookingClassKey (lQ);

BookingClass& lSegmentYCabinlFamilyQClass =
    FacBom<BookingClass>::instance().create (lQBookingClassKey);
FacBomManager::addToListAndMap (lSegmentYCabinlFamily,
                                lSegmentYCabinlFamilyQClass);
FacBomManager::linkWithParent (lSegmentYCabinlFamily,
                                lSegmentYCabinlFamilyQClass);

FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabinlFamilyQClass);
FacBomManager::addToListAndMap (lSegment, lSegmentYCabinlFamilyQClass);

/*=====
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=====
=====
=====*/
// Schedule:
// XX:
// Step 1: flight period level
// Create a flight period for XX:
const DoWSrtuct lDoWSrtuct ("1111111");
const Date_T lXXDateRangeStart (DEFAULT_DEPARTURE_DATE);
const Date_T lXXDateRangeEnd (DEFAULT_DEPARTURE_DATE);
const DatePeriod_T lXXDatePeriod (lXXDateRangeStart, lXXDateRangeEnd);
const PeriodStruct lXXPeriodStruct (lXXDatePeriod, lDoWSrtuct);

FlightPeriodKey lXXFlightPeriodKey (DEFAULT_FLIGHT_NUMBER, lXXPeriodStruct);

FlightPeriod& lXXFlightPeriod =
    FacBom<FlightPeriod>::instance().create (lXXFlightPeriodKey);
FacBomManager::addToListAndMap (lInv, lXXFlightPeriod);
FacBomManager::linkWithParent (lInv, lXXFlightPeriod);

// Step 2: segment period level
// Create a segment period

SegmentPeriodKey lXXSegmentPeriodKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);

SegmentPeriod& lXXSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lXXSegmentPeriodKey);
FacBomManager::addToListAndMap (lXXFlightPeriod, lXXSegmentPeriod);
FacBomManager::linkWithParent (lXXFlightPeriod, lXXSegmentPeriod);

lXXSegmentPeriod.setBoardingTime (Duration_T (14, 0, 0));
lXXSegmentPeriod.setOffTime (Duration_T (16, 0, 0));
lXXSegmentPeriod.setElapsedTime (Duration_T (8, 0, 0));
const CabinCode_T lY ("Y");
const ClassList_String_T lYQ ("YQ");
lXXSegmentPeriod.addCabinBookingClassList (lY,lYQ);

}

```

```

// //////////////////////////////////////
void CmdBomManager::buildSamplePricing (BomRoot& ioBomRoot) {

    // Set the airport-pair primary key.
    const AirportPairKey lAirportPairKey (AIRPORT_LHR, AIRPORT_SYD);

    // Create the AirportPairKey object and link it to the BOM tree root.
    AirportPair& lAirportPair =
        FacBom<AirportPair>::instance().create (lAirportPairKey);
    FacBomManager::addToListAndMap (ioBomRoot, lAirportPair);
    FacBomManager::linkWithParent (ioBomRoot, lAirportPair);

    // Set the fare date-period primary key.
    const Date_T lDateRangeStart (2011, boost::gregorian::Jan, 15);
    const Date_T lDateRangeEnd (2011, boost::gregorian::Dec, 31);
    const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
    const DatePeriodKey lDatePeriodKey (lDateRange);

    // Create the DatePeriodKey object and link it to the PosChannel object.
    DatePeriod& lDatePeriod =
        FacBom<DatePeriod>::instance().create (lDatePeriodKey);
    FacBomManager::addToListAndMap (lAirportPair, lDatePeriod);
    FacBomManager::linkWithParent (lAirportPair, lDatePeriod);

    // Set the point-of-sale-channel primary key.
    const PosChannelKey lPosChannelKey (POS_LHR, CHANNEL_DN);

    // Create the PositionKey object and link it to the AirportPair object.
    PosChannel& lPosChannel =
        FacBom<PosChannel>::instance().create (lPosChannelKey);
    FacBomManager::addToListAndMap (lDatePeriod, lPosChannel);
    FacBomManager::linkWithParent (lDatePeriod, lPosChannel);

    // Set the fare time-period primary key.
    const Time_T lTimeRangeStart (0, 0, 0);
    const Time_T lTimeRangeEnd (23, 0, 0);
    const TimePeriodKey lTimePeriodKey (lTimeRangeStart, lTimeRangeEnd);

    // Create the TimePeriodKey and link it to the DatePeriod object.
    TimePeriod& lTimePeriod =
        FacBom<TimePeriod>::instance().create (lTimePeriodKey);
    FacBomManager::addToListAndMap (lPosChannel, lTimePeriod);
    FacBomManager::linkWithParent (lPosChannel, lTimePeriod);

    // Pricing -- Generate the FareRule
    const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ROUND_TRIP,
                                           NO_ADVANCE_PURCHASE,
                                           SATURDAY_STAY,
                                           CHANGE_FEES,
                                           NON_REFUNDABLE,
                                           NO_STAY_DURATION);

    // Create the FareFeaturesKey and link it to the TimePeriod object.
    FareFeatures& lFareFeatures =
        FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
    FacBomManager::addToListAndMap (lTimePeriod, lFareFeatures);
    FacBomManager::linkWithParent (lTimePeriod, lFareFeatures);

    // Revenue Accounting -- Generate the YieldRule
    const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ROUND_TRIP,
                                              CABIN_Y);

```

```

// Create the YieldFeaturesKey and link it to the TimePeriod object.
YieldFeatures& lYieldFeatures =
    FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
FacBomManager::addToListAndMap (lTimePeriod, lYieldFeatures);
FacBomManager::linkWithParent (lTimePeriod, lYieldFeatures);

// Generate Segment Features and link them to their respective
// fare and yield rules.
AirlineCodeList_T lAirlineCodeList;
lAirlineCodeList.push_back (AIRLINE_CODE_BA);
ClassList_StringList_T lClassCodeList;
lClassCodeList.push_back (CLASS_CODE_Y);
const AirlineClassListKey lAirlineClassListKey (lAirlineCodeList,
                                                lClassCodeList);

// Create the AirlineClassList
AirlineClassList& lAirlineClassList =
    FacBom<AirlineClassList>::instance().create (lAirlineClassListKey);
// Link the AirlineClassList to the FareFeatures object
lAirlineClassList.setFare (900);
FacBomManager::addToListAndMap (lFareFeatures, lAirlineClassList);
FacBomManager::linkWithParent (lFareFeatures, lAirlineClassList);

// Link the AirlineClassList to the YieldFeatures object
lAirlineClassList.setYield (900);
FacBomManager::addToListAndMap (lYieldFeatures, lAirlineClassList);
// \todo (gsabatier): the following calls overrides the parent for
// lAirlineClassList. Check that it is what is actually wanted.
FacBomManager::linkWithParent (lYieldFeatures, lAirlineClassList);
}

// //////////////////////////////////////
void CmdBomManager::
buildSampleTravelSolutionForPricing (TravelSolutionList_T& ioTravelSolutionList
    ) {

    // Clean the list
    ioTravelSolutionList.clear();

    //
    const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");

    // Add the segment date key to the travel solution
    TravelSolutionStruct lTS;
    lTS.addSegment (lBA9_SegmentDateKey);

    // Add the travel solution to the list
    ioTravelSolutionList.push_back (lTS);
}

// //////////////////////////////////////
void CmdBomManager::
buildSampleTravelSolutions (TravelSolutionList_T& ioTravelSolutionList) {

    // Clean the list
    ioTravelSolutionList.clear();

    //
    const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");

```

```

// Add the segment date key to the travel solution
TravelSolutionStruct lTS;
lTS.addSegment (lBA9_SegmentDateKey);

// Fare option
const ClassCode_T lClassPath (CLASS_CODE_Q);
const Fare_T lFare (900);
const ChangeFees_T lChangeFee (CHANGE_FEES);
const NonRefundable_T isNonRefundable (NON_REFUNDABLE);
const SaturdayStay_T lSaturdayStay (SATURDAY_STAY);
const FareOptionStruct lFareOption (lClassPath, lFare, lChangeFee,
                                     isNonRefundable, lSaturdayStay);

// Add (a copy of) the fare option
lTS.addFareOption (lFareOption);

// Map of class availabilities: set the availability for the Q
// booking class (the one corresponding to the fare option) to 8.
ClassAvailabilityMap_T lClassAvailabilityMap;
const Availability_T lAvl (8);
const bool hasInsertBeenSuccessful = lClassAvailabilityMap.
    insert (ClassAvailabilityMap_T::value_type (lClassPath, lAvl)).second;
assert (hasInsertBeenSuccessful == true);
// Add the map to the dedicated list held by the travel solution
lTS.addClassAvailabilityMap (lClassAvailabilityMap);

// Add the travel solution to the list
ioTravelSolutionList.push_back (lTS);
}

// //////////////////////////////////////
BookingRequestStruct CmdBomManager::buildSampleBookingRequest () {
    // Origin
    const AirportCode_T lOrigin (AIRPORT_LHR);

    // Destination
    const AirportCode_T lDestination (AIRPORT_SYD);

    // Point of Sale (POS)
    const CityCode_T lPOS (POS_LHR);

    // Preferred departure date (10-JUN-2011)
    const Date_T lPreferredDepartureDate (2011, boost::gregorian::Jun, 10);

    // Preferred departure time (08:00)
    const Duration_T lPreferredDepartureTime (8, 0, 0);

    // Date of the request (15-MAY-2011)
    const Date_T lRequestDate (2011, boost::gregorian::May, 15);

    // Time of the request (10:00)
    const Duration_T lRequestTime (10, 0, 0);

    // Date-time of the request (made of the date and time above)
    const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);

    // Preferred cabin (also named class of service sometimes)
    const CabinCode_T lPreferredCabin (CABIN_ECO);

    // Number of persons in the party
    const PartySize_T lPartySize (3);

```

```

// Channel (direct/indirect, on-line/off-line)
const ChannelLabel_T lChannel (CHANNEL_DN);

// Type of the trip (one-way, inbound/outbound of a return trip)
const TripType_T lTripType (TRIP_TYPE_INBOUND);

// Duration of the stay (expressed as a number of days)
const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);

// Frequent flyer tier (member, silver, gold, platinum, senator, etc)
const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);

// Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
const WTP_T lWTP (DEFAULT_WTP);

// Value of time, for the customer (expressed in monetary unit per
// unit of time, e.g., EUR/hour)
const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);

// Creation of the booking request structure
BookingRequestStruct oBookingRequest (lOrigin, lDestination, lPOS,
                                       lPreferredDepartureDate,
                                       lRequestDateTime,
                                       lPreferredCabin,
                                       lPartySize, lChannel,
                                       lTripType, lStayDuration,
                                       lFrequentFlyerType,
                                       lPreferredDepartureTime,
                                       lWTP, lValueOfTime);

return oBookingRequest;
}

// ////////////////////////////////////////
BookingRequestStruct CmdBomManager::buildSampleBookingRequestForCRS() {
    // Origin
    const AirportCode_T lOrigin (AIRPORT_SIN);

    // Destination
    const AirportCode_T lDestination (AIRPORT_BKK);

    // Point of Sale (POS)
    const CityCode_T lPOS (POS_SIN);

    // Preferred departure date (30-JAN-2010)
    const Date_T lPreferredDepartureDate (2010, boost::gregorian::Jan, 30);

    // Preferred departure time (10:00)
    const Duration_T lPreferredDepartureTime (10, 0, 0);

    // Date of the request (22-JAN-2010)
    const Date_T lRequestDate (2010, boost::gregorian::Jan, 22);

    // Time of the request (10:00)
    const Duration_T lRequestTime (10, 0, 0);

    // Date-time of the request (made of the date and time above)
    const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);

    // Preferred cabin (also named class of service sometimes)
    const CabinCode_T lPreferredCabin (CABIN_ECO);

```

```

// Number of persons in the party
const PartySize_T lPartySize (3);

// Channel (direct/indirect, on-line/off-line)
const ChannelLabel_T lChannel (CHANNEL_IN);

// Type of the trip (one-way, inbound/outbound of a return trip)
const TripType_T lTripType (TRIP_TYPE_INBOUND);

// Duration of the stay (expressed as a number of days)
const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);

// Frequent flyer tier (member, silver, gold, platinum, senator, etc)
const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);

// Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
const WTP_T lWTP (DEFAULT_WTP);

// Value of time, for the customer (expressed in monetary unit per
// unit of time, e.g., EUR/hour)
const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);

// Creation of the booking request structure
BookingRequestStruct oBookingRequest (lOrigin,
                                      lDestination,
                                      lPOS,
                                      lPreferredDepartureDate,
                                      lRequestDateTime,
                                      lPreferredCabin,
                                      lPartySize, lChannel,
                                      lTripType, lStayDuration,
                                      lFrequentFlyerType,
                                      lPreferredDepartureTime,
                                      lWTP, lValueOfTime);

return oBookingRequest;
}

// ////////////////////////////////////////
void CmdBomManager::buildPartnershipsSampleInventoryAndRM (BomRoot& ioBomRoot)
{

// Step 0.1: Inventory level
// Create an Inventory for SQ
const InventoryKey lSQKey ("SQ");
Inventory& lSQInv = FacBom<Inventory>::instance().create (lSQKey);
FacBomManager::addToListAndMap (ioBomRoot, lSQInv);
FacBomManager::linkWithParent (ioBomRoot, lSQInv);

// Create an Inventory for CX
const InventoryKey lCXKey ("CX");
Inventory& lCXInv = FacBom<Inventory>::instance().create (lCXKey);
FacBomManager::addToListAndMap (ioBomRoot, lCXInv);
FacBomManager::linkWithParent (ioBomRoot, lCXInv);

// ===== SQ =====
// Step 0.2: Flight-date level
// Create a FlightDate (SQ11/08-FEB-2010) for SQ's Inventory
FlightNumber_T lFlightNumber = 11;
Date_T lDate (2010, 2, 8);
FlightDateKey lFlightDateKey (lFlightNumber, lDate);

```

```

FlightDate& lSQ11_20100208_FD =
    FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lSQInv, lSQ11_20100208_FD);
FacBomManager::linkWithParent (lSQInv, lSQ11_20100208_FD);

// Create a (mkt) FlightDate (SQ1200/08-FEB-2010) for SQ's Inventory
FlightNumber_T lMktFlightNumber = 1200;
//lDate = Date_T (2010, 2, 8);
FlightDateKey lMktFlightDateKey (lMktFlightNumber, lDate);

FlightDate& lSQ1200_20100208_FD =
    FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lSQInv, lSQ1200_20100208_FD);
FacBomManager::linkWithParent (lSQInv, lSQ1200_20100208_FD);

// Display the flight-date
// STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());

// Step 0.3: Segment-date level
// Create a first SegmentDate (SIN-BKK) for SQ's Inventory
const AirportCode_T lSIN ("SIN");
const AirportCode_T lBKK ("BKK");
const DateOffset_T l1Day (1);
const DateOffset_T l2Days (2);
const Duration_T l0820 (8, 20, 0);
const Duration_T l1100 (11, 0, 0);
const Duration_T l0340 (3, 40, 0);
SegmentDateKey lSegmentDateKey (lSIN, lBKK);

SegmentDate& lSINBKKSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINBKKSegment);
FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINBKKSegment);

// Fill the SegmentDate content
lSINBKKSegment.setBoardingDate (lDate);
lSINBKKSegment.setOffDate (lDate);
lSINBKKSegment.setBoardingTime (l0820);
lSINBKKSegment.setOffTime (l1100);
lSINBKKSegment.setElapsedTime (l0340);

// Create a second (mkt) SegmentDate (BKK-HKG) for SQ's Inventory
const AirportCode_T lHKG ("HKG");
const Duration_T l1200 (12, 0, 0);
const Duration_T l1540 (15, 40, 0);
const Duration_T l0240 (2, 40, 0);
SegmentDateKey lMktSegmentDateKey (lBKK, lHKG);

SegmentDate& lMktBKKHKGSegment =
    FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lSQ1200_20100208_FD, lMktBKKHKGSegment);
FacBomManager::linkWithParent (lSQ1200_20100208_FD, lMktBKKHKGSegment);

// Fill the (mkt) SegmentDate content
lMktBKKHKGSegment.setBoardingDate (lDate);
lMktBKKHKGSegment.setOffDate (lDate);
lMktBKKHKGSegment.setBoardingTime (l1200);
lMktBKKHKGSegment.setOffTime (l1540);
lMktBKKHKGSegment.setElapsedTime (l0240);

// Step 0.4: Leg-date level

```



```

// Create a first LegDate (SIN) for SQ's Inventory
LegDateKey lLegDateKey (lSIN);

LegDate& lSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINLeg);
FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINLeg);

// Fill the LegDate content
lSINLeg.setOffPoint (lBKK);
lSINLeg.setBoardingDate (lDate);
lSINLeg.setOffDate (lDate);
lSINLeg.setBoardingTime (l0820);
lSINLeg.setOffTime (l1100);
lSINLeg.setElapsedTime (l0340);

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lSINLeg, lSINBKKSegment);
FacBomManager::addToListAndMap (lSINBKKSegment, lSINLeg);

// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment SIN-BKK of SQ's Inventory
const CabinCode_T lY ("Y");
SegmentCabinKey lYSegmentCabinKey (lY);

SegmentCabin& lSINBKKSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lSINBKKSegment, lSINBKKSegmentYCabin);
FacBomManager::linkWithParent (lSINBKKSegment, lSINBKKSegmentYCabin);

// Create a SegmentCabin (Y) for the (mkt) Segment BKK-HKG of SQ's Inventory
SegmentCabin& lMktBKKHKGSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);
FacBomManager::linkWithParent (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg SIN-BKK on SQ's Inventory
LegCabinKey lYLegCabinKey (lY);

LegCabin& lSINLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lSINLeg, lSINLegYCabin);
FacBomManager::linkWithParent (lSINLeg, lSINLegYCabin);

CabinCapacity_T lCapacity (100);
lSINLegYCabin.setCapacities (lCapacity);
lSINLegYCabin.setAvailabilityPool (lCapacity);

    FacBomManager::addToListAndMap (lSINLegYCabin, lSINBKKSegmentYCabin,
                                   lSINBKKSegmentYCabin.getFullerKey());

    FacBomManager::addToListAndMap (lSINBKKSegmentYCabin, lSINLegYCabin,
                                   lSINLegYCabin.getFullerKey());

// Step 0.7: fare family level
// Create a FareFamily (1) for the Segment SIN-BKK, cabin Y on SQ's Inv
const FamilyCode_T l1 ("EcoSaver");
FareFamilyKey l1FareFamilyKey (l1);

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FareFamily& lSINBKKSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
                                lSINBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lSINBKKSegmentYCabin,
                                lSINBKKSegmentYCabin1Family);

// Create a FareFamily (1) for the (mkt) Segment BKK-HKG, cabin Y on SQ's Inv

FareFamily& lMktBKKHKGSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
                                lMktBKKHKGSegmentYCabin1Family);
FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin,
                                lMktBKKHKGSegmentYCabin1Family);

// Step 0.8: booking class level
// Create a BookingClass (Y) for the Segment SIN-BKK, cabin Y,
// fare family 1 on SQ's Inv
BookingClassKey lYBookingClassKey (lY);

BookingClass& lSINBKKSegmentYCabin1FamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lSINBKKSegmentYCabin1Family,
                                lSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lSINBKKSegmentYCabin1Family,
                                lSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
                                lSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lSINBKKSegment,
                                lSINBKKSegmentYCabin1FamilyYClass);

lSINBKKSegmentYCabin1FamilyYClass.setYield(700);

// Create a BookingClass (Y) for the (mkt) Segment BKK-HKG, cabin Y,
// fare family 1 on SQ's Inv
BookingClass& lMktBKKHKGSegmentYCabin1FamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin1Family,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin1Family,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lMktBKKHKGSegment,
                                lMktBKKHKGSegmentYCabin1FamilyYClass);

lMktBKKHKGSegmentYCabin1FamilyYClass.setYield(700);

// Create a BookingClass (M) for the Segment SIN-BKK, cabin Y,
// fare family 1 on SQ's Inv
const ClassCode_T lM ("M");
BookingClassKey lMBookingClassKey (lM);

BookingClass& lSINBKKSegmentYCabin1FamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lSINBKKSegmentYCabin1Family,
                                lSINBKKSegmentYCabin1FamilyMClass);
FacBomManager::linkWithParent (lSINBKKSegmentYCabin1Family,

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lSINBKKSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
                                lSINBKKSegmentYCabin1FamilyMClass);
FacBomManager::addToListAndMap (lSINBKKSegment,
                                lSINBKKSegmentYCabin1FamilyMClass);

lSINBKKSegmentYCabin1FamilyMClass.setYield(500);

// Create a BookingClass (M) for the (mkt) Segment BKK-HKG, cabin Y,
// fare family 1 on SQ's Inv
BookingClass& lMktBKKHKGSegmentYCabin1FamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin1Family,
                                lMktBKKHKGSegmentYCabin1FamilyMClass);
FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin1Family,
                                lMktBKKHKGSegmentYCabin1FamilyMClass);

FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
                                lMktBKKHKGSegmentYCabin1FamilyMClass);
FacBomManager::addToListAndMap (lMktBKKHKGSegment,
                                lMktBKKHKGSegmentYCabin1FamilyMClass);

lMktBKKHKGSegmentYCabin1FamilyMClass.setYield(500);

/* =====
   ===== */
// Step 0.9: Partner Inventory
// Create a partner Inventory CX for SQ
const InventoryKey lPartnerCXKey ("CX");
Inventory& lPartnerCXInv = FacBom<Inventory>::instance().create (lPartnerCXKey);
FacBomManager::addToListAndMap (lSQInv, lPartnerCXInv);
FacBomManager::linkWithParent (lSQInv, lPartnerCXInv);

// Step 0.9.2 : Flight-date level
lFlightNumber = 12;
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lPartnerCX12_20100208_FD =
    FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX12_20100208_FD);
FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX12_20100208_FD);

lFlightNumber = 1100;
lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lPartnerCX1100_20100208_FD =
    FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX1100_20100208_FD);
FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX1100_20100208_FD);

// Step 0.9.3: Segment-date level
lSegmentDateKey = SegmentDateKey (lBKK, lHKG);

SegmentDate& lPartnerBKKHKGSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegment);
FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegment);

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lPartnerBKKHKGSegment.setBoardingDate (lDate);
lPartnerBKKHKGSegment.setOffDate (lDate);
lPartnerBKKHKGSegment.setBoardingTime (11200);
lPartnerBKKHKGSegment.setOffTime (11540);
lPartnerBKKHKGSegment.setElapsedTime (10240);

lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);

SegmentDate& lPartnerMktSINBKKSegment =
    FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerCX1100_20100208_FD, lPartnerMktSINBKK
    Segment);
FacBomManager::linkWithParent (lPartnerCX1100_20100208_FD, lPartnerMktSINBKK
    Segment);

lPartnerMktSINBKKSegment.setBoardingDate (lDate);
lPartnerMktSINBKKSegment.setOffDate (lDate);
lPartnerMktSINBKKSegment.setBoardingTime (10820);
lPartnerMktSINBKKSegment.setOffTime (11100);
lPartnerMktSINBKKSegment.setElapsedTime (10340);

// Step 0.9.4: Leg-date level
lLegDateKey = LegDateKey (lBKK);

LegDate& lPartnerBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKLeg);
FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKLeg);

lPartnerBKKLeg.setOffPoint (lHKG);
lPartnerBKKLeg.setBoardingDate (lDate);
lPartnerBKKLeg.setOffDate (lDate);
lPartnerBKKLeg.setBoardingTime (11200);
lPartnerBKKLeg.setOffTime (11540);
lPartnerBKKLeg.setElapsedTime (10240);

FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKHKGSegment);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKLeg);

// Step 9.0.5: segment-cabin level

SegmentCabin& lPartnerBKKHKGSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentY
    Cabin);
FacBomManager::linkWithParent (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentYC
    abin);

SegmentCabin& lPartnerMktSINBKKSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSe
    gmentYCabin);
FacBomManager::linkWithParent (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSeg
    mentYCabin);

// Step 9.0.6: leg-cabin level

LegCabin& lPartnerBKKLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKLegYCabin);
FacBomManager::linkWithParent (lPartnerBKKLeg, lPartnerBKKLegYCabin);

lCapacity = CabinCapacity_T(999);

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```

lPartnerBKKLegYCabin.setCapacities (lCapacity);
lPartnerBKKLegYCabin.setAvailabilityPool (lCapacity);

FacBomManager::addToListAndMap (lPartnerBKKLegYCabin, lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin, lPartnerBKKLegYCabin,
                                lPartnerBKKLegYCabin.getFullerKey());

// Step 9.0.7: fare family level

FareFamily& lPartnerBKKHKGSegmentYCabinlFamily =
    FacBom<FareFamily>::instance().create (lFareFamilyKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabinlFamily);
FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabinlFamily);

FareFamily& lPartnerMktSINBKKSegmentYCabinlFamily =
    FacBom<FareFamily>::instance().create (lFareFamilyKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabinlFamily);
FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabinlFamily);

// Step 9.0.8: booking class level

BookingClass& lPartnerBKKHKGSegmentYCabinlFamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabinlFamily,
                                lPartnerBKKHKGSegmentYCabinlFamilyYClass);
FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabinlFamily,
                                lPartnerBKKHKGSegmentYCabinlFamilyYClass);

FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabinlFamilyYClass);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
                                lPartnerBKKHKGSegmentYCabinlFamilyYClass);

BookingClass& lPartnerMktSINBKKSegmentYCabinlFamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabinlFamily,
                                lPartnerMktSINBKKSegmentYCabinlFamilyYClass);

FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabinlFamily,
                                lPartnerMktSINBKKSegmentYCabinlFamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabinlFamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
                                lPartnerMktSINBKKSegmentYCabinlFamilyYClass);

BookingClass& lPartnerBKKHKGSegmentYCabinlFamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabinlFamily,
                                lPartnerBKKHKGSegmentYCabinlFamilyMClass);
FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabinlFamily,
                                lPartnerBKKHKGSegmentYCabinlFamilyMClass);

```

```

FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
                                lPartnerBKKHKGSegmentYCabinlFamilyMClass);
FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
                                lPartnerBKKHKGSegmentYCabinlFamilyMClass);

BookingClass& lPartnerMktSINBKKSegmentYCabinlFamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabinlFamily,
                                lPartnerMktSINBKKSegmentYCabinlFamilyMClass);

FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabinlFamily,
                                lPartnerMktSINBKKSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
                                lPartnerMktSINBKKSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
                                lPartnerMktSINBKKSegmentYCabinlFamilyMClass);

// Step 9.0.9: link SQ inventory objects to Partner CX inventory objects
FacBomManager::addToList (lSINBKKSegment, lPartnerMktSINBKKSegment);

lMktBKKHKGSegment.linkWithOperating (lPartnerBKKHKGSegment);

/* =====
   ===== */

// Step 1.0: O&D level
// Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK-SQ1200/08-FEB-2010/BKK-HKG) f
// or SQ's Inventory
OnDString_T lSQSINBKKOnDStr = "SQ;11,2010-Feb-08;SIN,BKK";
OnDString_T lMktSQBKKHKGOnDStr = "SQ;1200,2010-Feb-08;BKK,HKG";
OnDStringList_T lOnDStringList;
lOnDStringList.push_back (lSQSINBKKOnDStr);
lOnDStringList.push_back (lMktSQBKKHKGOnDStr);

OnDDateKey lOnDDateKey (lOnDStringList);
OnDDate& lSQ_SINHKG_OnDDate =
    FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lSQInv, lSQ_SINHKG_OnDDate);
FacBomManager::linkWithParent (lSQInv, lSQ_SINHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lSINBKKSegment);
FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lMktBKKHKGSegment);

// Add total forecast info for cabin Y.
const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
const WTP_T lWTP750 = 750.0;
const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
lSQ_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

// Add demand info (optional).
// 2 legs here, so 2 CabinClassPair to add in the list.
// First leg: cabin Y, class M.
CabinClassPair_T lCC_YM1 (lY,lM);
// Second leg: cabin Y, class M too.
CabinClassPair_T lCC_YM2 (lY,lM);
CabinClassPairList_T lCabinClassPairList;

```

```

lCabinClassPairList.push_back(lCC_YM1);
lCabinClassPairList.push_back(lCC_YM2);
const MeanStdDevPair_T lMean20StdDev2 (20.0, 2.0);
const Yield_T lYield850 = 850.0;
const YieldDemandPair_T lYield850Mean20StdDev2 (lYield850, lMean20StdDev2);
lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
    StdDev2);

CabinClassPair_T lCC_YY1 (lY,lY);
CabinClassPair_T lCC_YY2 (lY,lY);
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YY1);
lCabinClassPairList.push_back(lCC_YY2);
const MeanStdDevPair_T lMean10StdDev1 (10.0, 1.0);
const Yield_T lYield1200 = 1200.0;
const YieldDemandPair_T lYield1200Mean10StdDev1 (lYield1200, lMean10StdDev1);

lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
    0StdDev1);

// Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK) for SQ's Inventory
lOnDStringList.clear();
lOnDStringList.push_back (lSQSINBKKOnDStr);

lOnDDateKey = OnDDateKey(lOnDStringList);
OnDDate& lSQ_SINBKK_OnDDate =
    FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lSQInv, lSQ_SINBKK_OnDDate);
FacBomManager::linkWithParent (lSQInv, lSQ_SINBKK_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lSQ_SINBKK_OnDDate, lSINBKKSegment);

// Add total forecast info for cabin Y.
const WTP_T lWTP400 = 400.0;
const WTPDemandPair_T lWTP400Mean60StdDev6 (lWTP400, lMean60StdDev6);
lSQ_SINBKK_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);

// Add demand info (optional).
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YM1);
const MeanStdDevPair_T lMean20StdDev1 (20.0, 1.0);
const Yield_T lYield500 = 500.0;
const YieldDemandPair_T lYield500Mean20StdDev1 (lYield500, lMean20StdDev1);
lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
    StdDev1);

lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YY1);
const Yield_T lYield700 = 700.0;
const YieldDemandPair_T lYield700Mean20StdDev1 (lYield700, lMean10StdDev1 );
lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean20
    StdDev1);

/*****
***
// Create an O&D Date (SQ1200/08-FEB-2010/BKK-HKG) for SQ's Inventory
lFullKeyList.clear();
lFullKeyList.push_back (lMktSQBKKHKGFullKeyStr);

lOnDDateKey = OnDDateKey(lFullKeyList);

```

```

OnDDate& lMktSQ_BKKHKG_OnDDate =
    FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lSQInv, lMktSQ_BKKHKG_OnDDate);
FacBomManager::linkWithParent (lSQInv, lMktSQ_BKKHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lMktSQ_BKKHKG_OnDDate, lMktBKKHKGSegment);

// Demand info is not added for purely marketed O&Ds
// Add demand info
// lCabinClassPairList.clear();
// lCabinClassPairList.push_back(lCC_YM2);
// lMktSQ_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
    .0, 1.0);
*****
    *****/

// ///// CX /////
// Step 0.2: Flight-date level
// Create a FlightDate (CX12/08-FEB-2010) for CX's Inventory
lFlightNumber = 12;
//lDate = Date_T (2010, 2, 8);
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lCX12_20100208_FD =
    FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lCXInv, lCX12_20100208_FD);
FacBomManager::linkWithParent (lCXInv, lCX12_20100208_FD);

// Create a (mkt) FlightDate (CX1100/08-FEB-2010) for CX's Inventory
lFlightNumber = 1100;
//lDate = Date_T (2010, 2, 8);
lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lCX1100_20100208_FD =
    FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lCXInv, lCX1100_20100208_FD);
FacBomManager::linkWithParent (lCXInv, lCX1100_20100208_FD);

// Display the flight-date
// STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());

// Step 0.3: Segment-date level
// Create a SegmentDate BKK-HKG for CX's Inventory

lSegmentDateKey = SegmentDateKey (lBKK, lHKG);

SegmentDate& lBKKHKGSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKHKGSegment);
FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKHKGSegment);

// Fill the SegmentDate content
lBKKHKGSegment.setBoardingDate (lDate);
lBKKHKGSegment.setOffDate (lDate);
lBKKHKGSegment.setBoardingTime (11200);
lBKKHKGSegment.setOffTime (11540);
lBKKHKGSegment.setElapsedTime (10240);

// Create a second (mkt) SegmentDate (SIN-BKK) for CX's Inventory

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lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);

SegmentDate& lMktSINBKKSegment =
    FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lCX1100_20100208_FD, lMktSINBKKSegment);
FacBomManager::linkWithParent (lCX1100_20100208_FD, lMktSINBKKSegment);

// Fill the (mkt) SegmentDate content
lMktSINBKKSegment.setBoardingDate (lDate);
lMktSINBKKSegment.setOffDate (lDate);
lMktSINBKKSegment.setBoardingTime (10820);
lMktSINBKKSegment.setOffTime (11100);
lMktSINBKKSegment.setElapsedTime (10340);

// Step 0.4: Leg-date level
// Create a LegDate (BKK) for CX's Inventory
lLegDateKey = LegDateKey (lBKK);

LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKLeg);
FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKLeg);

// Fill the LegDate content
lBKKLeg.setOffPoint (lHKG);
lBKKLeg.setBoardingDate (lDate);
lBKKLeg.setOffDate (lDate);
lBKKLeg.setBoardingTime (11200);
lBKKLeg.setOffTime (11540);
lBKKLeg.setElapsedTime (10240);

// Display the leg-date
// STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());

// Link the segment-dates with the leg-dates
FacBomManager::addToListAndMap (lBKKLeg, lBKKHKGSegment);
FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKLeg);

// Step 0.5: segment-cabin level
// Create a SegmentCabin (Y) for the Segment BKK-HKG of CX's Inventory
SegmentCabin& lBKKHKGSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKHKGSegmentYCabin);
FacBomManager::linkWithParent (lBKKHKGSegment, lBKKHKGSegmentYCabin);

// Create a SegmentCabin (Y) for the (mkt) Segment SIN-BKK of CX's Inventory
SegmentCabin& lMktSINBKKSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);
FacBomManager::linkWithParent (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);

// Step 0.6: leg-cabin level
// Create a LegCabin (Y) for the Leg BKK-HKG on CX's Inventory
LegCabin& lBKKLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);

lCapacity = CabinCapacity_T(100);
lBKKLegYCabin.setCapacities (lCapacity);
lBKKLegYCabin.setAvailabilityPool (lCapacity);

// Link the segment-dates with the leg-dates

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FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin, lBKKLegYCabin,
                                lBKKLegYCabin.getFullerKey());

// Step 0.7: fare family level
// Create a fareFamily (1) for the Segment BKK-HKG, cabin Y on CX's Inv
FareFamily& lBKKHKGSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin1Family);
FacBomManager::linkWithParent (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin1Family);

// Create a FareFamily (1) for the (mkt) Segment SIN-BKK, cabin Y on CX's Inv
FareFamily& lMktSINBKKSegmentYCabin1Family =
    FacBom<FareFamily>::instance().create (l1FareFamilyKey);
FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabin1Family);
FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabin1Family);

// Step 0.8: booking class level
// Create a BookingClass (Y) for the
// Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
BookingClass& lBKKHKGSegmentYCabin1FamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin1Family,
                                lBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lBKKHKGSegmentYCabin1Family,
                                lBKKHKGSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lBKKHKGSegment,
                                lBKKHKGSegmentYCabin1FamilyYClass);

lBKKHKGSegmentYCabin1FamilyYClass.setYield(700);

// Create a BookingClass (Y) for the (mkt) Segment SIN-BKK, cabin Y,
// fare family 1 on CX's Inv
BookingClass& lMktSINBKKSegmentYCabin1FamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin1Family,
                                lMktSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin1Family,
                                lMktSINBKKSegmentYCabin1FamilyYClass);

FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabin1FamilyYClass);
FacBomManager::addToListAndMap (lMktSINBKKSegment,
                                lMktSINBKKSegmentYCabin1FamilyYClass);

lMktSINBKKSegmentYCabin1FamilyYClass.setYield(700);

//Create a BookingClass (M) for the
// Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
BookingClass& lBKKHKGSegmentYCabin1FamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin1Family,

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        lBKKHKGSegmentYCabinlFamilyMClass);
FacBomManager::linkWithParent (lBKKHKGSegmentYCabinlFamily,
                               lBKKHKGSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
                                lBKKHKGSegmentYCabinlFamilyMClass);
FacBomManager::addToListAndMap (lBKKHKGSegment,
                                lBKKHKGSegmentYCabinlFamilyMClass);

lBKKHKGSegmentYCabinlFamilyMClass.setYield(500);

// Create a BookingClass (M) for the (mkt) Segment SIN-BKK, cabin Y,
// fare family 1 on CX's Inv
BookingClass& lMktSINBKKSegmentYCabinlFamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabinlFamily,
                                lMktSINBKKSegmentYCabinlFamilyMClass);
FacBomManager::linkWithParent (lMktSINBKKSegmentYCabinlFamily,
                                lMktSINBKKSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
                                lMktSINBKKSegmentYCabinlFamilyMClass);
FacBomManager::addToListAndMap (lMktSINBKKSegment,
                                lMktSINBKKSegmentYCabinlFamilyMClass);

lMktSINBKKSegmentYCabinlFamilyMClass.setYield(500);

/* =====
   ===== */
// Step 0.9: Partner Inventory
// Create a partner Inventory SQ for CX
const InventoryKey lPartnerSQKey ("SQ");
Inventory& lPartnerSQInv = FacBom<Inventory>::instance().create (lPartnerSQKey);
FacBomManager::addToListAndMap (lCXInv, lPartnerSQInv);
FacBomManager::linkWithParent (lCXInv, lPartnerSQInv);

// Step 0.9.2 : Flight-date level
lFlightNumber = 11;
lFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lPartnerSQ11_20100208_FD =
    FacBom<FlightDate>::instance().create (lFlightDateKey);
FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ11_20100208_FD);
FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ11_20100208_FD);

lFlightNumber = 1200;
lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);

FlightDate& lPartnerSQ1200_20100208_FD =
    FacBom<FlightDate>::instance().create (lMktFlightDateKey);
FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ1200_20100208_FD);
FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ1200_20100208_FD);

// Step 0.9.3: Segment-date level
lSegmentDateKey = SegmentDateKey (lSIN, lBKK);

SegmentDate& lPartnerSINBKKSegment =
    FacBom<SegmentDate>::instance().create (lSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegment);
FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegment);

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t);

lPartnerSINBKKSegment.setBoardingDate (lDate);
lPartnerSINBKKSegment.setOffDate (lDate);
lPartnerSINBKKSegment.setBoardingTime (l0820);
lPartnerSINBKKSegment.setOffTime (l1100);
lPartnerSINBKKSegment.setElapsedTime (l0340);

lMktSegmentDateKey = SegmentDateKey (lBKK, lHKG);

SegmentDate& lPartnerMktBKKHKGSegment =
    FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
FacBomManager::addToListAndMap (lPartnerSQ1200_20100208_FD, lPartnerMktBKKHKG
    Segment);
FacBomManager::linkWithParent (lPartnerSQ1200_20100208_FD, lPartnerMktBKKHKG
    Segment);

lPartnerMktBKKHKGSegment.setBoardingDate (lDate);
lPartnerMktBKKHKGSegment.setOffDate (lDate);
lPartnerMktBKKHKGSegment.setBoardingTime (l1200);
lPartnerMktBKKHKGSegment.setOffTime (l1540);
lPartnerMktBKKHKGSegment.setElapsedTime (l0240);

// Step 0.9.4: Leg-date level
lLegDateKey = LegDateKey (lSIN);

LegDate& lPartnerSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINLeg);
FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINLeg);

lPartnerSINLeg.setOffPoint (lBKK);
lPartnerSINLeg.setBoardingDate (lDate);
lPartnerSINLeg.setOffDate (lDate);
lPartnerSINLeg.setBoardingTime (l0820);
lPartnerSINLeg.setOffTime (l1100);
lPartnerSINLeg.setElapsedTime (l0340);

FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINBKKSegment);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINLeg);

// Step 9.0.5: segment-cabin level

SegmentCabin& lPartnerSINBKKSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINBKKSegmentY
    Cabin);
FacBomManager::linkWithParent (lPartnerSINBKKSegment, lPartnerSINBKKSegmentY
    Cabin);

SegmentCabin& lPartnerMktBKKHKGSegmentYCabin =
    FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKG
    SegmentYCabin);
FacBomManager::linkWithParent (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKG
    SegmentYCabin);

// Step 9.0.6: leg-cabin level

LegCabin& lPartnerSINLegYCabin =
    FacBom<LegCabin>::instance().create (lYLegCabinKey);
FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINLegYCabin);
FacBomManager::linkWithParent (lPartnerSINLeg, lPartnerSINLegYCabin);

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lCapacity = CabinCapacity_T(999);
lPartnerSINLegYCabin.setCapacities (lCapacity);
lPartnerSINLegYCabin.setAvailabilityPool (lCapacity);

FacBomManager::addToListAndMap (lPartnerSINLegYCabin, lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabin.getFullerKey());
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin, lPartnerSINLegYCabin,
                                lPartnerSINLegYCabin.getFullerKey());

// Step 9.0.7: fare family level

FareFamily& lPartnerSINBKKSegmentYCabinlFamily =
    FacBom<FareFamily>::instance().create (lFareFamilyKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabinlFamily);
FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabinlFamily);

FareFamily& lPartnerMktBKKHKGSegmentYCabinlFamily =
    FacBom<FareFamily>::instance().create (lFareFamilyKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabinlFamily);
FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabinlFamily);

// Step 9.0.8: booking class level

BookingClass& lPartnerSINBKKSegmentYCabinlFamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabinlFamily,
                                lPartnerSINBKKSegmentYCabinlFamilyYClass);
FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabinlFamily,
                                lPartnerSINBKKSegmentYCabinlFamilyYClass);

FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabinlFamilyYClass);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
                                lPartnerSINBKKSegmentYCabinlFamilyYClass);

BookingClass& lPartnerMktBKKHKGSegmentYCabinlFamilyYClass =
    FacBom<BookingClass>::instance().create (lYBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabinlFamily,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);

FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabinlFamily,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);

BookingClass& lPartnerSINBKKSegmentYCabinlFamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabinlFamily,
                                lPartnerSINBKKSegmentYCabinlFamilyMClass);

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FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabinlFamily,
                               lPartnerSINBKKSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
                                lPartnerSINBKKSegmentYCabinlFamilyMClass);
FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
                                lPartnerSINBKKSegmentYCabinlFamilyMClass);

BookingClass& lPartnerMktBKKHKGSegmentYCabinlFamilyMClass =
    FacBom<BookingClass>::instance().create (lMBookingClassKey);
FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabinlFamily,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);

FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabinlFamily,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);

FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
                                lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);

// Step 9.0.9: link CX inventory objects to Partner SQ inventory objects
FacBomManager::addToList (lBKKHKGSegment, lPartnerMktBKKHKGSegment);

lMktSINBKKSegment.linkWithOperating (lPartnerSINBKKSegment);

/* =====
   ===== */

// Step 1.0: O&D level
// Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK-CX12/08-FEB-2010/BKK-HKG) f
// or CX's Inventory
OnDString_T lMktCXsINBKKOnDStr = "CX;1100,2010-Feb-08;SIN,BKK";
OnDString_T lCXBKKHKGOnDStr = "CX;12,2010-Feb-08;BKK,HKG";
lOnDStringList.clear();
lOnDStringList.push_back (lMktCXsINBKKOnDStr);
lOnDStringList.push_back (lCXBKKHKGOnDStr);

lOnDDateKey = OnDDateKey(lOnDStringList);
OnDDate& lCX_SINHKG_OnDDate =
    FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lCXInv, lCX_SINHKG_OnDDate);
FacBomManager::linkWithParent (lCXInv, lCX_SINHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lMktSINBKKSegment);
FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lBKKHKGSegment);

// Add total forecast info for cabin Y.
lCX_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);

// Add demand info
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YM1);
lCabinClassPairList.push_back(lCC_YM2);
lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
    StdDev2);

lCabinClassPairList.clear();

```

```

lCabinClassPairList.push_back(lCC_YY1);
lCabinClassPairList.push_back(lCC_YY2);
lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
    0StdDev1);

/*****
*****
// Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK) for CX's Inventory
lFullKeyList.clear();
lFullKeyList.push_back (lMktCX_SINBKK_FullKeyStr);

lOnDDateKey = OnDDateKey(lFullKeyList);
OnDDate& lMktCX_SINBKK_OnDDate =
    FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lCXInv, lMktCX_SINBKK_OnDDate);
FacBomManager::linkWithParent (lCXInv, lMktCX_SINBKK_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lMktCX_SINBKK_OnDDate, lMktSINBKKSegment);

// Demand info is not added for purely marketed O&Ds
// Add demand info
// lCabinClassPairList.clear();
// lCabinClassPairList.push_back(lCC_YM1);
// lMktCX_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
    .0, 1.0);
*****/

// Create an O&D Date (CX12/08-FEB-2010/BKK-HKG) for CX's Inventory
lOnDStringList.clear();
lOnDStringList.push_back (lCX_BKKHKG_OnDStr);

lOnDDateKey = OnDDateKey(lOnDStringList);
OnDDate& lCX_BKKHKG_OnDDate =
    FacBom<OnDDate>::instance().create (lOnDDateKey);
// Link to the inventory
FacBomManager::addToListAndMap (lCXInv, lCX_BKKHKG_OnDDate);
FacBomManager::linkWithParent (lCXInv, lCX_BKKHKG_OnDDate);

// Add the segments
FacBomManager::addToListAndMap (lCX_BKKHKG_OnDDate, lBKKHKGSegment);

// Add total forecast info for cabin Y.
lCX_BKKHKG_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);

// Add demand info
lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YM2);
lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
    StdDev1);

lCabinClassPairList.clear();
lCabinClassPairList.push_back(lCC_YY2);
const YieldDemandPair_T lYield700Mean10StdDev1 (lYield700, lMean10StdDev1 );
lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean10
    StdDev1);

/*=====
=====
=====

```

```

=====
=====*/
// Schedule:
// SQ:
// Step 1: flight period level
// Create a flight period for SQ11:
const DoWStruct lDoWSrtuct ("1111111");
const Date_T lDateRangeStart (2010, boost::gregorian::Feb, 8);
const Date_T lDateRangeEnd (2010, boost::gregorian::Feb, 9);
const DatePeriod_T lDatePeriod (lDateRangeStart, lDateRangeEnd);
const PeriodStruct lPeriodStruct (lDatePeriod, lDoWSrtuct);

lFlightNumber = FlightNumber_T (11);

FlightPeriodKey lFlightPeriodKey (lFlightNumber, lPeriodStruct);

FlightPeriod& lSQ11FlightPeriod =
    FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
FacBomManager::addToListAndMap (lSQInv, lSQ11FlightPeriod);
FacBomManager::linkWithParent (lSQInv, lSQ11FlightPeriod);

// Step 2: segment period level
// Create a segment period for SIN-BKK:

SegmentPeriodKey lSegmentPeriodKey (lSIN, lBKK);

SegmentPeriod& lSINBKKSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
FacBomManager::addToListAndMap (lSQ11FlightPeriod, lSINBKKSegmentPeriod);
FacBomManager::linkWithParent (lSQ11FlightPeriod, lSINBKKSegmentPeriod);

lSINBKKSegmentPeriod.setBoardingTime (10820);
lSINBKKSegmentPeriod.setOffTime (11100);
lSINBKKSegmentPeriod.setElapsedTime (10340);
ClassList_String_T lYM ("YM");
lSINBKKSegmentPeriod.addCabinBookingClassList (lY, lYM);

// CX:
// Step 1: flight period level
// Create a flight period for CX12:
lFlightNumber = FlightNumber_T (12);

lFlightPeriodKey = FlightPeriodKey(lFlightNumber, lPeriodStruct);

FlightPeriod& lCX12FlightPeriod =
    FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
FacBomManager::addToListAndMap (lCXInv, lCX12FlightPeriod);
FacBomManager::linkWithParent (lCXInv, lCX12FlightPeriod);

// Step 2: segment period level
// Create a segment period for BKK-HKG:

lSegmentPeriodKey = SegmentPeriodKey (lBKK, lHKG);

SegmentPeriod& lBKKHKGSegmentPeriod =
    FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
FacBomManager::addToListAndMap (lCX12FlightPeriod, lBKKHKGSegmentPeriod);
FacBomManager::linkWithParent (lCX12FlightPeriod, lBKKHKGSegmentPeriod);

lBKKHKGSegmentPeriod.setBoardingTime (11200);
lBKKHKGSegmentPeriod.setOffTime (11540);

```



```

    lBKHKHKGSegmentPeriod.setElapsedTime (10240);
    lBKHKHKGSegmentPeriod.addCabinBookingClassList (lY,lYM);

}

// ////////////////////////////////////////
void CmdBomManager::buildPartnershipsSamplePricing (BomRoot& ioBomRoot) {

    /*=====
    =====*/
    // First airport pair SIN-BKK.
    // Set the airport-pair primary key.
    AirportPairKey lAirportPairKey ("SIN", "BKK");

    // Create the AirportPairKey object and link it to the ioBomRoot object.
    AirportPair& lSINBKKAirportPair =
        FacBom<AirportPair>::instance().create (lAirportPairKey);
    FacBomManager::addToListAndMap (ioBomRoot, lSINBKKAirportPair);
    FacBomManager::linkWithParent (ioBomRoot, lSINBKKAirportPair);

    // Set the fare date-period primary key.
    const Date_T lDateRangeStart (2010, boost::gregorian::Jan, 15);
    const Date_T lDateRangeEnd (2010, boost::gregorian::Dec, 31);
    const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
    const DatePeriodKey lDatePeriodKey (lDateRange);

    // Create the DatePeriodKey object and link it to the PosChannel object.
    DatePeriod& lSINBKKDatePeriod =
        FacBom<DatePeriod>::instance().create (lDatePeriodKey);
    FacBomManager::addToListAndMap (lSINBKKAirportPair, lSINBKKDatePeriod);
    FacBomManager::linkWithParent (lSINBKKAirportPair, lSINBKKDatePeriod);

    // Set the point-of-sale-channel primary key.
    PosChannelKey lPosChannelKey ("SIN","IN");

    // Create the PositionKey object and link it to the AirportPair object.
    PosChannel& lSINPosChannel =
        FacBom<PosChannel>::instance().create (lPosChannelKey);
    FacBomManager::addToListAndMap (lSINBKKDatePeriod, lSINPosChannel);
    FacBomManager::linkWithParent (lSINBKKDatePeriod, lSINPosChannel);

    // Set the fare time-period primary key.
    const Time_T lTimeRangeStart (0, 0, 0);
    const Time_T lTimeRangeEnd (23, 0, 0);
    const TimePeriodKey lFareTimePeriodKey (lTimeRangeStart,
                                             lTimeRangeEnd);

    // Create the TimePeriodKey and link it to the DatePeriod object.
    TimePeriod& lSINBKKFareTimePeriod =
        FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
    FacBomManager::addToListAndMap (lSINPosChannel, lSINBKKFareTimePeriod);
    FacBomManager::linkWithParent (lSINPosChannel, lSINBKKFareTimePeriod);

    // Generate the FareRule
    const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ONE_WAY,
                                             NO_ADVANCE_PURCHASE,
                                             SATURDAY_STAY,
                                             CHANGE_FEES,
                                             NON_REFUNDABLE,
                                             NO_STAY_DURATION);

```

```

// Create the FareFeaturesKey and link it to the TimePeriod object.
FareFeatures& lSINBKKFareFeatures =
    FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
FacBomManager::addToListAndMap (lSINBKKFareTimePeriod, lSINBKKFareFeatures);
FacBomManager::linkWithParent (lSINBKKFareTimePeriod, lSINBKKFareFeatures);

// Generate Segment Features and link them to their FareRule.
AirlineCodeList_T lSQAirlineCodeList;
lSQAirlineCodeList.push_back ("SQ");

ClassList_StringList_T lYClassCodeList;
lYClassCodeList.push_back ("Y");
const AirlineClassListKey lSQAirlineYClassListKey (lSQAirlineCodeList,
                                                    lYClassCodeList);

ClassList_StringList_T lMClassCodeList;
lMClassCodeList.push_back ("M");
const AirlineClassListKey lSQAirlineMClassListKey (lSQAirlineCodeList,
                                                    lMClassCodeList);

// Create the AirlineClassListKey and link it to the FareFeatures object.
AirlineClassList& lSQAirlineYClassList =
    FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
lSQAirlineYClassList.setFare(700);
FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineYClassList);
FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineYClassList);

AirlineClassList& lSQAirlineMClassList =
    FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
lSQAirlineMClassList.setFare(500);
FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineMClassList);
FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineMClassList);

/*=====*/
// Second airport pair BKK-HKG.
// Set the airport-pair primary key.
lAirportPairKey = AirportPairKey ("BKK", "HKG");

// Create the AirportPairKey object and link it to the ioBomRoot object.
AirportPair& lBKKHKGAirportPair =
    FacBom<AirportPair>::instance().create (lAirportPairKey);
FacBomManager::addToListAndMap (ioBomRoot, lBKKHKGAirportPair);
FacBomManager::linkWithParent (ioBomRoot, lBKKHKGAirportPair);

// Set the fare date-period primary key.
// Use the same as previously.

// Create the DatePeriodKey object and link it to the PosChannel object.
DatePeriod& lBKKHKGDatePeriod =
    FacBom<DatePeriod>::instance().create (lDatePeriodKey);
FacBomManager::addToListAndMap (lBKKHKGAirportPair, lBKKHKGDatePeriod);
FacBomManager::linkWithParent (lBKKHKGAirportPair, lBKKHKGDatePeriod);

// Set the point-of-sale-channel primary key.
lPosChannelKey = PosChannelKey ("BKK", "IN");

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lBKKPosChannel =
    FacBom<PosChannel>::instance().create (lPosChannelKey);

```

```

FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lBKKPosChannel);
FacBomManager::linkWithParent (lBKKHKGDatePeriod, lBKKPosChannel);

// Set the fare time-period primary key.
// Use the same as previously.

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lBKKHKGFareTimePeriod =
    FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
FacBomManager::addToListAndMap (lBKKPosChannel, lBKKHKGFareTimePeriod);
FacBomManager::linkWithParent (lBKKPosChannel, lBKKHKGFareTimePeriod);

// Generate the FareRule
// Use the same key as previously.

// Create the FareFeaturesKey and link it to the TimePeriod object.
FareFeatures& lBKKHKGFareFeatures =
    FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
FacBomManager::addToListAndMap (lBKKHKGFareTimePeriod, lBKKHKGFareFeatures);
FacBomManager::linkWithParent (lBKKHKGFareTimePeriod, lBKKHKGFareFeatures);

// Generate Segment Features and link them to their FareRule.
AirlineCodeList_T lCXAirlineCodeList;
lCXAirlineCodeList.push_back ("CX");

const AirlineClassListKey lCXAirlineYClassListKey (lCXAirlineCodeList,
                                                    lYClassCodeList);

const AirlineClassListKey lCXAirlineMClassListKey (lCXAirlineCodeList,
                                                    lMClassCodeList);

// Create the AirlineClassListKey and link it to the FareFeatures object.
AirlineClassList& lCXAirlineYClassList =
    FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
lCXAirlineYClassList.setFare(700);
FacBomManager::addToListAndMap (lBKKHKGFareFeatures, lCXAirlineYClassList);
FacBomManager::linkWithParent (lBKKHKGFareFeatures, lCXAirlineYClassList);

AirlineClassList& lCXAirlineMClassList =
    FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
lCXAirlineMClassList.setFare(500);
FacBomManager::addToListAndMap (lBKKHKGFareFeatures, lCXAirlineMClassList);
FacBomManager::linkWithParent (lBKKHKGFareFeatures, lCXAirlineMClassList);

/*=====
=====*/
// Third airport pair SIN-HKG.
// Set the airport-pair primary key.
lAirportPairKey = AirportPairKey ("SIN", "HKG");

// Create the AirportPairKey object and link it to the ioBomRoot object.
AirportPair& lSINHKGAirportPair =
    FacBom<AirportPair>::instance().create (lAirportPairKey);
FacBomManager::addToListAndMap (ioBomRoot, lSINHKGAirportPair);
FacBomManager::linkWithParent (ioBomRoot, lSINHKGAirportPair);

// Set the fare date-period primary key.
// Use the same as previously.

// Create the DatePeriodKey object and link it to the PosChannel object.

```

```

DatePeriod& lSINHKGDatePeriod =
    FacBom<DatePeriod>::instance().create (lDatePeriodKey);
FacBomManager::addToListAndMap (lSINHKGAirportPair, lSINHKGDatePeriod);
FacBomManager::linkWithParent (lSINHKGAirportPair, lSINHKGDatePeriod);

// Set the point-of-sale-channel primary key.
lPosChannelKey = PosChannelKey("SIN","IN");

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lOnDSINPosChannel =
    FacBom<PosChannel>::instance().create (lPosChannelKey);
FacBomManager::addToListAndMap (lSINHKGDatePeriod, lOnDSINPosChannel);
FacBomManager::linkWithParent (lSINHKGDatePeriod, lOnDSINPosChannel);

// Set the fare time-period primary key.
// Use the same as previously.

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lSINHKGFAreTimePeriod =
    FacBom<TimePeriod>::instance().create (lFAreTimePeriodKey);
FacBomManager::addToListAndMap (lOnDSINPosChannel, lSINHKGFAreTimePeriod);
FacBomManager::linkWithParent (lOnDSINPosChannel, lSINHKGFAreTimePeriod);

// Generate the FareRule
// Use the same key as previously.

// Create the FareFeaturesKey and link it to the TimePeriod object.
FareFeatures& lSINHKGFAreFeatures =
    FacBom<FareFeatures>::instance().create (lFAreFeaturesKey);
FacBomManager::addToListAndMap (lSINHKGFAreTimePeriod, lSINHKGFAreFeatures);
FacBomManager::linkWithParent (lSINHKGFAreTimePeriod, lSINHKGFAreFeatures);

// Generate Segment Features and link them to their FareRule.
AirlineCodeList_T lSQ_CXAirlineCodeList;
lSQ_CXAirlineCodeList.push_back ("SQ");
lSQ_CXAirlineCodeList.push_back ("CX");

ClassList_StringList_T lY_YClassCodeList;
lY_YClassCodeList.push_back ("Y");
lY_YClassCodeList.push_back ("Y");
const AirlineClassListKey lSQ_CXAirlineYClassListKey (lSQ_CXAirlineCodeList,
                                                         lY_YClassCodeList);

ClassList_StringList_T lM_MClassCodeList;
lM_MClassCodeList.push_back ("M");
lM_MClassCodeList.push_back ("M");
const AirlineClassListKey lSQ_CXAirlineMClassListKey (lSQ_CXAirlineCodeList,
                                                         lM_MClassCodeList);

// Create the AirlineClassListKey and link it to the FareFeatures object.
AirlineClassList& lSQ_CXAirlineYClassList =
    FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
lSQ_CXAirlineYClassList.setFare(1200);
FacBomManager::addToListAndMap (lSINHKGFAreFeatures, lSQ_CXAirlineYClassList)
;
FacBomManager::linkWithParent (lSINHKGFAreFeatures, lSQ_CXAirlineYClassList);

AirlineClassList& lSQ_CXAirlineMClassList =
    FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);

```

```

lSQ_CXAirlineMClassList.setFare(850);
FacBomManager::addToListAndMap (lSINHKGFAreFeatures, lSQ_CXAirlineMClassList)
;
FacBomManager::linkWithParent (lSINHKGFAreFeatures, lSQ_CXAirlineMClassList);

/*=====
=====*/

// Use the same airport pair, and date period for adding SQ SIN-BKK yields.

// Set the point-of-sale-channel primary key.
lPosChannelKey = PosChannelKey(DEFAULT_POS, DEFAULT_CHANNEL);

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lRAC_SINBKKPosChannel =
    FacBom<PosChannel>::instance().create (lPosChannelKey);
FacBomManager::addToListAndMap (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);
FacBomManager::linkWithParent (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);

// Set the yield time-period primary key.
const TimePeriodKey lYieldTimePeriodKey (lTimeRangeStart,
                                           lTimeRangeEnd);

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lSINBKKYieldTimePeriod =
    FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
FacBomManager::addToListAndMap (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod
);
FacBomManager::linkWithParent (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod)
;

// Generate the YieldRule
const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ONE_WAY,
                                           CABIN_Y);

// Create the YieldFeaturesKey and link it to the TimePeriod object.
YieldFeatures& lSINBKKYieldFeatures =
    FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
FacBomManager::addToListAndMap (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures)
;
FacBomManager::linkWithParent (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures);

// Generate Segment Features and link them to their YieldRule.
// Use the same key as previously.

// Create the AirlineClassListKey and link it to the YieldFeatures object.
AirlineClassList& lRAC_SQAirlineYClassList =
    FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
lRAC_SQAirlineYClassList.setYield(700);
FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineYClassList
);
FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineYClassList
);

AirlineClassList& lRAC_SQAirlineMClassList =
    FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
lRAC_SQAirlineMClassList.setYield(500);
FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineMClassList
);

```

```

    t);
    FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineMClassList
    );

    /*=====
    =====*/

    // Use the same airport pair, and date period for adding CX BKK-HKG yields.

    // Set the point-of-sale-channel primary key.
    // Use the same as previously.

    // Create the PositionKey object and link it to the AirportPair object.
    PosChannel& lRAC_BKKHKGPosChannel =
        FacBom<PosChannel>::instance().create (lPosChannelKey);
    FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);
    FacBomManager::linkWithParent (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);

    // Set the yield time-period primary key.
    // Use the same as previously.

    // Create the TimePeriodKey and link it to the DatePeriod object.
    TimePeriod& lBKKHKGYieldTimePeriod =
        FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
    FacBomManager::addToListAndMap (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod
    );
    FacBomManager::linkWithParent (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod)
    ;

    // Generate the YieldRule
    // Use the same key as previously.

    // Create the YieldFeaturesKey and link it to the TimePeriod object.
    YieldFeatures& lBKKHKGYieldFeatures =
        FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
    FacBomManager::addToListAndMap (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures)
    ;
    FacBomManager::linkWithParent (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures);

    // Generate Segment Features and link them to their YieldRule.
    // Use the same key as previously.

    // Create the AirlineClassListKey and link it to the YieldFeatures object.
    AirlineClassList& lRAC_CXAirlineYClassList =
        FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
    lRAC_CXAirlineYClassList.setYield(700);
    FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassList
    );
    FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassList
    );

    AirlineClassList& lRAC_CXAirlineMClassList =
        FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
    lRAC_CXAirlineMClassList.setYield(500);
    FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassList
    );
    FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassList
    );

    /*=====
    =====*/

```

```

// Use the same airport pair, and date period for SQ-CX SIN-HKG

// Set the point-of-sale-channel primary key.
// Use the same as previously.

// Create the PositionKey object and link it to the AirportPair object.
PosChannel& lRAC_SINHKGChannel =
    FacBom<PosChannel>::instance().create (lPosChannelKey);
FacBomManager::addToListAndMap (lSINHKGDatePeriod, lRAC_SINHKGChannel);
FacBomManager::linkWithParent (lSINHKGDatePeriod, lRAC_SINHKGChannel);

// Set the yield time-period primary key.
// Use the same as previously.

// Create the TimePeriodKey and link it to the DatePeriod object.
TimePeriod& lSINHKGYieldTimePeriod =
    FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
FacBomManager::addToListAndMap (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);
FacBomManager::linkWithParent (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);

// Generate the YieldRule
// Use the same key as previously.

// Create the YieldFeaturesKey and link it to the TimePeriod object.
YieldFeatures& lSINHKGYieldFeatures =
    FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
FacBomManager::addToListAndMap (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures)
;
FacBomManager::linkWithParent (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures);

// Generate Segment Features and link them to their YieldRule.
// Use the same key as previously

// Create the AirlineClassListKey and link it to the YieldFeatures object.
AirlineClassList& lRAC_SQ_CXAirlineYClassList =
    FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
lRAC_SQ_CXAirlineYClassList.setYield(1200);
FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClass
List);
FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClassL
ist);

AirlineClassList& lRAC_SQ_CXAirlineMClassList =
    FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
lRAC_SQ_CXAirlineMClassList.setYield(850);
FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClass
List);
FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClassL
ist);

}

}

/*!

```

## 4 C++ Class Storing the StdAir Context

```

*/
// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <cassert>
#include <sstream>
// StdAir
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/service/STDAIR_ServiceContext.hpp>

namespace stdair {

    // //////////////////////////////////////
    STDAIR_ServiceContext::STDAIR_ServiceContext ()
        : _bomRoot (NULL), _eventQueue (NULL),
          _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
        // Build the BomRoot object
        init();
    }

    // //////////////////////////////////////
    STDAIR_ServiceContext::
    STDAIR_ServiceContext (const STDAIR_ServiceContext& iServiceContext)
        : _bomRoot (iServiceContext._bomRoot),
          _eventQueue (iServiceContext._eventQueue),
          _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
        assert (false);
    }

    // //////////////////////////////////////
    STDAIR_ServiceContext::~STDAIR_ServiceContext () {
    }

    // //////////////////////////////////////
    void STDAIR_ServiceContext::init () {
        //
        initBomRoot();

        //
        initEventQueue();
    }

    // //////////////////////////////////////
    void STDAIR_ServiceContext::initBomRoot () {
        _bomRoot = &FacBom<BomRoot>::instance().create();
    }

    // //////////////////////////////////////
    void STDAIR_ServiceContext::initEventQueue () {

        // The event queue key is just a string. For now, it is not used.
        const EventQueueKey lKey ("EQ01");

        // Create an EventQueue object instance
        EventQueue& lEventQueue = FacBom<EventQueue>::instance().create (lKey);
    }
}

```



```

        // Store the event queue object
        _eventQueue = &lEventQueue;
    }

    // //////////////////////////////////////
    const std::string STDAIR_ServiceContext::shortDisplay() const {
        std::ostringstream ostr;
        ostr << "STDAIR_ServiceContext -- " << _initType
            << " -- DB: " << _dbParams;
        if (_eventQueue != NULL) {
            ostr << " -- Queue: " << _eventQueue->toString();
        }
        return ostr.str();
    }

    // //////////////////////////////////////
    const std::string STDAIR_ServiceContext::display() const {
        std::ostringstream ostr;
        ostr << shortDisplay();
        return ostr.str();
    }

    // //////////////////////////////////////
    const std::string STDAIR_ServiceContext::describe() const {
        return shortDisplay();
    }

    // //////////////////////////////////////
    BomRoot& STDAIR_ServiceContext::getBomRoot() const {
        assert (_bomRoot != NULL);
        return *_bomRoot;
    }

    // //////////////////////////////////////
    EventQueue& STDAIR_ServiceContext::getEventQueue() const {
        assert (_eventQueue != NULL);
        return *_eventQueue;
    }
}

/*!
```

## 5 People

### 5.1 Project Admins (and Developers)

- Denis Arnaud <[denis\\_arnaud@users.sourceforge.net](mailto:denis_arnaud@users.sourceforge.net)> (N)
- Anh Quan Nguyen <[quannaus@users.sourceforge.net](mailto:quannaus@users.sourceforge.net)> (N)
- Gabrielle Sabatier <[gsabatier@users.sourceforge.net](mailto:gsabatier@users.sourceforge.net)> (N)

### 5.2 Retired Developers

- Mehdi Ayouni <[mehdi.ayouni@gmail.com](mailto:mehdi.ayouni@gmail.com)>

- Son Nguyen Kim <[snguyenkim@users.sourceforge.net](mailto:snguyenkim@users.sourceforge.net)> (N)

### 5.3 Contributors

- Emmanuel Bastien <[ebastien@users.sourceforge.net](mailto:ebastien@users.sourceforge.net)> (N)

### 5.4 Distribution Maintainers

- **Fedora/RedHat**: Denis Arnaud <[denis\\_arnaud@users.sourceforge.net](mailto:denis_arnaud@users.sourceforge.net)> (N)
- **Debian**: Emmanuel Bastien <[ebastien@users.sourceforge.net](mailto:ebastien@users.sourceforge.net)> (N)

#### Note

(N) - **Amadeus** employees.

## 6 Coding Rules

In the following sections we describe the naming conventions which are used for files, classes, structures, local variables, and global variables.

### 6.1 Default Naming Rules for Variables

Variables names follow Java naming conventions. Examples:

- `lNumberOfPassengers`
- `lSeatAvailability`

### 6.2 Default Naming Rules for Functions

Function names follow Java naming conventions. Example:

- `int myFunctionName (const int& a, int b)`

### 6.3 Default Naming Rules for Classes and Structures

Each new word in a class or structure name should always start with a capital letter and the words should be separated with an under-score. Abbreviations are written with capital letters. Examples:

- `MyClassName`
- `MyStructName`

## 6.4 Default Naming Rules for Files

Files are named after the C++ class names.

Source files are named using `.cpp` suffix, whereas header files end with `.hpp` extension. Examples:

- `FlightDate.hpp`
- `SegmentDate.cpp`

## 6.5 Default Functionality of Classes

All classes that are configured by input parameters should include:

- default empty constructor
- one or more additional constructor(s) that takes input parameters and initializes the class instance
- setup function, preferably named `'setup'` or `'set_parameters'`

Explicit destructor functions are not required, unless they are needed. It shall not be possible to use any of the other member functions unless the class has been properly initiated with the input parameters.

# 7 Copyright and License

## 7.1 GNU LESSER GENERAL PUBLIC LICENSE

### 7.1.1 Version 2.1, February 1999

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```
<one line to give the library's name and a brief idea of what it does.>
Copyright (C) <year> <name of author>

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```

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```
Yoyodyne, Inc., hereby disclaims all copyright interest in the
library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990
Ty Coon, President of Vice
```

That's all there is to it!

Source

## 8 Documentation Rules

### 8.1 General Rules

All classes in StdAir should be properly documented with Doxygen comments in include (.hpp) files. Source (.cpp) files should be documented according to a normal standard for well documented C++ code.

An example of how the interface of a class shall be documented in StdAir is shown here:

```
/*!
 * \brief Brief description of MyClass here
 *
 * Detailed description of MyClass here. With example code if needed.
 */
class MyClass {
```

```

public:
    //! Default constructor
    MyClass(void) { setup_done = false; }

    /*!
     * \brief Constructor that initializes the class with parameters
     *
     * Detailed description of the constructor here if needed
     *
     * \param[in] param1 Description of \a param1 here
     * \param[in] param2 Description of \a param2 here
     */
    MyClass(TYPE1 param1, TYPE2 param2) { setup(param1, param2); }

    /*!
     * \brief Setup function for MyClass
     *
     * Detailed description of the setup function here if needed
     *
     * \param[in] param1 Description of \a param1 here
     * \param[in] param2 Description of \a param2 here
     */
    void setup(TYPE1 param1, TYPE2 param2);

    /*!
     * \brief Brief description of memberFunction1
     *
     * Detailed description of memberFunction1 here if needed
     *
     * \param[in]      param1 Description of \a param1 here
     * \param[in]      param2 Description of \a param2 here
     * \param[in,out] param3 Description of \a param3 here
     * \return Description of the return value here
     */
    TYPE4 memberFunction1(TYPE1 param1, TYPE2 param2, TYPE3 &param3);

private:

    bool _setupDone;          /*!< Variable that checks if the class is properly
                               initialized with parameters */
    TYPE1 _privateVariable1; /*!< Short description of _privateVariable1 here
    TYPE2 _privateVariable2; /*!< Short description of _privateVariable2 here
};

```

## 8.2 File Header

All files should start with the following header, which include Doxygen's `\file`, `\brief` and `\author` tags, `$Date$` and `$Revisions$` CVS tags, and a common copyright note:

```

/*!
 * \file
 * \brief Brief description of the file here
 * \author Names of the authors who contributed to this code
 * \date Date
 *
 * Detailed description of the file here if needed.
 *
 * -----

```

```
*
* StdAir - C++ Standard Airline IT Object Library
*
* Copyright (C) 2009-2010 (\see authors file for a list of contributors)
*
* \see copyright file for license information
*
* -----
*/
```

### 8.3 Grouping Various Parts

All functions must be added to a Doxygen group in order to appear in the documentation. The following code example defines the group `'my_group'`:

```
/*!
 * \defgroup my_group Brief description of the group here
 *
 * Detailed description of the group here
 */
```

The following example shows how to document the function `myFunction` and how to add it to the group `my_group`:

```
/*!
 * \brief Brief description of myFunction here
 * \ingroup my_group
 *
 * Detailed description of myFunction here
 *
 * \param[in] param1 Description of \a param1 here
 * \param[in] param2 Description of \a param2 here
 * \return Description of the return value here
 */
TYPE3 myFunction(TYPE1 param1, TYPE2 &param2);
```

## 9 Main features

A short list of the main features of StdAir is given below sorted in different categories. Many more features and functions exist and for these we refer to the reference documentation.

### 9.1 Standard Airline IT Business Object Model (BOM)

- (Airline) Network-related classes:
  - Network, ReachableUniverse
- (Air) Travel-related classes:
  - TravelSolution, OriginDestination,

- (Airline) Inventory-related classes:
  - Inventory, FlightDate, SegmentDate, SegmentCabin, BookingClass, LegDate, LegCabin, Bucket
- (Airline) Schedule-related classes:
  - FlightPeriod, SegmentPeriod, LegPeriod
- (Simulated) Passenger-related demand classes:
  - DemandStream, BookingRequest
- (Air) Price-related classes:
  - YieldStore

## 9.2 Architecture of the StdAir library

- Separate structure and content classes
- `Boost.Fusion`

## 10 Make a Difference

**Do not ask what StdAir can do for you. Ask what you can do for StdAir.**

You can help us to develop the StdAir library. There are always a lot of things you can do:

- Start using StdAir
- Tell your friends about StdAir and help them to get started using it
- If you find a bug, report it to us (on the [dedicated Sourceforge's Trac Web site](#)). Without your help we can never hope to produce a bug free code.
- Help us to improve the documentation by providing information about documentation bugs
- Answer support requests in the StdAir [discussion forums](#) on SourceForge. If you know the answer to a question, help others to overcome their StdAir problems.
- Help us to improve our algorithms. If you know of a better way (e.g., that is faster or requires less memory) to implement some of our algorithms, then let us know.
- Help to port StdAir to new platforms. If you manage to compile StdAir on a new platform, then tell how you did it.
- Send your code. If you have a good StdAir compatible code, which you can release under the LGPL, and you think it should be included in StdAir, then send it to the community.

- Become an StdAir developer. Send us (see the [People](#) page) an e-mail and tell what you can do for StdAir.

## 11 Make a new release

### 11.1 Introduction

This document describes briefly the recommended procedure of releasing a new version of StdAir using a Linux development machine and the SourceForge project site.

The following steps are required to make a release of the distribution package.

### 11.2 Initialisation

Clone locally the full [Git project](#):

```
cd ~
mkdir -p dev/sim
cd ~/dev/sim
git clone git://stdair.git.sourceforge.net/gitroot/stdair/stdair stdairgit
cd stdairgit
git checkout trunk
```

### 11.3 Branch creation

Create the branch, on your local clone, corresponding to the new release (say, 0.5.0):

```
cd ~/dev/sim/stdairgit
git checkout trunk
git checkout -b 0.5.0
```

Update the version in the various build system files, replacing 99.99.99 by the correct version number:

```
vi CMakeLists.txt
vi autogen.sh
```

Update the version and add a change-log in the ChangeLog and in the RPM specification files:

```
vi ChangeLog
vi stdair.spec
```

### 11.4 Commit and publish the release branch

Commit the new release:

```
cd ~/dev/sim/stdairgit
git add -A
git commit -m "[Release 0.5.0] Release of version 0.5.0."
git push
```

## 11.5 Update the change-log in the trunk as well

Update the change-log in the ChangeLog and RPM specification files:

```
cd ~/dev/sim/stdairgit
git checkout trunk
vi ChangeLog
vi stdair.spec
```

Commit the change-logs and publish the trunk (main development branch):

```
git commit -m "[Doc] Integrated the change-log of the release 0.5.0."
git push
```

## 11.6 Create distribution packages

Create the distribution packages using the following command:

```
cd ~/dev/sim/stdairgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/stdair-0.5.0 \
      -DCMAKE_BUILD_TYPE:STRING=Debug -DINSTALL_DOC:BOOL=ON ..
make check && make dist
```

This will configure, compile and check the package. The output packages will be named, for instance, `stdair-0.5.0.tar.gz` and `stdair-0.5.0.tar.bz2`.

## 11.7 Generation the RPM packages

Optionally, generate the RPM package (for instance, for [Fedora/RedHat](#)):

```
cd ~/dev/sim/stdairgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/stdair-99.99.99 \
      -DCMAKE_BUILD_TYPE:STRING=Debug -DINSTALL_DOC:BOOL=ON ..
make dist
```

To perform this step, `rpm-build`, `rpmlint` and `rpmdevtools` have to be available on the system.

```
cp stdair.spec ~/dev/packages/SPECS \
  && cp stdair-0.5.0.tar.bz2 ~/dev/packages/SOURCES
cd ~/dev/packages/SPECS
rpmbuild -ba stdair.spec
rpmlint -i ../SPECS/stdair.spec ../SRPMS/stdair-0.5.0-1.fc15.src.rpm \
  ../RPMS/noarch/stdair-* ../RPMS/i686/stdair-*
```



## 11.8 Update distributed change log

Update the `NEWS` and `ChangeLog` files with appropriate information, including what has changed since the previous release. Then commit and push the changes into the [StdAir's Git repository](#).

## 11.9 Create the binary package, including the documentation

Create the binary package, which includes HTML and PDF documentation, using the following command:

```
make package
```

The output binary package will be named, for instance, `stdair-0.5.0-Linux.tar.bz2`. That package contains both the HTML and PDF documentation. The binary package contains also the executables and shared libraries, as well as C++ header files, but all of those do not interest us for now.

## 11.10 Upload the files to SourceForge

Upload the distribution and documentation packages to the SourceForge server. Check [SourceForge help page on uploading software](#).

## 11.11 Upload the documentation to SourceForge

In order to update the Web site files, either:

- [synchronise them with rsync and SSH](#):

```
cd ~/dev/sim/stdairgit
git checkout 0.5.0
rsync -aiv doc/html/ doc/latex/refman.pdf joe,stdair@web.sourceforge.net:htdocs/
```

where `-aiv` options mean:

- `-a`: archive/mirror mode; equals `-rlptgoD` (no `-H`, `-A`, `-X`)
- `-v`: increase verbosity
- `-i`: output a change-summary for all updates
- Note the trailing slashes (`/`) at the end of both the source and target directories. It means that the content of the source directory (`doc/html`), rather than the directory itself, has to be copied into the content of the target directory.

- or use the [SourceForge Shell service](#).

## 11.12 Make a new post

- submit a new entry in the [SourceForge project-related news feed](#)
- make a new post on the [SourceForge hosted WordPress blog](#)
- and update, if necessary, [Trac tickets](#).

## 11.13 Send an email on the announcement mailing-list

Finally, you should send an announcement to [stdair-announce@lists.sourceforge.net](mailto:stdair-announce@lists.sourceforge.net) (see <https://lists.sourceforge.net/lists/listinfo/stdair-announce> for the archives)

# 12 Installation

## 12.1 Table of Contents

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## 12.2 Fedora/RedHat Linux distributions

Note that on [Fedora/RedHat](#) Linux distributions, RPM packages are available and can be installed with your usual package manager. For instance:

```
yum -y install stdair-devel stdair-doc
```

RPM packages can also be available on the [SourceForge download site](#).

### 12.3 StdAir Requirements

StdAir should compile without errors or warnings on most GNU/Linux systems, on UNIX systems like Solaris SunOS, and on POSIX based environments for Microsoft Windows like Cygwin or MinGW with MSYS. It can be also built on Microsoft Windows NT/2000/XP/Vista/7 using Microsoft's Visual C++ .NET, but our support for this compiler is limited. For GNU/Linux, SunOS, Cygwin and MinGW we assume that you have at least the following GNU software installed on your computer:

- GNU Autotools:
  - `autoconf`,
  - `automake`,
  - `libtool`,
  - `make`, version 3.72.1 or later (check version with ``make --version``)
- `GCC` - GNU C++ Compiler (g++), version 4.3.x or later (check version with ``gcc --version``)
- `Boost` - C++ STL extensions, version 1.35 or later (check version with ``grep "define BOOST_LIB_VERSION" /usr/include/boost/version.hpp``)
- `MySQL` - Database client libraries, version 5.0 or later (check version with ``mysql --version``)
- `SOCI` - C++ database client library wrapper, version 3.0.0 or later (check version with ``soci-config --version``)

Optionally, you might need a few additional programs: `Doxygen`, `LaTeX`, `Dvips` and `Ghostscript`, to generate the HTML and PDF documentation.

We strongly recommend that you use recent stable releases of the GCC, if possible. We do not actively work on supporting older versions of the GCC, and they may therefore (without prior notice) become unsupported in future releases of StdAir.

### 12.4 Basic Installation

Briefly, the shell commands ``. /cmake .. && make install`` should configure, build and install this package. The following more-detailed instructions are generic; see the `'README'` file for instructions specific to this package. Some packages provide this `'INSTALL'` file but do not implement all of the features documented below. The lack of an optional feature in a given package is not necessarily a bug. More recommendations for GNU packages can be found in the info page corresponding to "Makefile Conventions: (standards)Makefile Conventions".

The `'cmake'` shell script attempts to guess correct values for various system-dependent variables used during compilation. It uses those values to create a `'Makefile'` in each directory of the package. It may also create one or more `'.h'` files containing system-dependent definitions. Finally, it creates a `'CMakeCache.txt'` cache file that you can refer to in the future to recreate the current configuration, and files `'CMakeFiles'` containing compiler output (useful mainly for debugging `'cmake'`).

It can also use an optional file (typically called `'config.cache'` and enabled with `'--cache-file=config.cache'` or simply `'-C'`) that saves the results of its tests to speed up reconfiguring. Caching is disabled by default to prevent problems with accidental use of stale cache files.

If you need to do unusual things to compile the package, please try to figure out how `'configure'` could check whether to do them, and mail diffs or instructions to the address given in the `'README'` so they can be considered for the next release. If you are using the cache, and at some point `'config.cache'` contains results you don't want to keep, you may remove or edit it.

The file `'CMakeLists.txt'` is used to create the `'Makefile'` files.

The simplest way to compile this package is:

1. `'cd'` to the directory containing the package's source code and type `'./cmake . '` to configure the package for your system. Running `'cmake'` is generally fast. While running, it prints some messages telling which features it is checking for.
2. Type `'make'` to compile the package.
3. Optionally, type `'make check'` to run any self-tests that come with the package, generally using the just-built uninstalled binaries.
4. Type `'make install'` to install the programs and any data files and documentation. When installing into a prefix owned by root, it is recommended that the package be configured and built as a regular user, and only the `'make install'` phase executed with root privileges.
5. You can remove the program binaries and object files from the source code directory by typing `'make clean'`. To also remove the files that `'configure'` created (so you can compile the package for a different kind of computer), type `'make distclean'`. There is also a `'make maintainer-clean'` target, but that is intended mainly for the package's developers. If you use it, you may have to get all sorts of other programs in order to regenerate files that came with the distribution.
6. Often, you can also type `'make uninstall'` to remove the installed files again. In practice, not all packages have tested that uninstallation works correctly, even though it is required by the GNU Coding Standards.

## 12.5 Compilers and Options

Some systems require unusual options for compilation or linking that the `'cmake'` script does not know about. Run `'./cmake --help'` for details on some of the pertinent environment variables.

You can give 'cmake' initial values for configuration parameters by setting variables in the command line or in the environment. Here is an example:

```
./cmake CC=c99 CFLAGS=-g LIBS=-lposix
```

#### See also

[Defining Variables](#) for more details.

## 12.6 Compiling For Multiple Architectures

You can compile the package for more than one kind of computer at the same time, by placing the object files for each architecture in their own directory. To do this, you can use GNU 'make'. 'cd' to the directory where you want the object files and executables to go and run the 'configure' script. 'configure' automatically checks for the source code in the directory that 'configure' is in and in '..'. This is known as a "VPATH" build.

With a non-GNU 'make', it is safer to compile the package for one architecture at a time in the source code directory. After you have installed the package for one architecture, use 'make distclean' before reconfiguring for another architecture.

On MacOS X 10.5 and later systems, you can create libraries and executables that work on multiple system types--known as "fat" or "universal" binaries--by specifying multiple '-arch' options to the compiler but only a single '-arch' option to the preprocessor. Like this:

```
./configure CC="gcc -arch i386 -arch x86_64 -arch ppc -arch ppc64" \  
CXX="g++ -arch i386 -arch x86_64 -arch ppc -arch ppc64" \  
CPP="gcc -E" CXXCPP="g++ -E"
```

This is not guaranteed to produce working output in all cases, you may have to build one architecture at a time and combine the results using the 'lipo' tool if you have problems.

## 12.7 Installation Names

By default, 'make install' installs the package's commands under '/usr/local/bin', include files under '/usr/local/include', etc. You can specify an installation prefix other than '/usr/local' by giving 'configure' the option '--prefix=PREFIX', where PREFIX must be an absolute file name.

You can specify separate installation prefixes for architecture-specific files and architecture-independent files. If you pass the option '--exec-prefix=PREFIX' to 'configure', the package uses

PREFIX as the prefix for installing programs and libraries. Documentation and other data files still use the regular prefix.

In addition, if you use an unusual directory layout you can give options like `--bindir=DIR` to specify different values for particular kinds of files. Run `configure --help` for a list of the directories you can set and what kinds of files go in them. In general, the default for these options is expressed in terms of `${prefix}`, so that specifying just `--prefix` will affect all of the other directory specifications that were not explicitly provided.

The most portable way to affect installation locations is to pass the correct locations to `configure`; however, many packages provide one or both of the following shortcuts of passing variable assignments to the `make install` command line to change installation locations without having to reconfigure or recompile.

The first method involves providing an override variable for each affected directory. For example, `make install prefix=/alternate/directory` will choose an alternate location for all directory configuration variables that were expressed in terms of `${prefix}`. Any directories that were specified during `configure`, but not in terms of `${prefix}`, must each be overridden at install time for the entire installation to be relocated. The approach of makefile variable overrides for each directory variable is required by the GNU Coding Standards, and ideally causes no recompilation. However, some platforms have known limitations with the semantics of shared libraries that end up requiring recompilation when using this method, particularly noticeable in packages that use GNU Libtool.

The second method involves providing the `DESTDIR` variable. For example, `make install DESTDIR=/alternate/directory` will prepend `/alternate/directory` before all installation names. The approach of `DESTDIR` overrides is not required by the GNU Coding Standards, and does not work on platforms that have drive letters. On the other hand, it does better at avoiding recompilation issues, and works well even when some directory options were not specified in terms of `${prefix}` at `configure` time.

## 12.8 Optional Features

If the package supports it, you can cause programs to be installed with an extra prefix or suffix on their names by giving `cmake` the option `--program-prefix=PREFIX` or `--program-suffix=SUFFIX`.

Some packages pay attention to `--enable-FEATURE` options to `configure`, where `FEATURE` indicates an optional part of the package. They may also pay attention to `--with-PACKAGE` options,

where PACKAGE is something like 'gnu-as' or 'x' (for the X Window System). The 'README' should mention any '--enable-' and '--with-' options that the package recognizes.

For packages that use the X Window System, 'configure' can usually find the X include and library files automatically, but if it doesn't, you can use the 'configure' options '--x-includes=DIR' and '--x-libraries=DIR' to specify their locations.

Some packages offer the ability to configure how verbose the execution of 'make' will be. For these packages, running './configure --enable-silent-rules' sets the default to minimal output, which can be overridden with 'make V=1'; while running './configure --disable-silent-rules' sets the default to verbose, which can be overridden with 'make V=0'.

## 12.9 Particular systems

On HP-UX, the default C compiler is not ANSI C compatible. If GNU CC is not installed, it is recommended to use the following options in order to use an ANSI C compiler:

```
./configure CC="cc -Ae -D_XOPEN_SOURCE=500"
```

and if that doesn't work, install pre-built binaries of GCC for HP-UX.

On OSF/1 a.k.a. Tru64, some versions of the default C compiler cannot parse its '<wchar.h>' header file. The option '-nodtk' can be used as a workaround. If GNU CC is not installed, it is therefore recommended to try

```
./configure CC="cc"
```

and if that doesn't work, try

```
./configure CC="cc -nodtk"
```

On Solaris, don't put '/usr/ucb' early in your 'PATH'. This directory contains several dysfunctional programs; working variants of these programs are available in '/usr/bin'. So, if you need '/usr/ucb' in your 'PATH', put it after '/usr/bin'.

On Haiku, software installed for all users goes in '/boot/common', not '/usr/local'. It is recommended to use the following options:

```
./cmake -DCMAKE_INSTALL_PREFIX=/boot/common
```

## 12.10 Specifying the System Type

There may be some features `'configure'` cannot figure out automatically, but needs to determine by the type of machine the package will run on. Usually, assuming the package is built to be run on the `_same_` architectures, `'configure'` can figure that out, but if it prints a message saying it cannot guess the machine type, give it the `'--build=TYPE'` option. `TYPE` can either be a short name for the system type, such as `'sun4'`, or a canonical name which has the form `CPU-COMPANY-SYSTEM`

where `SYSTEM` can have one of these forms:

- OS
- KERNEL-OS

See the file `'config.sub'` for the possible values of each field. If `'config.sub'` isn't included in this package, then this package doesn't need to know the machine type.

If you are `_building_` compiler tools for cross-compiling, you should use the option `'--target=TYPE'` to select the type of system they will produce code for.

If you want to `_use_` a cross compiler, that generates code for a platform different from the build platform, you should specify the `"host"` platform (i.e., that on which the generated programs will eventually be run) with `'--host=TYPE'`.

## 12.11 Sharing Defaults

If you want to set default values for `'configure'` scripts to share, you can create a site shell script called `'config.site'` that gives default values for variables like `'CC'`, `'cache_file'`, and `'prefix'`. `'configure'` looks for `'PREFIX/share/config.site'` if it exists, then `'PREFIX/etc/config.site'` if it exists. Or, you can set the `'CONFIG_SITE'` environment variable to the location of the site script. A warning: not all `'configure'` scripts look for a site script.

## 12.12 Defining Variables

Variables not defined in a site shell script can be set in the environment passed to `'configure'`. However, some packages may run `configure` again during the build, and the customized values of these variables may be lost. In order to avoid this problem, you should set them in the `'configure'` command line, using `'VAR=value'`. For example:

```
./configure CC=/usr/local2/bin/gcc
```



causes the specified 'gcc' to be used as the C compiler (unless it is overridden in the site shell script).

Unfortunately, this technique does not work for 'CONFIG\_SHELL' due to an Autoconf bug. Until the bug is fixed you can use this workaround:

```
CONFIG_SHELL=/bin/bash /bin/bash ./configure CONFIG_SHELL=/bin/bash
```

## 12.13 'cmake' Invocation

'cmake' recognizes the following options to control how it operates.

- '--help', '-h' print a summary of all of the options to 'configure', and exit.
- '--help=short', '--help=recursive' print a summary of the options unique to this package's 'configure', and exit. The 'short' variant lists options used only in the top level, while the 'recursive' variant lists options also present in any nested packages.
- '--version', '-V' print the version of Autoconf used to generate the 'configure' script, and exit.
- '--cache-file=FILE' enable the cache: use and save the results of the tests in FILE, traditionally 'config.cache'. FILE defaults to '/dev/null' to disable caching.
- '--config-cache', '-C' alias for '--cache-file=config.cache'.
- '--quiet', '--silent', '-q' do not print messages saying which checks are being made. To suppress all normal output, redirect it to '/dev/null' (any error messages will still be shown).
- '--srcdir=DIR' look for the package's source code in directory DIR. Usually 'configure' can determine that directory automatically.
- '--prefix=DIR' use DIR as the installation prefix.

### See also

[Installation Names](#) for more details, including other options available for fine-tuning the installation locations.

- '--no-create', '-n' run the configure checks, but stop before creating any output files.

'cmake' also accepts some other, not widely useful, options. Run 'cmake --help' for more details.

The 'cmake' script produces an output like this:

```

cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/stdair-0.50.0 \
-DLIB_SUFFIX=64 -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON ..
-- The C compiler identification is GNU
-- The CXX compiler identification is GNU
-- Check for working C compiler: /usr/lib64/ccache/gcc
-- Check for working C compiler: /usr/lib64/ccache/gcc -- works
-- Detecting C compiler ABI info
-- Detecting C compiler ABI info - done
-- Check for working CXX compiler: /usr/lib64/ccache/c++
-- Check for working CXX compiler: /usr/lib64/ccache/c++ -- works
-- Detecting CXX compiler ABI info
-- Detecting CXX compiler ABI info - done
-- Requires Git without specifying any version
-- Current Git revision name: e8beb4d11ff9b1af6b3f3e9ff1e92250aee0291a trunk
-- Requires PythonLibs-2.7
-- Found PythonLibs: /usr/lib64/libpython2.7.so (Required is at least version "2.7")
-- Found PythonLibs 2.7
-- Requires Boost-1.41
-- Boost version: 1.46.0
-- Found the following Boost libraries:
--   program_options
--   date_time
--   iostreams
--   serialization
--   filesystem
--   unit_test_framework
--   python
-- Found Boost version: 1.46.0
-- Found BoostWrapper: /usr/include (Required is at least version "1.41")
-- Requires ZeroMQ-2.0
-- Found ZeroMQ: /usr/lib64/libzmq.so (Required is at least version "2.0")
-- Found ZeroMQ version: 2.1
-- Requires MySQL-5.1
-- Using mysql-config: /usr/bin/mysql_config
-- Found MySQL: /usr/lib64/mysql/libmysqlclient.so (Required is at least version "5.1")
-- Found MySQL version: 5.5.14
-- Requires SOCI-3.0
-- Using soci-config: /usr/bin/soci-config
-- SOCI headers are buried
-- Found SOCI: /usr/lib64/libsoci_core.so (Required is at least version "3.0")
-- Found SOCIMySQL: /usr/lib64/libsoci_mysql.so (Required is at least version "3.0")
-- Found SOCI with MySQL back-end support version: 3.0.0
-- Requires Doxygen-1.7
-- Found Doxygen: /usr/bin/doxygen
-- Found DoxygenWrapper: /usr/bin/doxygen (Required is at least version "1.7")
-- Found Doxygen version: 1.7.4
-- Had to set the linker language for 'stdairlib' to CXX
-- Had to set the linker language for 'stdairuicllib' to CXX
-- Test 'StdAirTest' to be built with 'MPBomRoot.cpp;MPInventory.cpp;StandardAirlineITTestSuite.cpp'
--
-- =====
-- -----
-- ---      Project Information      ---
-- -----
-- PROJECT_NAME ..... : stdair
-- PACKAGE_PRETTY_NAME ..... : StdAir
-- PACKAGE ..... : stdair
-- PACKAGE_NAME ..... : STDAIR
-- PACKAGE_VERSION ..... : 0.50.0
-- GENERIC_LIB_VERSION ..... : 0.50.0
-- GENERIC_LIB_SOVERSION ..... : 99.99
--

```

```

-- -----
-- ---      Build Configuration      ---
-- -----
-- Modules to build ..... : stdair
-- Libraries to build/install ..... : stdairlib;stdairuicllib
-- Binaries to build/install ..... : stdair
-- Modules to test ..... : stdair
-- Binaries to test ..... : StdAirTesttst
--
-- * Module ..... : stdair
--   + Layers to build ..... : .;basic;bom;factory;dbadaptor;command;service
--   + Dependencies on other layers :
--   + Libraries to build/install . : stdairlib;stdairuicllib
--   + Executables to build/install : stdair
--   + Tests to perform ..... : StdAirTesttst
--
-- BUILD_SHARED_LIBS ..... : ON
-- CMAKE_BUILD_TYPE ..... : Debug
-- * CMAKE_C_FLAGS ..... :
-- * CMAKE_CXX_FLAGS ..... : -O2 -g -pipe -Wall -Wp,-D_FORTIFY_SOURCE=2 -fexceptions -fst
-- * BUILD_FLAGS ..... :
-- * COMPILE_FLAGS ..... :
-- CMAKE_MODULE_PATH ..... : /home/user/dev/sim/stdair/stdairgithub/config/
-- CMAKE_INSTALL_PREFIX ..... : /home/user/dev/deliveries/stdair-0.50.0
--
-- * Doxygen:
--   - DOXYGEN_VERSION ..... : 1.7.4
--   - DOXYGEN_EXECUTABLE ..... : /usr/bin/doxygen
--   - DOXYGEN_DOT_EXECUTABLE ..... : /usr/bin/dot
--   - DOXYGEN_DOT_PATH ..... : /usr/bin
--
-- -----
-- ---      Installation Configuration  ---
-- -----
-- INSTALL_LIB_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/lib64
-- INSTALL_BIN_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/bin
-- INSTALL_INCLUDE_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/include
-- INSTALL_DATA_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/share
-- INSTALL_SAMPLE_DIR ..... : /home/user/dev/deliveries/stdair-0.50.0/share/stdair/samples
-- INSTALL_DOC ..... : ON
--
-- -----
-- ---      Packaging Configuration      ---
-- -----
-- CPACK_PACKAGE_CONTACT ..... : Denis Arnaud <denis_arnaud - at - users dot sourceforge dot n
-- CPACK_PACKAGE_VENDOR ..... : Denis Arnaud
-- CPACK_PACKAGE_VERSION ..... : 0.50.0
-- CPACK_PACKAGE_DESCRIPTION_FILE . : /home/user/dev/sim/stdair/stdairgithub/README
-- CPACK_RESOURCE_FILE_LICENSE .... : /home/user/dev/sim/stdair/stdairgithub/COPYING
-- CPACK_GENERATOR ..... : TBZ2
-- CPACK_DEBIAN_PACKAGE_DEPENDS ... :
-- CPACK_SOURCE_GENERATOR ..... : TBZ2;TGZ
-- CPACK_SOURCE_PACKAGE_FILE_NAME . : stdair-0.50.0
--
-- -----
-- ---      External libraries          ---
-- -----
--
-- * Python:
--   - PYTHONLIBS_VERSION ..... : 2.7
--   - PYTHON_LIBRARIES ..... : /usr/lib64/libpython2.7.so
--   - PYTHON_INCLUDE_PATH ..... : /usr/include/python2.7

```

```
-- - PYTHON_INCLUDE_DIRS ..... : /usr/include/python2.7
-- - PYTHON_DEBUG_LIBRARIES ..... :
-- - Python_ADDITIONAL_VERSIONS . :
--
-- * ZeroMQ:
-- - ZeroMQ_VERSION ..... : 2.1
-- - ZeroMQ_LIBRARIES ..... : /usr/lib64/libzmq.so
-- - ZeroMQ_INCLUDE_DIR ..... : /usr/include
--
-- * Boost:
-- - Boost_VERSION ..... : 104600
-- - Boost_LIB_VERSION ..... : 1_46
-- - Boost_HUMAN_VERSION ..... : 1.46.0
-- - Boost_INCLUDE_DIRS ..... : /usr/include
-- - Boost required components .. : program_options;date_time;iostreams;serialization;filesystem;
-- - Boost required libraries ... : optimized;/usr/lib64/libboost_iostreams-mt.so;debug;/usr/lib
--
-- * MySQL:
-- - MYSQL_VERSION ..... : 5.5.14
-- - MYSQL_INCLUDE_DIR ..... : /usr/include/mysql
-- - MYSQL_LIBRARIES ..... : /usr/lib64/mysql/libmysqlclient.so
--
-- * SOCI:
-- - SOCI_VERSION ..... : 3.0.0
-- - SOCI_INCLUDE_DIR ..... : /usr/include/soci
-- - SOCI_MYSQL_INCLUDE_DIR ..... : /usr/include/soci
-- - SOCI_LIBRARIES ..... : /usr/lib64/libsoci_core.so
-- - SOCI_MYSQL_LIBRARIES ..... : /usr/lib64/libsoci_mysql.so
--
-- Change a value with: cmake -D<Variable>=<Value>
-- =====
--
-- Configuring done
-- Generating done
-- Build files have been written to: /home/user/dev/sim/stdair/stdairgithub/build
```

It is recommended that you check if your library has been compiled and linked properly and works as expected. To do so, you should execute the testing process 'make check'. As a result, you should obtain a similar report:

```
[ 0%] Built target hdr_cfg_stdair
[ 97%] Built target stdairlib
[100%] Built target StdAirTesttst
Scanning dependencies of target check_stdairtst
Test project /home/user/dev/sim/stdair/stdairgithub/build/test/stdair
  Start 1: StdAirTesttst
1/1 Test #1: StdAirTesttst ..... Passed    0.02 sec

100% tests passed, 0 tests failed out of 1

Total Test time (real) = 0.27 sec
[100%] Built target check_stdairtst
Scanning dependencies of target check
[100%] Built target check
```

Check if all the executed tests PASSED. If not, please contact us by filling a [bug-report](#).

Finally, you should install the compiled and linked library, include files and (optionally) HTML and PDF documentation by typing:

```
make install
```

Depending on the PREFIX settings during configuration, you might need the root (administrator) access to perform this step.

Eventually, you might invoke the following command

```
make clean
```

to remove all files created during compilation process, or even

```
cd ~/dev/sim/stdairgit
rm -rf build && mkdir build
cd build
```

to remove everything.

## 13 Linking with StdAir

### 13.1 Table of Contents

- [Introduction](#)
- [Using the pkg-config command](#)
- [Using the stdair-config script](#)
- [M4 macro for the GNU Autotools](#)
- [Using StdAir with dynamic linking](#)

### 13.2 Introduction

There are two convenient methods of linking your programs with the StdAir library. The first one employs the 'pkg-config' command (see <http://pkgconfig.freedesktop.org/>), whereas the second one uses 'stdair-config' script. These methods are shortly described below.

### 13.3 Using the pkg-config command

'pkg-config' is a helper tool used when compiling applications and libraries. It helps you insert the correct compiler and linker options. The syntax of the 'pkg-config' is as follows:

```
pkg-config <options> <library_name>
```

For instance, assuming that you need to compile an StdAir based program 'my\_prog.cpp', you should use the following command:

```
g++ `pkg-config --cflags stdair` -o my_prog my_prog.cpp \  
    `pkg-config --libs stdair`
```

For more information see the 'pkg-config' man pages.

### 13.4 Using the stdair-config script

StdAir provides a shell script called 'stdair-config', which is installed by default in '\$prefix/bin' ('/usr/local/bin') directory. It can be used to simplify compilation and linking of StdAir based programs. The usage of this script is quite similar to the usage of the 'pkg-config' command.

Assuming that you need to compile the program 'my\_prog.cpp' you can now do that with the following command:

```
g++ `stdair-config --cflags` -o my_prog my_prog.cpp `stdair-config --libs`
```

A list of 'stdair-config' options can be obtained by typing:

```
stdair-config --help
```

If the 'stdair-config' command is not found by your shell, you should add its location '\$prefix/bin' to the PATH environment variable, e.g.:

```
export PATH=/usr/local/bin:$PATH
```

### 13.5 M4 macro for the GNU Autotools

A M4 macro file is delivered with StdAir, namely 'stdair.m4', which can be found in, e.g., '/usr/share/aclocal'. When used by a 'configure' script, thanks to the 'AM\_PATH\_STDPAIR' macro (specified in the M4 macro file), the following Makefile variables are then defined:

- 'STDAIR\_VERSION' (e.g., defined to 0.2.0)
- 'STDAIR\_CFLAGS' (e.g., defined to '-I\${prefix}/include')
- 'STDAIR\_LIBS' (e.g., defined to '-L\${prefix}/lib -lstdair')

## 13.6 Using StdAir with dynamic linking

When using static linking some of the library routines in StdAir are copied into your executable program. This can lead to unnecessary large executables. To avoid having too large executable files you may use dynamic linking instead. Dynamic linking means that the actual linking is performed when the program is executed. This requires that the system is able to locate the shared StdAir library file during your program execution. If you install the StdAir library using a non-standard prefix, the `'LD_LIBRARY_PATH'` environment variable might be used to inform the linker of the dynamic library location, e.g.:

```
export LD_LIBRARY_PATH=<StdAir installation prefix>/lib:$LD_LIBRARY_PATH
```

## 14 Test Rules

This section describes how the functionality of the StdAir library should be verified. In the `'test/stdair'` subdirectory, test source files are provided. All functionality should be tested using these test source files.

### 14.1 The Test Source Files

Each new StdAir module/class should be accompanied with a test source file. The test source file is an implementation in C++ that tests the functionality of a function/class or a group of functions/classes called test suites. The test source file should test relevant parameter settings and input/output relations to guarantee correct functionality of the corresponding classes/functions. The test source files should be maintained using version control and updated whenever new functionality is added to the StdAir library.

The test source file should print relevant data to a standard output that can be used to verify the functionality. All relevant parameter settings should be tested.

The test source file should be placed in the `'test/stdair'` subdirectory and should have a name ending with `'TestSuite.cpp'`.

### 14.2 The Reference File

Consider a test source file named `'YieldTestSuite.cpp'`. A reference file named `'YieldTestSuite.ref'` should accompany the test source file. The reference file contains a reference printout of the standard output generated when running the test program. The reference file should be maintained using version control and updated according to the test source file.

### 14.3 Testing StdAir Library

One can compile and execute all test programs from the `'test/stdair'` sub-directory by typing:

```
% make check
```

after successful compilation of the StdAir library.

## 15 Users Guide

### 15.1 Table of Contents

- [Introduction](#)
- [Get Started](#)
  - [Get the StdAir library](#)
  - [Build the StdAir project](#)
  - [Build and Run the Tests](#)
  - [Install the StdAir Project \(Binaries, Documentation\)](#)
- [Exploring the Predefined BOM Tree](#)
  - [Airline Distribution BOM Tree](#)
  - [Airline Network BOM Tree](#)
  - [Airline Inventory BOM Tree](#)
- [Extending the BOM Tree](#)

### 15.2 Introduction

The `StdAir` library contains classes for airline business management. This document does not cover all the aspects of the `StdAir` library. It does however explain the most important things you need to know in order to start using `StdAir`.

### 15.3 Get Started

#### 15.3.1 Get the StdAir library

#### 15.3.2 Build the StdAir project

To run the configuration script the first time, go to the top directory (where the StdAir package has been un-packed), and issue either of the following two commands, depending on whether the StdAir project has been checked out from the Subversion repository or downloaded as a tar-ball package from the Sourceforge Web site:

- `./autogen.sh`
- `./configure`



### 15.3.3 Build and Run the Tests

### 15.3.4 Install the StdAir Project (Binaries, Documentation)

## 15.4 Exploring the Predefined BOM Tree

StdAir predefines a BOM (Business Object Model) tree specific to the airline IT arena.

### 15.4.1 Airline Distribution BOM Tree

- `stdair::TravelSolutionStruct`

### 15.4.2 Airline Network BOM Tree

- `stdair::FlightPeriod`

### 15.4.3 Airline Inventory BOM Tree

- `stdair::Inventory`
- `stdair::FlightDate`

#### 15.4.3.1 Airline Inventory Marketing BOM Tree

- `stdair::SegmentDate`
- `stdair::SegmentCabin`
- `stdair::FareFamily`
- `stdair::BookingClass`

#### 15.4.3.2 Airline Inventory Operating BOM Tree

- `stdair::LegDate`
- `stdair::LegCabin`
- `stdair::Bucket`

## 15.5 Extending the BOM Tree

# 16 Supported Systems

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- [StdAir 3.9.1](#)
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## 16.2 Introduction

This page is intended to provide a list of StdAir supported systems, i.e. the systems on which configuration, installation and testing process of the StdAir library has been successful. Results are grouped based on minor release number. Therefore, only the latest tests for bug-fix releases are included. Besides, the information on this page is divided into sections dependent on the operating system.

Where necessary, some extra information is given for each tested configuration, e.g. external libraries installed, configuration commands used, etc.

If you manage to compile, install and test the StdAir library on a system not mentioned below, please let us know, so we could update this database.

## 16.3 StdAir 3.10.x

### 16.3.1 Linux Systems

#### 16.3.1.1 Fedora Core 4 with ATLAS

- **Platform:** Intel Pentium 4

- **Operating System:** Fedora Core 4 (x86)
- **Compiler:** g++ (GCC) 4.0.2 20051125
- **StdAir release:** 3.10.0
- **External Libraries:** From FC4 distribution:
  - fftw3.i386-3.0.1-3
  - fftw3-devel.i386-3.0.1-3
  - atlas-sse2.i386-3.6.0-8.fc4
  - atlas-sse2-devel.i386-3.6.0-8.fc4
  - blas.i386-3.0-35.fc4
  - lapack.i386-3.0-35.fc4
- **Tests Status:** All tests PASSED
- **Comments:** StdAir configured with:

```
% CXXFLAGS="-O3 -pipe -march=pentium4" ./configure
```
- **Date:** March 7, 2006
- **Tester:** Tony Ottosson

#### 16.3.1.2 Gentoo Linux with ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler(s):** g++ (GCC) 3.4.5
- **StdAir release:** 3.10.1
- **External Libraries:** Compiled and installed from portage tree:
  - sci-libs/acml-3.0.0
- **Tests Status:** All tests PASSED
- **Comments:** BLAS and LAPACK libs set by using the following system commands:

```
% eselect blas set ACML
% eselect lapack set ACML
```

StdAir configured with:

```
% export CPPFLAGS="-I/usr/include/acml"
% ./configure --with-blas="-lblas"
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.1.3 Gentoo Linux with ATLAS

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86)
- **Compiler:** g++ (GCC) 3.4.5
- **StdAir release:** 3.10.1
- **External Libraries:** Compiled and installed from portage tree:
  - sci-libs/fftw-3.1
  - sci-libs/blas-atlas-3.6.0-r1
  - sci-libs/lapack-atlas-3.6.0
- **Tests Status:** All tests PASSED
- **Comments:** BLAS and LAPACK libs set by using the following system commands:

```
% eselect blas set ATLAS
% eselect lapack set ATLAS
```

StdAir configured with:

```
% ./configure --with-blas="-lblas"
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.1.4 Gentoo Linux with MKL

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler:** g++ (GCC) 3.4.5
- **StdAir release:** 3.10.0
- **External Libraries:** Intel Math Kernel Library (MKL) 8.0.1 installed manually in the following directory: /opt/intel/mkl/8.0.1
- **Tests Status:** All tests PASSED
- **Comments:** StdAir configured using the following commands:

```
% export LDFLAGS="-L/opt/intel/mkl/8.0.1/lib/32"
% export CPPFLAGS="-I/opt/intel/mkl/8.0.1/include"
% ./configure
```
- **Date:** February 28, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.1.5 Gentoo Linux with NetLib's BLAS and LAPACK

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86)
- **Compiler:** g++ (GCC) 3.4.5
- **StdAir release:** 3.10.1
- **External Libraries:** Compiled and installed from portage tree:
  - sci-libs/fftw-3.1
  - sci-libs/blas-reference-19940131-r2
  - sci-libs/cblas-reference-20030223
  - sci-libs/lapack-reference-3.0-r2
- **Tests Status:** All tests PASSED
- **Comments:** BLAS and LAPACK libs set by using the following system commands:

```
% blas-config reference
% lapack-config reference
```

StdAir configured with:

```
% ./configure --with-blas="-lblas"
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.1.6 Red Hat Enterprise Linux with StdAir External

- **Platform:** Intel Pentium 4
- **Operating System:** Red Hat Enterprise Linux AS release 4 (Nahant Update 2)
- **Compiler:** g++ (GCC) 3.4.4 20050721 (Red Hat 3.4.4-2)
- **StdAir release:** 3.10.0
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from StdAir External 2.1.1 package
- **Tests Status:** All tests PASSED
- **Date:** March 7, 2006
- **Tester:** Erik G. Larsson

## 16.3.1.7 SUSE Linux 10.0 with NetLib's BLAS and LAPACK

- **Platform:** Intel Pentium 4 CPU 3.20GHz (64-bit)
- **Operating System:** SUSE Linux 10.0 (x86\_64)
- **Compiler(s):** g++ (GCC) 4.0.2
- **StdAir release:** 3.10.0
- **External Libraries:** BLAS, LAPACK and FFTW libraries installed from OpenSuse 10.0 RPM repository:
  - blas-3.0-926
  - lapack-3.0-926
  - fftw3-3.0.1-114
  - fftw3-threads-3.0.1-114
  - fftw3-devel-3.0.1-114
- **Tests Status:** All tests PASSED
- **Comments:** StdAir configured with:

```
% export CXXFLAGS="-m64 -march=nocona -O3 -pipe"
% ./configure --with-lapack="/usr/lib64/liblapack.so.3"
```
- **Date:** March 1, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.1.8 SUSE Linux 10.0 with MKL

- **Platform:** Intel Pentium 4 CPU 3.20GHz (64-bit)
- **Operating System:** SUSE Linux 10.0 (x86\_64)
- **Compiler(s):** g++ (GCC) 4.0.2
- **StdAir release:** 3.10.0
- **External Libraries:** Intel Math Kernel Library (MKL) 8.0.1 installed manually in the following directory: /opt/intel/mkl/8.0.1
- **Tests Status:** All tests PASSED
- **Comments:** StdAir configured with:

```
% export CXXFLAGS="-m64 -march=nocona -O3 -pipe"
% export LDFLAGS="-L/opt/intel/mkl/8.0.1/lib/em64t"
% export CPPFLAGS="-I/opt/intel/mkl/8.0.1/include"
% ./configure
```
- **Date:** March 1, 2006
- **Tester:** Adam Piatyszek (ediap)

### 16.3.2 Windows Systems

#### 16.3.2.1 Microsoft Windows XP with Cygwin

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s):** g++ (GCC) 3.4.4 (cygming special)
- **StdAir release:** 3.10.1
- **External Libraries:** Installed from Cygwin's repository:
  - fftw-3.0.1-2
  - fftw-dev-3.0.1-1
  - lapack-3.0-4
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. StdAir configured with:

```
% ./configure
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

#### 16.3.2.2 Microsoft Windows XP with Cygwin and ATLAS

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s):** g++ (GCC) 3.4.4 (cygming special)
- **StdAir release:** 3.10.1
- **External Libraries:** Installed from Cygwin's repository:
  - fftw-3.0.1-2
  - fftw-dev-3.0.1-1ATLAS BLAS and LAPACK libraries from StdAir External 2.1.1 package configured using:

```
% ./configure --enable-atlas --disable-fftw
```
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% ./configure
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.2.3 Microsoft Windows XP with Cygwin and ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, Cygwin 1.5.19-4
- **Compiler(s):** g++ (GCC) 3.4.4 (cygming special)
- **StdAir release:** 3.10.2
- **External Libraries:** ACML version 3.1.0 (acml3.1.0-32-win32-g77.exe) installed into a default directory, i.e. "c:\Program Files\AMD\acml3.1.0"
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/cygdrive/c/Progra~1/AMD/acml3.1.0/gnu32/lib"
% export CPPFLAGS="-I/cygdrive/c/Progra~1/AMD/acml3.1.0/gnu32/include"
% ./configure --enable-debug
```
- **Date:** May 15, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.2.4 Microsoft Windows XP with MinGW, MSYS and ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, MinGW 5.0.2, MSYS 1.0.10
- **Compiler(s):** g++ (GCC) 3.4.4 (mingw special)
- **StdAir release:** 3.10.2
- **External Libraries:** ACML version 3.1.0 (acml3.1.0-32-win32-g77.exe) installed into a default directory, i.e. "c:\Program Files\AMD\acml3.1.0"
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/c/Progra~1/AMD/acml3.1.0/gnu32/lib"
% export CPPFLAGS="-I/c/Progra~1/AMD/acml3.1.0/gnu32/include"
% ./configure --enable-debug
```
- **Date:** May 15, 2006
- **Tester:** Adam Piatyszek (ediap)



## 16.3.2.5 Microsoft Windows XP with MinGW, MSYS and StdAir External

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2, MinGW 5.0.2, MSYS 1.0.10
- **Compiler(s):** g++ (GCC) 3.4.4 (mingw special)
- **StdAir release:** 3.10.5
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from StdAir External 2.2.0 package
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. StdAir configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% export CPPFLAGS="-I/usr/local/include"
% export CXXFLAGS="-Wall -O3 -march=athlon-tbird -pipe"
% ./configure --disable-html-doc
```

- **Date:** August 11, 2006
- **Tester:** Adam Piatyszek (ediap)

## 16.3.2.6 Microsoft Windows XP with MS Visual C++ and Intel MKL

- **Platform:** AMD Sempron 3000+
- **Operating System:** Microsoft Windows XP SP2
- **Compiler(s):** Microsoft Visual C++ 2005 .NET
- **StdAir release:** 3.10.5
- **External Libraries:** Intel Math Kernel Library (MKL) 8.1 installed manually in the following directory: "C:\Program Files\Intel\MKL\8.1"
- **Tests Status:** Not fully tested. Some StdAir based programs compiled and run with success.
- **Comments:** Only static library can be built. StdAir built by opening the "win32\stdair.vcproj" project file in MSVC++ and executing "Build -> Build Solution" command from menu.
- **Date:** August 11, 2006
- **Tester:** Adam Piatyszek (ediap)

### 16.3.3 Unix Systems

#### 16.3.3.1 SunOS 5.9 with StdAir External

- **Platform:** SUNW, Sun-Blade-100 (SPARC)
- **Operating System:** SunOS 5.9 Generic\_112233-10
- **Compiler(s):** g++ (GCC) 3.4.5
- **StdAir release:** 3.10.2
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from StdAir External 2.1.1 package. The following configuration command has been used:

```
% export CFLAGS="-mcpu=ultrasparc -O2 -pipe -funroll-all-loops"  
% ./configure
```

- **Tests Status:** All tests PASSED
- **Comments:** StdAir configured with:

```
% export LDFLAGS="-L/usr/local/lib"  
% export CPPFLAGS="-I/usr/local/include"  
% export CXXFLAGS="-mcpu=ultrasparc -O2 -pipe"  
% ./configure --enable-debug
```

- **Date:** May 15, 2006
- **Tester:** Adam Piatyszek (ediap)

## 17 StdAir Supported Systems (Previous Releases)

### 17.1 StdAir 3.9.1

### 17.2 StdAir 3.9.0

### 17.3 StdAir 3.8.1

## 18 Tutorials

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## 18.2 Introduction

This page contains some tutorial examples that will help you getting started using StdAir. Most examples show how to construct some simple business objects, i.e., instances of the so-named Business Object Model (BOM).

### 18.2.1 Preparing the StdAir Project for Development

The source code for these examples can be found in the `batches` and `test/stdair` directories. They are compiled along with the rest of the `StdAir` project. See the User Guide ([Users Guide](#)) for more details on how to build the `StdAir` project.

## 18.3 Build a Predefined BOM Tree

A few steps:

- [Instantiate the BOM Root Object](#)
- [Instantiate the \(Airline\) Inventory Object](#)
- [Link the Inventory Object with the BOM Root](#)

### 18.3.1 Instantiate the BOM Root Object

First, a BOM root object (i.e., a root for all the classes in the project) is instantiated by the `stdair::STDAIR_ServiceContext` context object, when the `stdair::STDAIR_Service` is itself instantiated. The corresponding `StdAir` type (class) is `stdair::BomRoot`.

In the following sample, that object is named `ioBomRoot`, and is given as input/output parameter of the `stdair::CmdBomManager::buildSampleBom()` method:

```
void CmdBomManager::buildSampleBom (BomRoot& ioBomRoot) {
```

### 18.3.2 Instantiate the (Airline) Inventory Object

An airline inventory object can then be instantiated. Let us give it the "BA" airline code (corresponding to [British Airways](#)) as the object key. That is, an object (let us name it `lBAKey`) of type (class) `stdair::InventoryKey` has first to be instantiated.

```
const InventoryKey lBAKey ("BA");
```

Thanks to that key, an airline inventory object, i.e. of type (class) `stdair::Inventory`, can be instantiated. Let us name that airline inventory object `lBAInv`.

```
Inventory& lBAInv = FacBom<Inventory>::instance().create (lBAKey);
```

### 18.3.3 Link the Inventory Object with the BOM Root

Then, both objects have to be linked: the airline inventory object (`stdair::Inventory`) has to be linked with the root of the BOM tree (`stdair::BomRoot`). That operation is as simple as using the `stdair::FacBomManager::addToListAndMap()` method:

```
FacBomManager::addToListAndMap (ioBomRoot, lBAInv);  
FacBomManager::linkWithParent (ioBomRoot, lBAInv);
```

### 18.3.4 Build Another Airline Inventory

Another airline inventory object, corresponding to the Air France ([Air France](#)) company, is instantiated the same way:

```
const InventoryKey lAFKey ("AF");  
Inventory& lAFInv = FacBom<Inventory>::instance().create (lAFKey);  
FacBomManager::addToListAndMap (ioBomRoot, lAFInv);  
FacBomManager::linkWithParent (ioBomRoot, lAFInv);
```

See the corresponding full program ([C++ Class Building Sample StdAir BOM Trees](#)) for more details.

### 18.3.5 Dump The BOM Tree Content

From the `BomRoot` (of type `stdair::BomRoot`) object instance, the list of airline inventories (of type `stdair::Inventory`) can then be retrieved...

```
const InventoryList_T& lInventoryList =  
    BomManager::getList<Inventory> (iBomRoot);
```

... and browsed:

```

for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
     itInv != lInventoryList.end(); ++itInv, ++invIdx) {
    const Inventory* lInv_ptr = *itInv;
    assert (lInv_ptr != NULL);

    // Retrieve the inventory key (airline code)
    const AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();

    // Display only the requested inventories
    if (iAirlineCode == "all" || iAirlineCode == lAirlineCode) {
        // Get the list of flight-dates for that inventory
        list (oStream, *lInv_ptr, invIdx, iFlightNumber);
    }
}

// ////////////////////////////////////////
void BomDisplay::list (std::ostream& oStream, const Inventory& iInventory,
                     const unsigned short iInventoryIndex,
                     const FlightNumber_T& iFlightNumber) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Check whether there are FlightDate objects
    if (BomManager::hasMap<FlightDate> (iInventory) == false) {
        return;
    }

    //
    const AirlineCode_T& lAirlineCode = iInventory.getAirlineCode();
    oStream << iInventoryIndex << ". " << lAirlineCode << std::endl;

    // Browse the flight-dates
    unsigned short lCurrentFlightNumber = 0;
    unsigned short flightNumberIdx = 0;
    unsigned short departureDateIdx = 1;
    const FlightDateMap_T& lFlightDateList =
        BomManager::getMap<FlightDate> (iInventory);
    for (FlightDateMap_T::const_iterator itFD = lFlightDateList.begin();
         itFD != lFlightDateList.end(); ++itFD, ++departureDateIdx) {
        const FlightDate* lFD_ptr = itFD->second;
        assert (lFD_ptr != NULL);

        // Retrieve the key of the flight-date
        const FlightNumber_T& lFlightNumber = lFD_ptr->getFlightNumber();
        const Date_T& lFlightDateDate = lFD_ptr->getDepartureDate();

        // Display only the requested flight number
        if (iFlightNumber == 0 || iFlightNumber == lFlightNumber) {
            //
            if (lCurrentFlightNumber != lFlightNumber) {
                lCurrentFlightNumber = lFlightNumber;
                ++flightNumberIdx; departureDateIdx = 1;
                oStream << " " << iInventoryIndex << "." << flightNumberIdx << ". "
                    << lAirlineCode << lFlightNumber << std::endl;
            }

            oStream << " " << iInventoryIndex << "." << flightNumberIdx
                << "." << departureDateIdx << ". "
                << lAirlineCode << lFlightNumber << " / " << lFlightDateDate

```

```

        << std::endl;
    }
}

// ////////////////////////////////////////
void BomDisplay::listAirportPairDateRange (std::ostream& oStream,
                                           const BomRoot& iBomRoot) {
    // Save the formatting flags for the given STL output stream
    FlagSaver flagSaver (oStream);

    // Check whether there are AirportPair objects
    if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
        return;
    }

    const AirportPairList_T& lAirportPairList =
        BomManager::getList<AirportPair> (iBomRoot);
    for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
         itAir != lAirportPairList.end(); ++itAir ) {
        const AirportPair* lAir_ptr = *itAir;
        assert (lAir_ptr != NULL);

        // Check whether there are date-period objects
        assert (BomManager::hasList<DatePeriod> (*lAir_ptr) == true);

        // Browse the date-period objects
        const DatePeriodList_T& lDatePeriodList =
            BomManager::getList<DatePeriod> (*lAir_ptr);

        for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
             itDP != lDatePeriodList.end(); ++itDP) {
            const DatePeriod* lDP_ptr = *itDP;
            assert (lDP_ptr != NULL);

            // Display the date-period object
            oStream << lAir_ptr->describeKey()
                << " / " << lDP_ptr->describeKey() << std::endl;
        }
    }
}

// ////////////////////////////////////////
void BomDisplay::csvDisplay (std::ostream& oStream,

```

See the corresponding full program ([C++ Utility Class Browsing and Dumping the StdAir BOM Tree](#)) for more details.

### 18.3.6 Result of the Tutorial Program

When the `stdair.cpp` program is run (with the `-b` option), the output should look like:

```

[D].../batches/stdair.cpp:243: Welcome to stdair
[D].../stdair/command/CmdBomManager.cpp:41: StdAir will build the BOM tree from
    built-in specifications.
[D].../batches/stdair.cpp:286:

```

```

=====
BomRoot:  -- ROOT  --
=====

+++++
Inventory: BA
+++++
*****
FlightDate: BA9, 2011-Jun-10
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
BA9 2011-Jun-10, LHR-BKK, 2011-Jun-10, 21:45:00, 2011-Jun-11, 15:40:00, 11:05:00,
1, 06:50:00, 9900, 0,
BA9 2011-Jun-10, BKK-SYD, 2011-Jun-11, 17:05:00, 2011-Jun-12, 15:40:00, 09:05:00,
1, 13:30:00, 8100, 0,
*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
BA9 2011-Jun-10, LHR-BKK 2011-Jun-10, Y, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 0, 0
, 3.52965e-319, 0, 0,
BA9 2011-Jun-10, BKK-SYD 2011-Jun-11, Y, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 0, 0
, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
BA9 2011-Jun-10, LHR-SYD 2011-Jun-10, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
BA9 2011-Jun-10, LHR-BKK 2011-Jun-10, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
BA9 2011-Jun-10, BKK-SYD 2011-Jun-11, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
(pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
BA9 2011-Jun-10, LHR-SYD 2011-Jun-10, Y, EcoSaver, Q, 0 (0), 0, 0, 0, 0, 0 (0), 0
, 0, 0, 0, 0, 0,
+++++
Inventory: AF
+++++
*****
FlightDate: AF84, 2011-Mar-20
*****
*****
Leg-Dates:
-----
Flight, Leg, BoardDate, BoardTime, OffDate, OffTime, Date Offset, Time Offset, El
apsed, Distance, Capacity,
AF84 2011-Mar-20, CDG-SFO, 2011-Mar-20, 10:40:00, 2011-Mar-20, 12:50:00, 11:10:00
, 0, -09:00:00, 9900, 0,

```

```

*****
*****
LegCabins:
-----
Flight, Leg, Cabin, OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, Comm
    Space, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice,
AF84 2011-Mar-20, CDG-SFO 2011-Mar-20, Y, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 9, 9, 0,
    0, 0, 0, 0,
*****
*****
Buckets:
-----
Flight, Leg, Cabin, Yield, AU/SI, SS, AV,
*****
*****
SegmentCabins:
-----
Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, CommSpace, AvPool, BP,
AF84 2011-Mar-20, CDG-SFO 2011-Mar-20, Y, EcoSaver, 0, 0, 0, 0, 9, 0,
*****
*****
Subclasses:
-----
Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), Nego, NS%, OB%, Bkgs, GrpBks
    (pdg), StfBkgs, WLBkgs, ETB, ClassAvl, RevAvl, SegAvl,
AF84 2011-Mar-20, CDG-SFO 2011-Mar-20, Y, EcoSaver, Q, 0 (0), 0, 0, 0, 0, 0 (0),
    0, 0, 0, 0, 0, 0,

```

See the corresponding full program ([Command-Line Utility to Demonstrate Typical StdAir Usage](#)) for more details.

## 18.4 Extend the Pre-Defined BOM Tree

Now that we master how to instantiate the pre-defined StdAir classes, let us see how to extend that BOM.

### 18.4.1 Extend an Airline Inventory Object

For instance, let us assume that some (IT) provider (e.g., you) would like to have a specific implementation of the `Inventory` object. The corresponding class has just to extend the `stdair::Inventory` class:

```

namespace myprovider {
    class Inventory : public stdair::Inventory {

```

The STL containers have to be defined accordingly too:

```

    typedef std::list<Inventory*> InventoryList_T;

```

See the full class definition ([Specific Implementation of an Airline Inventory](#)) and implementation ([Specific Implementation of an Airline Inventory](#)) for more details.



## 18.4.2 Build the Specific BOM Objects

The BOM root object (`stdair::BomRoot`) is instantiated the classical way:

```
stdair::BomRoot& lBomRoot = stdairService.getBomRoot();
```

Then, the specific implementation of the airline inventory object (`myprovider::Inventory`) can be instantiated the same way as a standard `Inventory` (`stdair::Inventory`) would be:

```
const stdair::InventoryKey lBAKey (lBAAirlineCode);
myprovider::Inventory& lBAInv =
    stdair::FacBom<myprovider::Inventory>::instance().create (lBAKey);
```

Then, the specific implementation of the airline inventory object (`myprovider::Inventory`) is linked to the root of the BOM tree (`stdair::BomRoot`) the same way as the standard `Inventory` (`stdair::Inventory`) would be:

```
stdair::FacBomManager::addToList (lBomRoot, lBAInv);
```

Another specific airline inventory object is instantiated the same way:

```
const stdair::InventoryKey lAFKey (lFAAirlineCode);
myprovider::Inventory& lAFInv =
    stdair::FacBom<myprovider::Inventory>::instance().create (lAFKey);
stdair::FacBomManager::addToList (lBomRoot, lAFInv);
```

From the `BomRoot` (of type `stdair::BomRoot`) object instance, the list of specific airline inventories (of type `stdair::Inventory`) can then be retrieved...

```
const myprovider::InventoryList_T& lInventoryList =
    stdair::BomManager::getList<myprovider::Inventory> (lBomRoot);
```

... and browsed:

```
for (myprovider::InventoryList_T::const_iterator itInv =
    lInventoryList.begin(); itInv != lInventoryList.end();
    ++itInv, ++idx) {
    const myprovider::Inventory* lInv_ptr = *itInv;
    BOOST_REQUIRE (lInv_ptr != NULL);

    BOOST_CHECK_EQUAL (lInventoryKeyArray[idx], lInv_ptr->describeKey());
    BOOST_CHECK_MESSAGE (lInventoryKeyArray[idx] == lInv_ptr->describeKey(),
        "They inventory key, '" << lInventoryKeyArray[idx]
        << "'", does not match that of the Inventory object: '"
        << lInv_ptr->describeKey() << "'");
}
```

### 18.4.3 Result of the Tutorial Program

When this program is run, the output should look like:

```
Inventory: BA
Inventory: AF
```

See the corresponding full program ([Command-Line Test to Demonstrate How To Extend StdAir BOM](#)) for more details.

## 19 Command-Line Utility to Demonstrate Typical StdAir Usage

```

*/
// STL
#include <cassert>
#include <iostream>
#include <sstream>
#include <fstream>
#include <string>
// Boost (Extended STL)
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/program_options.hpp>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
// StdAir
#include <stdair/stdair_types.hpp>
#include <stdair/bom/BomArchive.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <stdair/config/stdair-paths.hpp>

// ////////// Constants //////////
const std::string K_STDAIR_DEFAULT_LOG_FILENAME ("stdair.log");

const std::string K_STDAIR_DEFAULT_INPUT_FILENAME (STDAIR_SAMPLE_DIR
                                                    "/schedule01.csv");

const bool K_STDAIR_DEFAULT_BUILT_IN_INPUT = false;

const bool K_STDAIR_DEFAULT_BUILT_FOR_RMOL = false;

const bool K_STDAIR_DEFAULT_BUILT_FOR_CRS = false;

const int K_STDAIR_EARLY_RETURN_STATUS = 99;

// ////////// Parsing of Options & Configuration //////////
// A helper function to simplify the main part.
template<class T> std::ostream& operator<< (std::ostream& os,
                                           const std::vector<T>& v) {
    std::copy (v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
    return os;
}

int readConfiguration (int argc, char* argv[], bool& ioIsBuiltin,
```

```

        bool& ioIsForRMOL, bool& ioIsForCRS,
        stdair::Filename_T& ioInputFilename,
        std::string& ioLogFilename) {
// Default for the built-in input
ioIsBuiltin = K_STDAIR_DEFAULT_BUILT_IN_INPUT;

// Default for the RMOL input
ioIsForRMOL = K_STDAIR_DEFAULT_BUILT_FOR_RMOL;

// Default for the CRS input
ioIsForCRS = K_STDAIR_DEFAULT_BUILT_FOR_CRIS;

// Declare a group of options that will be allowed only on command line
boost::program_options::options_description generic ("Generic options");
generic.add_options()
    ("prefix", "print installation prefix")
    ("version,v", "print version string")
    ("help,h", "produce help message");

// Declare a group of options that will be allowed both on command
// line and in config file

boost::program_options::options_description config ("Configuration");
config.add_options()
    ("builtin,b",
     "The sample BOM tree can be either built-in or parsed from an input file. Th
     at latter must then be given with the -i/--input option")
    ("rmol,r",
     "Build a sample BOM tree for RMOL (i.e., a dummy flight-date with a single l
     eg-cabin)")
    ("crs,c",
     "Build a sample BOM tree for CRS")
    ("input,i",
     boost::program_options::value< std::string >(&ioInputFilename)->default_valu
     e(K_STDAIR_DEFAULT_INPUT_FILENAME),
     "(CVS) input file for the demand distributions")
    ("log,l",
     boost::program_options::value< std::string >(&ioLogFilename)->default_value(
     K_STDAIR_DEFAULT_LOG_FILENAME),
     "Filename for the logs")
    ;

// Hidden options, will be allowed both on command line and
// in config file, but will not be shown to the user.
boost::program_options::options_description hidden ("Hidden options");
hidden.add_options()
    ("copyright",
     boost::program_options::value< std::vector<std::string> >(),
     "Show the copyright (license)");

boost::program_options::options_description cmdline_options;
cmdline_options.add(generic).add(config).add(hidden);

boost::program_options::options_description config_file_options;
config_file_options.add(config).add(hidden);
boost::program_options::options_description visible ("Allowed options");
visible.add(generic).add(config);

boost::program_options::positional_options_description p;
p.add ("copyright", -1);

boost::program_options::variables_map vm;

```

```

boost::program_options::
    store (boost::program_options::command_line_parser (argc, argv).
            options (cmdline_options).positional(p).run(), vm);

std::ifstream ifs ("stdair.cfg");
boost::program_options::store (parse_config_file (ifs, config_file_options),
                               vm);
boost::program_options::notify (vm);

if (vm.count ("help")) {
    std::cout << visible << std::endl;
    return K_STDAIR_EARLY_RETURN_STATUS;
}

if (vm.count ("version")) {
    std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
    return K_STDAIR_EARLY_RETURN_STATUS;
}

if (vm.count ("prefix")) {
    std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
    return K_STDAIR_EARLY_RETURN_STATUS;
}

if (vm.count ("builtin")) {
    ioIsBuiltin = true;
}

if (vm.count ("rmol")) {
    ioIsForRMOL = true;

    // The RMOL sample tree takes precedence over the default built-in BOM tree
    ioIsBuiltin = false;
}

if (vm.count ("crs")) {
    ioIsForCRS = true;

    // The RMOL sample tree takes precedence over the default built-in BOM tree
    ioIsBuiltin = false;
}

const std::string isBuiltinStr = (ioIsBuiltin == true)?"yes":"no";
std::cout << "The BOM should be built-in? " << isBuiltinStr << std::endl;

const std::string isForRMOLStr = (ioIsForRMOL == true)?"yes":"no";
std::cout << "The BOM should be built-in for RMOL? " << isForRMOLStr
    << std::endl;

const std::string isForCRSStr = (ioIsForCRS == true)?"yes":"no";
std::cout << "The BOM should be built-in for CRS? " << isForCRSStr
    << std::endl;

if (ioIsBuiltin == false && ioIsForRMOL == false && ioIsForCRS == false) {
    if (vm.count ("input")) {
        ioInputFilename = vm["input"].as< std::string >();
        std::cout << "Input filename is: " << ioInputFilename << std::endl;
    } else {
        std::cerr << "Either one among the -b/--builtin, -r/--rmol, -c/--crs "
            << "or -i/--input options must be specified" << std::endl;
    }
}

```

```

    }

    if (vm.count ("log")) {
        ioLogFilename = vm["log"].as< std::string >();
        std::cout << "Log filename is: " << ioLogFilename << std::endl;
    }

    return 0;
}

// ////////////////////////////////// M A I N //////////////////////////////////
int main (int argc, char* argv[]) {

    // State whether the BOM tree should be built-in or parsed from an
    // input file
    bool isBuiltin;

    // State whether a sample BOM tree should be built for RMOL.
    bool isForRMOL;

    // State whether a sample BOM tree should be built for the CRS.
    bool isForCRS;

    // Input file name
    stdair::Filename_T lInputFilename;

    // Output log File
    std::string lLogFilename;

    // Call the command-line option parser
    const int lOptionParserStatus =
        readConfiguration (argc, argv, isBuiltin, isForRMOL, isForCRS,
                           lInputFilename, lLogFilename);

    if (lOptionParserStatus == K_STDAIR_EARLY_RETURN_STATUS) {
        return 0;
    }

    // Set the log parameters
    std::ofstream logOutputFile;
    // Open and clean the log outputfile
    logOutputFile.open (lLogFilename.c_str());
    logOutputFile.clear();

    const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
    stdair::STDAIR_Service stdairService (lLogParams);

    // DEBUG
    STDAIR_LOG_DEBUG ("Welcome to stdair");

    // Check whether or not a (CSV) input file should be read
    if (isBuiltin == true || isForRMOL == true || isForCRS == true) {

        if (isForRMOL == true) {
            // Build the sample BOM tree for RMOL
            stdairService.buildDummyInventory (300);

        } else if (isForCRS == true) {
            //
            stdair::TravelSolutionList_T lTravelSolutionList;
            stdairService.buildSampleTravelSolutions (lTravelSolutionList);
        }
    }
}

```

```

        // Build the sample BOM tree for CRS
        const stdair::BookingRequestStruct& lBookingRequest =
            stdairService.buildSampleBookingRequest();

        // DEBUG: Display the travel solution and booking request
        STDAIR_LOG_DEBUG ("Booking request: " << lBookingRequest.display());

        const std::string& lCSVDump =
            stdairService.csvDisplay (lTravelSolutionList);
        STDAIR_LOG_DEBUG (lCSVDump);

    } else {
        assert (isBuiltin == true);

        // Build a sample BOM tree
        stdairService.buildSampleBom();
    }

} else {
    // Read the input file
    //stdairService.readFromInputFile (lInputFilename);

    // DEBUG
    STDAIR_LOG_DEBUG ("StdAir will parse " << lInputFilename
        << " and build the corresponding BOM tree.");
}

// DEBUG: Display the whole BOM tree
const std::string& lCSVDump = stdairService.csvDisplay();
STDAIR_LOG_DEBUG (lCSVDump);

// Close the Log outputFile
logOutputFile.close();

/*
    Note: as that program is not intended to be run on a server in
    production, it is better not to catch the exceptions. When it
    happens (that an exception is throwned), that way we get the
    call stack.
*/

return 0;
}

/*!

```

## 20 Specific Implementation of a BOM Root

```

*/
// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <cassert>
// StdAir Test
#include <test/stdair/MPBomRoot.hpp>

namespace myprovider {

```

```

// //////////////////////////////////////
BomRoot::BomRoot (const Key_T& iKey) : stdair::BomRoot (iKey) {
}

// //////////////////////////////////////
BomRoot::~BomRoot () {
}

}
/*!

```

## 21 Specific Implementation of a BOM Root

```

*/

// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <string>
// StdAir
#include <stdair/bom/BomRoot.hpp>

namespace myprovider {

    class BomRoot : public stdair::BomRoot {
    public:
        // ////////////////////////////////// Display support methods //////////////////////////////////
        std::string toString() const { return describeKey(); }

        const std::string describeKey() const { return std::string (""); }

    public:
        BomRoot (const Key_T&);
        ~BomRoot ();
        BomRoot ();
        BomRoot (const BomRoot&);
    };

}
/*!

```

## 22 Specific Implementation of an Airline Inventory

```

*/

// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <cassert>
// StdAir
#include <stdair/stdair_inventory_types.hpp>
// StdAir Test
#include <test/stdair/MPInventory.hpp>

namespace myprovider {

```

```

// ////////////////////////////////////////
Inventory::Inventory (const Key_T& iKey) : stdair::Inventory (iKey) {
}

// ////////////////////////////////////////
Inventory::~Inventory () {
}

// ////////////////////////////////////////
std::string Inventory::toString() const {
    std::ostringstream oStr;
    oStr << _key.toString();
    return oStr.str();
}

// ////////////////////////////////////////
const std::string Inventory::describeKey() const {
    return _key.toString();
}

}
/*!

```

## 23 Specific Implementation of an Airline Inventory

```

*/

// ////////////////////////////////////////
// Import section
// ////////////////////////////////////////
// STL
#include <list>
// StdAir
#include <stdair/bom/Inventory.hpp>

namespace myprovider {

    class Inventory : public stdair::Inventory {
    public:
        // //////////// Display support methods ////////////
        std::string toString() const;

        const std::string describeKey() const;

    public:
        Inventory (const Key_T&);
        ~Inventory();
        Inventory ();
        Inventory (const Inventory&);
    };

    // //////////// Type definitions ////////////
    typedef std::list<Inventory*> InventoryList_T;

}
/*!

```



## 24 Command-Line Test to Demonstrate How To Extend StdAir BOM

```

*/
// ////////////////////////////////////////
// Import section
// ////////////////////////////////////////
// STL
#include <sstream>
#include <fstream>
#include <string>
// Boost MPL
#include <boost/mpl/push_back.hpp>
#include <boost/mpl/vector.hpp>
#include <boost/mpl/at.hpp>
#include <boost/mpl/assert.hpp>
#include <boost/type_traits/is_same.hpp>
// Boost Unit Test Framework (UTF)
#define BOOST_TEST_DYN_LINK
#define BOOST_TEST_MAIN
#define BOOST_TEST_MODULE StdAirTest
#if BOOST_VERSION >= 103900
#include <boost/test/unit_test.hpp>
#else // BOOST_VERSION >= 103900
#include <boost/test/test_tools.hpp>
#include <boost/test/results_reporter.hpp>
#include <boost/test/unit_test_suite.hpp>
#include <boost/test/output_test_stream.hpp>
#include <boost/test/unit_test_log.hpp>
#include <boost/test/framework.hpp>
#include <boost/test/detail/unit_test_parameters.hpp>
#endif // BOOST_VERSION >= 103900
// Boost Serialisation
#include <boost/archive/text_oarchive.hpp>
#include <boost/archive/text_iarchive.hpp>
// StdAir
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <stdair/basic/float_utils.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/factory/FacBomManager.hpp>
// StdAir Test Suite
#include <test/stdair/StdairTestLib.hpp>
#include <test/stdair/MPInventory.hpp>

namespace boost_utf = boost::unit_test;

#if BOOST_VERSION >= 103900

// (Boost) Unit Test XML Report
std::ofstream utfReportStream ("StandardAirlineITTestSuite_utfresults.xml");

struct UnitTestConfig {
    UnitTestConfig() {
        boost_utf::unit_test_log.set_stream (utfReportStream);
        boost_utf::unit_test_log.set_format (boost_utf::XML);
        boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
        // boost_utf::unit_test_log.set_threshold_level (boost_utf::log_successful_te
            sts);
    }
}

```

```

    }

    ~UnitTestFixture() {
    }
};

// ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////

// Set the UTF configuration (re-direct the output to a specific file)
BOOST_GLOBAL_FIXTURE (UnitTestFixture);

// Start the test suite
BOOST_AUTO_TEST_SUITE (master_test_suite)

BOOST_AUTO_TEST_CASE (float_comparison_test) {
    float a = 0.2f;
    a = 5*a;
    const float b = 1.0f;

    // Test the Boost way
    BOOST_CHECK_MESSAGE (a == b, "The two floats (" << a << " and " << b
                        << ") should be equal, but are not");
    BOOST_CHECK_CLOSE (a, b, 0.0001);

    // Test the Google way
    const FloatingPoint<float> lhs (a), rhs (b);
    BOOST_CHECK_MESSAGE (lhs.AlmostEquals (rhs),
                        "The two floats (" << a << " and " << b
                        << ") should be equal, but are not");
}

BOOST_AUTO_TEST_CASE (mpl_structure_test) {
    const stdair::ClassCode_T lBookingClassCodeA ("A");
    const stdair_test::BookingClass lA (lBookingClassCodeA);
    const stdair_test::Cabin lCabin (lA);

    BOOST_CHECK_EQUAL (lCabin.toString(), lBookingClassCodeA);
    BOOST_CHECK_MESSAGE (lCabin.toString() == lBookingClassCodeA,
                        "The cabin key, '" << lCabin.toString()
                        << "' is not equal to '" << lBookingClassCodeA << "'");

    // MPL
    typedef boost::mpl::vector<stdair_test::BookingClass> MPL_BookingClass;
    typedef boost::mpl::push_back<MPL_BookingClass,
                                stdair_test::Cabin>::type types;

    if (boost::is_same<stdair_test::BookingClass,
                    stdair_test::Cabin::child>::value == false) {
        BOOST_REQUIRE ("The two types must be equal, but are not");
    }

    if (boost::is_same<boost::mpl::at_c<types, 1>::type,
                    stdair_test::Cabin>::value == false) {
        BOOST_REQUIRE ("The type must be stdair_test::Cabin, but is not");
    }
}

BOOST_AUTO_TEST_CASE (stdair_service_initialisation_test) {
    // Output log File
    const std::string lLogFilename ("StandardAirlineITTestSuite_init.log");

```

```

// Set the log parameters
std::ofstream logOutputFile;

// Open and clean the log outputfile
logOutputFile.open (lLogFilename.c_str());
logOutputFile.clear();

// Initialise the stdair BOM
const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
stdair::STDAIR_Service stdairService (lLogParams);

// Retrieve (a reference on) the top of the BOM tree
stdair::BomRoot& lBomRoot = stdairService.getBomRoot();

// Retrieve the BomRoot key, and compare it to the expected one
const std::string& lBomRootKeyStr = lBomRoot.describeKey();
const std::string lBomRootString (" -- ROOT -- ");

// DEBUG
STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
                  << "'. It should be equal to '" << lBomRootString << "'");

BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
                    "The BOM root key, '" << lBomRootKeyStr
                    << "', should be equal to '" << lBomRootString
                    << "', but is not.");

// Build a sample BOM tree
stdairService.buildSampleBom();

// DEBUG: Display the whole BOM tree
const std::string& lCSVDump = stdairService.csvDisplay();
STDAIR_LOG_DEBUG (lCSVDump);

// Close the Log outputFile
logOutputFile.close();
}

BOOST_AUTO_TEST_CASE (bom_structure_instantiation_test) {
    // Step 0.0: initialisation
    // Create the root of the Bom tree (i.e., a BomRoot object)
    stdair::BomRoot& lBomRoot =
        stdair::FacBom<stdair::BomRoot>::instance().create();

    // Step 0.1: Inventory level
    // Create an Inventory (BA)
    const stdair::AirlineCode_T lBAAirlineCode ("BA");
    const stdair::InventoryKey lBAKey (lBAAirlineCode);
    myprovider::Inventory& lBAInv =
        stdair::FacBom<myprovider::Inventory>::instance().create (lBAKey);
    stdair::FacBomManager::addToList (lBomRoot, lBAInv);

    BOOST_CHECK_EQUAL (lBAInv.describeKey(), lBAAirlineCode);
    BOOST_CHECK_MESSAGE (lBAInv.describeKey() == lBAAirlineCode,
                        "The inventory key, '" << lBAInv.describeKey()
                        << "', should be equal to '" << lBAAirlineCode
                        << "', but is not");

    // Create an Inventory for AF
    const stdair::AirlineCode_T lFAAirlineCode ("AF");

```

```

const stdair::InventoryKey lAFKey (lFAirlineCode);
myprovider::Inventory& lAFInv =
    stdair::FacBom<myprovider::Inventory>::instance().create (lAFKey);
stdair::FacBomManager::addToList (lBomRoot, lAFInv);

BOOST_CHECK_EQUAL (lAFInv.describeKey(), lFAirlineCode);
BOOST_CHECK_MESSAGE (lAFInv.describeKey() == lFAirlineCode,
    "The inventory key, '" << lAFInv.describeKey()
    << "', should be equal to '" << lFAirlineCode
    << "', but is not");

// Browse the inventories
const myprovider::InventoryList_T& lInventoryList =
    stdair::BomManager::getList<myprovider::Inventory> (lBomRoot);
const std::string lInventoryKeyArray[2] = {lBAAirlineCode, lFAirlineCode};
short idx = 0;
for (myprovider::InventoryList_T::const_iterator itInv =
    lInventoryList.begin(); itInv != lInventoryList.end();
    ++itInv, ++idx) {
    const myprovider::Inventory* lInv_ptr = *itInv;
    BOOST_REQUIRE (lInv_ptr != NULL);

    BOOST_CHECK_EQUAL (lInventoryKeyArray[idx], lInv_ptr->describeKey());
    BOOST_CHECK_MESSAGE (lInventoryKeyArray[idx] == lInv_ptr->describeKey(),
        "They inventory key, '" << lInventoryKeyArray[idx]
        << "', does not match that of the Inventory object: '"
        << lInv_ptr->describeKey() << "'");
}
}

BOOST_AUTO_TEST_CASE (bom_structure_serialisation_test) {

    // Backup (thanks to Boost.Serialisation) file
    const std::string lBackupFilename = "StandardAirlineITTestSuite_serial.txt";

    // Output log File
    const std::string lLogFilename ("StandardAirlineITTestSuite_serial.log");

    // Set the log parameters
    std::ofstream logOutputFile;

    // Open and clean the log outputfile
    logOutputFile.open (lLogFilename.c_str());
    logOutputFile.clear();

    // Initialise the stdair BOM
    const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
    stdair::STDAIR_Service stdairService (lLogParams);

    // Build a sample BOM tree
    stdairService.buildSampleBom();

    // DEBUG: Display the whole BOM tree
    const std::string& lCSVDump = stdairService.csvDisplay();
    STDAIR_LOG_DEBUG (lCSVDump);

    // Retrieve (a reference on) the top of the BOM tree
    stdair::BomRoot& lBomRoot = stdairService.getBomRoot();

    // Retrieve the BomRoot key, and compare it to the expected one
    const std::string lBAInvKeyStr ("BA");
    stdair::Inventory* lBAInv_ptr = lBomRoot.getInventory (lBAInvKeyStr);

```

```

// DEBUG
STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
    << lBAInvKeyStr << "' key.");

BOOST_REQUIRE_MESSAGE (lBAInv_ptr != NULL,
    "An Inventory object should exist with the key, '"
    << lBAInvKeyStr << "'.");

// create and open a character archive for output
std::ofstream ofs (lBackupFilename.c_str());

// save data to archive
{
    boost::archive::text_oarchive oa (ofs);
    // write class instance to archive
    oa << lBomRoot;
    // archive and stream closed when destructors are called
}

// ... some time later restore the class instance to its original state
stdair::BomRoot& lRestoredBomRoot =
    stdair::FacBom<stdair::BomRoot>::instance().create();
{
    // create and open an archive for input
    std::ifstream ifs (lBackupFilename.c_str());
    boost::archive::text_iarchive ia (ifs);
    // read class state from archive
    ia >> lRestoredBomRoot;
    // archive and stream closed when destructors are called
}

// DEBUG: Display the whole BOM tree
std::ostringstream oRestoredCSVDumpStr;
stdair::BomDisplay::csvDisplay (oRestoredCSVDumpStr, lRestoredBomRoot);
STDAIR_LOG_DEBUG (oRestoredCSVDumpStr.str());

// Retrieve the BomRoot key, and compare it to the expected one
const std::string& lBomRootKeyStr = lRestoredBomRoot.describeKey();
const std::string lBomRootString (" -- ROOT -- ");

// DEBUG
STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
    << "'. It should be equal to '" << lBomRootString << "'");

BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
    "The BOM root key, '" << lBomRootKeyStr
    << "', should be equal to '" << lBomRootString
    << "', but is not.");

// Retrieve the Inventory
stdair::Inventory* lRestoredBAInv_ptr =
    lRestoredBomRoot.getInventory (lBAInvKeyStr);

// DEBUG
STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
    << lBAInvKeyStr << "' key.");

BOOST_CHECK_MESSAGE (lRestoredBAInv_ptr != NULL,
    "An Inventory object should exist with the key, '"
    << lBAInvKeyStr << "'.");

```

```
// Close the Log outputFile
logOutputFile.close();
}

// End the test suite
BOOST_AUTO_TEST_SUITE_END()

#else // BOOST_VERSION >= 103900
boost_utf::test_suite* init_unit_test_suite (int, char* []) {
    boost_utf::test_suite* test = BOOST_TEST_SUITE ("Unit test example 1");
    return test;
}
#endif // BOOST_VERSION >= 103900

/*!
```

## 25 Module Index

### 25.1 Modules

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std::basic_ios< wchar_t >	
std::basic_iostream< char >	
std::basic_iostream< wchar_t >	
std::basic_istream< char >	

```

std::basic_istream< wchar_t >
std::basic_istream< char >
std::basic_istream< wchar_t >
std::basic_ofstream< char >
std::basic_ofstream< wchar_t >
std::basic_ostream< char >
std::basic_ostream< wchar_t >
std::basic_ostringstream< char >
std::basic_ostringstream< wchar_t >
std::basic_string< char >
std::basic_string< wchar_t >
std::basic_stringstream< char >
std::basic_stringstream< wchar_t >

```

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<a href="#">test/stdair/StdairTestLib.hpp</a>	1267

## 31 Module Documentation

### 31.1 Abstract part of the Business Object Model (BOM)

#### Author

Anh Quan Nguyen <[quannaus@users.sourceforge.net](mailto:quannaus@users.sourceforge.net)>

#### Date

20/01/2010

### 31.2 Part of the Business Object Model (BOM) handling

(hash-like )keys

#### Author

Anh Quan Nguyen <[quannaus@users.sourceforge.net](mailto:quannaus@users.sourceforge.net)>

#### Date

20/01/2010

## 32 Directory Documentation

## 32.1 stdair/basic/ Directory Reference

### Files

- file [BasChronometer.cpp](#)
- file [BasChronometer.hpp](#)
- file [BasConst.cpp](#)
- file [BasConst\\_BomDisplay.hpp](#)
- file [BasConst\\_BookingClass.hpp](#)
- file [BasConst\\_DefaultObject.hpp](#)
- file [BasConst\\_Event.hpp](#)
- file [BasConst\\_General.hpp](#)
- file [BasConst\\_Inventory.hpp](#)
- file [BasConst\\_Period\\_BOM.hpp](#)
- file [BasConst\\_Request.hpp](#)
- file [BasConst\\_TravelSolution.hpp](#)
- file [BasConst\\_Yield.hpp](#)
- file [BasDBParams.cpp](#)
- file [BasDBParams.hpp](#)
- file [BasFileMgr.cpp](#)
- file [BasFileMgr.hpp](#)
- file [BasLogParams.cpp](#)
- file [BasLogParams.hpp](#)
- file [BasParserHelperTypes.hpp](#)
- file [BasParserTypes.hpp](#)
- file [BasTypes.hpp](#)
- file [ContinuousAttributeLite.hpp](#)
- file [DemandGenerationMethod.cpp](#)
- file [DemandGenerationMethod.hpp](#)
- file [DictionaryManager.cpp](#)
- file [DictionaryManager.hpp](#)
- file [EventType.cpp](#)
- file [EventType.hpp](#)
- file [float\\_utils.hpp](#)
- file [float\\_utils\\_google.hpp](#)
- file [ForecastingMethod.cpp](#)
- file [ForecastingMethod.hpp](#)
- file [PartnershipTechnique.cpp](#)
- file [PartnershipTechnique.hpp](#)
- file [PassengerType.cpp](#)
- file [PassengerType.hpp](#)
- file [ProgressStatus.cpp](#)
- file [ProgressStatus.hpp](#)
- file [ProgressStatusSet.cpp](#)
- file [ProgressStatusSet.hpp](#)
- file [RandomGeneration.cpp](#)
- file [RandomGeneration.hpp](#)

- file [SampleType.cpp](#)
- file [SampleType.hpp](#)
- file [ServiceInitialisationType.cpp](#)
- file [ServiceInitialisationType.hpp](#)
- file [StructAbstract.hpp](#)
- file [YieldRange.cpp](#)
- file [YieldRange.hpp](#)

## 32.2 batches/ Directory Reference

### Files

- file [stdair.cpp](#)

## 32.3 stdair/bom/ Directory Reference

### Files

- file [AirlineClassList.cpp](#)
- file [AirlineClassList.hpp](#)
- file [AirlineClassListKey.cpp](#)
- file [AirlineClassListKey.hpp](#)
- file [AirlineClassListTypes.hpp](#)
- file [AirlineFeature.cpp](#)
- file [AirlineFeature.hpp](#)
- file [AirlineFeatureKey.cpp](#)
- file [AirlineFeatureKey.hpp](#)
- file [AirlineFeatureTypes.hpp](#)
- file [AirlineStruct.cpp](#)
- file [AirlineStruct.hpp](#)
- file [AirportPair.cpp](#)
- file [AirportPair.hpp](#)
- file [AirportPairKey.cpp](#)
- file [AirportPairKey.hpp](#)
- file [AirportPairTypes.hpp](#)
- file [BomAbstract.hpp](#)
- file [BomArchive.cpp](#)
- file [BomArchive.hpp](#)
- file [BomDisplay.cpp](#)
- file [BomDisplay.hpp](#)
- file [BomHolder.hpp](#)
- file [BomHolderKey.cpp](#)
- file [BomHolderKey.hpp](#)
- file [BomJSONExport.cpp](#)
- file [BomJSONExport.hpp](#)



- file [BomJSONImport.cpp](#)
- file [BomJSONImport.hpp](#)
- file [BomKeyManager.cpp](#)
- file [BomKeyManager.hpp](#)
- file [BomManager.hpp](#)
- file [BomRetriever.cpp](#)
- file [BomRetriever.hpp](#)
- file [BomRoot.cpp](#)
- file [BomRoot.hpp](#)
- file [BomRootKey.cpp](#)
- file [BomRootKey.hpp](#)
- file [BookingClass.cpp](#)
- file [BookingClass.hpp](#)
- file [BookingClassKey.cpp](#)
- file [BookingClassKey.hpp](#)
- file [BookingClassTypes.hpp](#)
- file [BookingRequestStruct.cpp](#)
- file [BookingRequestStruct.hpp](#)
- file [BookingRequestTypes.hpp](#)
- file [Bucket.cpp](#)
- file [Bucket.hpp](#)
- file [BucketKey.cpp](#)
- file [BucketKey.hpp](#)
- file [BucketTypes.hpp](#)
- file [CancellationStruct.cpp](#)
- file [CancellationStruct.hpp](#)
- file [CancellationTypes.hpp](#)
- file [DatePeriod.cpp](#)
- file [DatePeriod.hpp](#)
- file [DatePeriodKey.cpp](#)
- file [DatePeriodKey.hpp](#)
- file [DatePeriodTypes.hpp](#)
- file [DoWStruct.cpp](#)
- file [DoWStruct.hpp](#)
- file [EventQueue.cpp](#)
- file [EventQueue.hpp](#)
- file [EventQueueKey.cpp](#)
- file [EventQueueKey.hpp](#)
- file [EventQueueTypes.hpp](#)
- file [EventStruct.cpp](#)
- file [EventStruct.hpp](#)
- file [EventTypes.hpp](#)
- file [FareFamily.cpp](#)
- file [FareFamily.hpp](#)
- file [FareFamilyKey.cpp](#)
- file [FareFamilyKey.hpp](#)

- file [FareFamilyTypes.hpp](#)
- file [FareFeatures.cpp](#)
- file [FareFeatures.hpp](#)
- file [FareFeaturesKey.cpp](#)
- file [FareFeaturesKey.hpp](#)
- file [FareFeaturesTypes.hpp](#)
- file [FareOptionStruct.cpp](#)
- file [FareOptionStruct.hpp](#)
- file [FareOptionTypes.hpp](#)
- file [FlightDate.cpp](#)
- file [FlightDate.hpp](#)
- file [FlightDateKey.cpp](#)
- file [FlightDateKey.hpp](#)
- file [FlightDateTypes.hpp](#)
- file [FlightPeriod.cpp](#)
- file [FlightPeriod.hpp](#)
- file [FlightPeriodKey.cpp](#)
- file [FlightPeriodKey.hpp](#)
- file [FlightPeriodTypes.hpp](#)
- file [GuillotineBlock.cpp](#)
- file [GuillotineBlock.hpp](#)
- file [GuillotineBlockKey.cpp](#)
- file [GuillotineBlockKey.hpp](#)
- file [GuillotineBlockTypes.hpp](#)
- file [Inventory.cpp](#)
- file [Inventory.hpp](#)
- file [InventoryKey.cpp](#)
- file [InventoryKey.hpp](#)
- file [InventoryTypes.hpp](#)
- file [key\\_types.hpp](#)
- file [KeyAbstract.hpp](#)
- file [LegCabin.cpp](#)
- file [LegCabin.hpp](#)
- file [LegCabinKey.cpp](#)
- file [LegCabinKey.hpp](#)
- file [LegCabinTypes.hpp](#)
- file [LegDate.cpp](#)
- file [LegDate.hpp](#)
- file [LegDateKey.cpp](#)
- file [LegDateKey.hpp](#)
- file [LegDateTypes.hpp](#)
- file [OnDDate.cpp](#)
- file [OnDDate.hpp](#)
- file [OnDDateKey.cpp](#)
- file [OnDDateKey.hpp](#)
- file [OnDDateTypes.hpp](#)

- file [OptimisationNotificationStruct.cpp](#)
- file [OptimisationNotificationStruct.hpp](#)
- file [OptimisationNotificationTypes.hpp](#)
- file [ParsedKey.cpp](#)
- file [ParsedKey.hpp](#)
- file [PeriodStruct.cpp](#)
- file [PeriodStruct.hpp](#)
- file [PosChannel.cpp](#)
- file [PosChannel.hpp](#)
- file [PosChannelKey.cpp](#)
- file [PosChannelKey.hpp](#)
- file [PosChannelTypes.hpp](#)
- file [RMEventStruct.cpp](#)
- file [RMEventStruct.hpp](#)
- file [RMEventTypes.hpp](#)
- file [SegmentCabin.cpp](#)
- file [SegmentCabin.hpp](#)
- file [SegmentCabinKey.cpp](#)
- file [SegmentCabinKey.hpp](#)
- file [SegmentCabinTypes.hpp](#)
- file [SegmentDate.cpp](#)
- file [SegmentDate.hpp](#)
- file [SegmentDateKey.cpp](#)
- file [SegmentDateKey.hpp](#)
- file [SegmentDateTypes.hpp](#)
- file [SegmentPeriod.cpp](#)
- file [SegmentPeriod.hpp](#)
- file [SegmentPeriodKey.cpp](#)
- file [SegmentPeriodKey.hpp](#)
- file [SegmentPeriodTypes.hpp](#)
- file [SnapshotStruct.cpp](#)
- file [SnapshotStruct.hpp](#)
- file [SnapshotTypes.hpp](#)
- file [TimePeriod.cpp](#)
- file [TimePeriod.hpp](#)
- file [TimePeriodKey.cpp](#)
- file [TimePeriodKey.hpp](#)
- file [TimePeriodTypes.hpp](#)
- file [TravelSolutionStruct.cpp](#)
- file [TravelSolutionStruct.hpp](#)
- file [TravelSolutionTypes.hpp](#)
- file [VirtualClassStruct.cpp](#)
- file [VirtualClassStruct.hpp](#)
- file [VirtualClassTypes.hpp](#)
- file [YieldFeatures.cpp](#)
- file [YieldFeatures.hpp](#)

- file [YieldFeaturesKey.cpp](#)
- file [YieldFeaturesKey.hpp](#)
- file [YieldFeaturesTypes.hpp](#)
- file [YieldStore.cpp](#)
- file [YieldStore.hpp](#)
- file [YieldStoreKey.cpp](#)
- file [YieldStoreKey.hpp](#)
- file [YieldStoreTypes.hpp](#)

## 32.4 stdair/ui/cmdline/ Directory Reference

### Files

- file [readline\\_autocomp.hpp](#)
- file [SReadline.hpp](#)  
*C++ wrapper around libreadline.*

## 32.5 stdair/command/ Directory Reference

### Files

- file [CmdAbstract.cpp](#)
- file [CmdAbstract.hpp](#)
- file [CmdBomManager.cpp](#)
- file [CmdBomManager.hpp](#)
- file [CmdBomSerialiser.cpp](#)
- file [CmdBomSerialiser.hpp](#)
- file [DBManagerForAirlines.cpp](#)
- file [DBManagerForAirlines.hpp](#)

## 32.6 stdair/config/ Directory Reference

### Files

- file [stdair-paths.hpp](#)

## 32.7 stdair/dbadaptor/ Directory Reference

### Files

- file [DbAbstract.cpp](#)
- file [DbAbstract.hpp](#)
- file [DbAirline.cpp](#)
- file [DbAirline.hpp](#)

## 32.8 stdair/factory/ Directory Reference

### Files

- file [FacAbstract.cpp](#)
- file [FacAbstract.hpp](#)
- file [FacBom.hpp](#)
- file [FacBomManager.hpp](#)

## 32.9 stdair/service/ Directory Reference

### Files

- file [DBSessionManager.cpp](#)
- file [DBSessionManager.hpp](#)
- file [FacServiceAbstract.cpp](#)
- file [FacServiceAbstract.hpp](#)
- file [FacSTDAIRServiceContext.cpp](#)
- file [FacSTDAIRServiceContext.hpp](#)
- file [FacSupervisor.cpp](#)
- file [FacSupervisor.hpp](#)
- file [Logger.cpp](#)
- file [Logger.hpp](#)
- file [ServiceAbstract.cpp](#)
- file [ServiceAbstract.hpp](#)
- file [STDAIR\\_Service.cpp](#)
- file [STDAIR\\_ServiceContext.cpp](#)
- file [STDAIR\\_ServiceContext.hpp](#)

## 32.10 test/stdair/ Directory Reference

### Files

- file [MPBomRoot.cpp](#)
- file [MPBomRoot.hpp](#)
- file [MPIInventory.cpp](#)
- file [MPIInventory.hpp](#)
- file [StandardAirlineITTestSuite.cpp](#)
- file [StdairTestLib.hpp](#)

## 32.11 stdair/ Directory Reference

### Directories

- directory [basic](#)
- directory [bom](#)
- directory [command](#)
- directory [config](#)
- directory [dbadaptor](#)
- directory [factory](#)
- directory [service](#)
- directory [ui](#)

### Files

- file [stdair\\_basic\\_types.hpp](#)
- file [stdair\\_date\\_time\\_types.hpp](#)
- file [stdair\\_db.hpp](#)
- file [stdair\\_demand\\_types.hpp](#)
- file [stdair\\_event\\_types.hpp](#)
- file [stdair\\_exceptions.hpp](#)
- file [stdair\\_fare\\_types.hpp](#)
- file [stdair\\_file.hpp](#)
- file [stdair\\_inventory\\_types.hpp](#)
- file [stdair\\_log.hpp](#)
- file [stdair\\_maths\\_types.hpp](#)
- file [stdair\\_rm\\_types.hpp](#)
- file [STDAIR\\_Service.hpp](#)
- file [stdair\\_service\\_types.hpp](#)
- file [stdair\\_types.hpp](#)

## 32.12 test/ Directory Reference

### Directories

- directory [stdair](#)

## 32.13 stdair/ui/ Directory Reference

### Directories

- directory [cmdline](#)

## 33 Namespace Documentation

### 33.1 boost Namespace Reference

Forward declarations.

#### Namespaces

- namespace [serialization](#)

#### 33.1.1 Detailed Description

Forward declarations.

### 33.2 boost::serialization Namespace Reference

### 33.3 bpt Namespace Reference

#### Typedefs

- typedef char [ptree](#)

#### 33.3.1 Typedef Documentation

##### 33.3.1.1 typedef char bpt::ptree

Definition at line 21 of file [BomJSONExport.hpp](#).

### 33.4 soci Namespace Reference

#### Classes

- struct [type\\_conversion](#)< [stdair::AirlineStruct](#) >

### 33.5 stdair Namespace Reference

Handle on the StdAir library context.

#### Namespaces

- namespace [LOG](#)

## Classes

- struct [BasChronometer](#)
- struct [DefaultDCPList](#)
- struct [DefaultDtdFratMap](#)
- struct [DefaultDtdProbMap](#)
- struct [BasDBParams](#)
  - Structure holding the parameters for connection to a database.*
- struct [BasFileMgr](#)
- struct [BasLogParams](#)
  - Structure holding parameters for logging.*
- struct [date\\_time\\_element](#)
- struct [ContinuousAttributeLite](#)
  - Class modeling the distribution of values that can be taken by a continuous attribute.*
- struct [DemandGenerationMethod](#)
  - Enumeration of demand (booking request) generation methods.*
- class [DictionaryManager](#)
  - Class wrapper of dictionary business methods.*
- struct [EventType](#)
- struct [ForecastingMethod](#)
- struct [PartnershipTechnique](#)
  - Enumeration of partnership techniques.*
- struct [PassengerType](#)
- struct [ProgressStatus](#)
- struct [ProgressStatusSet](#)
- struct [RandomGeneration](#)
  - Class holding a random generator.*
- struct [SampleType](#)
  - Enumeration of BOM sample types.*
- struct [ServiceInitialisationType](#)
  - Enumeration of service initialisation types.*
- struct [StructAbstract](#)
  - Base class for the light structures.*
- class [YieldRange](#)
- class [AirlineClassList](#)
  - Class representing the actual attributes for a segment-features.*
- struct [AirlineClassListKey](#)
  - Key of airport-pair.*
- class [AirlineFeature](#)
- struct [AirlineFeatureKey](#)
- struct [AirlineStruct](#)
- class [AirportPair](#)
  - Class representing the actual attributes for an airport-pair.*
- struct [AirportPairKey](#)



- Key of airport-pair.*
- class [BomAbstract](#)
  - Base class for the Business Object Model (BOM) layer.*
- class [BomArchive](#)
  - Utility class to archive/restore BOM objects with Boost serialisation.*
- class [BomDisplay](#)
  - Utility class to display StdAir objects with a pretty format.*
- class [BomHolder](#)
  - Class representing the holder of BOM object containers (list and map).*
- struct [BomHolderKey](#)
- class [BomJSONExport](#)
  - Utility class to export StdAir objects in a JSON format.*
- class [BomJSONImport](#)
  - Utility class to import StdAir objects in a JSON format.*
- class [BomKeyManager](#)
  - Utility class to extract key structures from strings.*
- class [BomManager](#)
  - Utility class for StdAir-based objects.*
- class [BomRetriever](#)
  - Utility class to retrieve StdAir objects.*
- class [BomRoot](#)
  - Class representing the actual attributes for the Bom root.*
- struct [BomRootKey](#)
  - Key of the BOM structure root.*
- class [BookingClass](#)
- struct [BookingClassKey](#)
- struct [BookingRequestStruct](#)
  - Structure holding the elements of a booking request.*
- class [Bucket](#)
  - Class representing the actual attributes for an airline booking class.*
- struct [BucketKey](#)
  - Key of booking-class.*
- struct [CancellationStruct](#)
  - Structure holding the elements of a travel solution.*
- class [DatePeriod](#)
  - Class representing the actual attributes for a fare date-period.*
- struct [DatePeriodKey](#)
  - Key of date-period.*
- struct [DoWStruct](#)
- class [EventQueue](#)
  - Class holding event structures.*
- struct [EventQueueKey](#)
- struct [EventStruct](#)
- class [FareFamily](#)

- Class representing the actual attributes for a family fare.*
- struct [FareFamilyKey](#)
  - Key of a given fare family, made of a fare family code.*
- class [FareFeatures](#)
  - Class representing the actual attributes for a fare date-period.*
- struct [FareFeaturesKey](#)
  - Key of date-period.*
- struct [FareOptionStruct](#)
  - Structure holding the elements of a fare option.*
- class [FlightDate](#)
  - Class representing the actual attributes for an airline flight-date.*
- struct [FlightDateKey](#)
  - Key of a given flight-date, made of a flight number and a departure date.*
- class [FlightPeriod](#)
- struct [FlightPeriodKey](#)
- class [GuillotineBlock](#)
  - Class representing the actual attributes for an airline guillotine-block.*
- struct [GuillotineBlockKey](#)
  - Key of a given guillotine block, made of a guillotine number.*
- class [Inventory](#)
  - Class representing the actual attributes for an airline inventory.*
- struct [InventoryKey](#)
  - Key of a given inventory, made of the airline code.*
- struct [KeyAbstract](#)
  - Base class for the keys of Business Object Model (BOM) layer.*
  - Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segemnt-dates in general.*
- class [LegCabin](#)
  - Class representing the actual attributes for an airline leg-cabin.*
- struct [LegCabinKey](#)
  - Key of a given leg-cabin, made of a cabin code (only).*
- class [LegDate](#)
- struct [LegDateKey](#)
- class [OnDDate](#)
  - Class representing the actual attributes for an airline flight-date.*
- struct [OnDDateKey](#)
  - Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).*
- struct [OptimisationNotificationStruct](#)
- struct [ParsedKey](#)
- struct [PeriodStruct](#)
- class [PosChannel](#)
  - Class representing the actual attributes for a fare point of sale.*

- struct [PosChannelKey](#)  
*Key of point of sale and channel.*
- struct [RMEventStruct](#)
- class [SegmentCabin](#)  
*Class representing the actual attributes for an airline segment-cabin.*
- struct [SegmentCabinKey](#)  
*Key of a given segment-cabin, made of a cabin code (only).*
- class [SegmentDate](#)  
*Class representing the actual attributes for an airline segment-date.*
- struct [SegmentDateKey](#)  
*Key of a given segment-date, made of an origin and a destination airports.*
- class [SegmentPeriod](#)
- struct [SegmentPeriodKey](#)
- struct [SnapshotStruct](#)
- class [TimePeriod](#)  
*Class representing the actual attributes for a fare time-period.*
- struct [TimePeriodKey](#)  
*Key of time-period.*
- struct [TravelSolutionStruct](#)  
*Structure holding the elements of a travel solution.*
- struct [VirtualClassStruct](#)
- class [YieldFeatures](#)  
*Class representing the actual attributes for a yield date-period.*
- struct [YieldFeaturesKey](#)  
*Key of date-period.*
- class [YieldStore](#)
- struct [YieldStoreKey](#)
- class [CmdAbstract](#)
- class [CmdBomManager](#)
- class [CmdBomSerialiser](#)
- class [DBManagerForAirlines](#)
- class [DbAbstract](#)
- class [FacAbstract](#)
- class [FacBom](#)  
*Base class for Factory layer.*
- class [FacBomManager](#)  
*Utility class for linking StdAir-based objects.*
- class [DBSessionManager](#)
- class [FacServiceAbstract](#)
- class [FacSTDAIRServiceContext](#)  
*Factory for [Bucket](#).*
- class [FacSupervisor](#)
- class [Logger](#)
- class [ServiceAbstract](#)

- class [STDAIR\\_ServiceContext](#)  
*Class holding the context of the Stdair services.*
- class [RootException](#)  
*Root of the stdair exceptions.*
- class [FileNotFoundException](#)
- class [NonInitialisedLogServiceException](#)
- class [NonInitialisedServiceException](#)
- class [NonInitialisedContainerException](#)
- class [NonInitialisedRelationShipException](#)
- class [MemoryAllocationException](#)
- class [ObjectLinkingException](#)
- class [DocumentNotFoundException](#)
- class [ParserException](#)
- class [SerialisationException](#)
- class [KeyNotFoundException](#)
- class [CodeConversionException](#)
- class [CodeDuplicationException](#)
- class [ObjectCreationDuplicationException](#)
- class [ObjectNotFoundException](#)
- class [ParsingFileFailedException](#)
- class [SQLDatabaseException](#)
- class [NonInitialisedDBSessionManagerException](#)
- class [SQLDatabaseConnectionImpossibleException](#)
- class [EventException](#)
- class [EventQueueException](#)
- class [RootFilePath](#)  
*Root of the input and output files.*
- class [InputFilePath](#)
- class [STDAIR\\_Service](#)  
*Interface for the STDAIR Services.*

#### Typedefs

- typedef [date\\_time\\_element](#)< 0, 23 > [hour\\_t](#)
- typedef [date\\_time\\_element](#)< 0, 59 > [minute\\_t](#)
- typedef [date\\_time\\_element](#)< 0, 59 > [second\\_t](#)
- typedef [date\\_time\\_element](#)< 1900, 2100 > [year\\_t](#)
- typedef [date\\_time\\_element](#)< 1, 12 > [month\\_t](#)
- typedef [date\\_time\\_element](#)< 1, 31 > [day\\_t](#)
- typedef std::istreambuf\_iterator< char > [base\\_iterator\\_t](#)
- typedef boost::spirit::multi\_pass< [base\\_iterator\\_t](#) > [iterator\\_t](#)
- typedef boost::spirit::qi::int\_parser< unsigned int, 10, 1, 1 > [int1\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< int, 10, 2, 2 > [uint2\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< int, 10, 4, 4 > [uint4\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< int, 10, 1, 4 > [uint1\\_4\\_p\\_t](#)

- typedef boost::spirit::qi::uint\_parser< [hour\\_t](#), 10, 2, 2 > [hour\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< [minute\\_t](#), 10, 2, 2 > [minute\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< [second\\_t](#), 10, 2, 2 > [second\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< [year\\_t](#), 10, 4, 4 > [year\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< [month\\_t](#), 10, 2, 2 > [month\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< [day\\_t](#), 10, 2, 2 > [day\\_p\\_t](#)
- typedef unsigned short [DictionaryKey\\_T](#)
- typedef std::list< [AirlineClassList](#) \* > [AirlineClassListList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [AirlineClassList](#) \* > [AirlineClassListMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [AirlineClassList](#) \* > [AirlineClassListWithKey\\_T](#)
- typedef std::list< [AirlineClassListWithKey\\_T](#) > [AirlineClassListDetailedList\\_T](#)
- typedef std::list< [AirlineFeature](#) \* > [AirlineFeatureList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [AirlineFeature](#) \* > [AirlineFeatureMap\\_T](#)
- typedef std::list< [AirportPair](#) \* > [AirportPairList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [AirportPair](#) \* > [AirportPairMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [AirportPair](#) \* > [AirportPairWithKey\\_T](#)
- typedef std::list< [AirportPairWithKey\\_T](#) > [AirportPairDetailedList\\_T](#)
- typedef std::map< const std::type\_info \*, [BomAbstract](#) \* > [HolderMap\\_T](#)
- typedef boost::tokenizer< boost::char\_separator< char > > [Tokeniser\\_T](#)
- typedef std::list< [BookingClass](#) \* > [BookingClassList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [BookingClass](#) \* > [BookingClassMap\\_T](#)
- typedef boost::shared\_ptr< [BookingRequestStruct](#) > [BookingRequestPtr\\_T](#)
- typedef std::string [DemandGeneratorKey\\_T](#)
- typedef std::list< [Bucket](#) \* > [BucketList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [Bucket](#) \* > [BucketMap\\_T](#)
- typedef boost::shared\_ptr< [CancellationStruct](#) > [CancellationPtr\\_T](#)
- typedef std::list< [DatePeriod](#) \* > [DatePeriodList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [DatePeriod](#) \* > [DatePeriodMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [DatePeriod](#) \* > [DatePeriodWithKey\\_T](#)
- typedef std::list< [DatePeriodWithKey\\_T](#) > [DatePeriodDetailedList\\_T](#)
- typedef std::list< [EventQueue](#) \* > [EventQueueList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [EventQueue](#) \* > [EventQueueMap\\_T](#)
- typedef std::pair< const [LongDuration\\_T](#), [EventStruct](#) > [EventListElement\\_T](#)
- typedef std::map< const [LongDuration\\_T](#), [EventStruct](#) > [EventList\\_T](#)
- typedef std::list< [FareFamily](#) \* > [FareFamilyList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [FareFamily](#) \* > [FareFamilyMap\\_T](#)
- typedef std::list< [FareFeatures](#) \* > [FareFeaturesList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [FareFeatures](#) \* > [FareFeaturesMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [FareFeatures](#) \* > [FareFeaturesWithKey\\_T](#)
- typedef std::list< [FareFeaturesWithKey\\_T](#) > [FareFeaturesDetailedList\\_T](#)
- typedef std::list< [FareOptionStruct](#) > [FareOptionList\\_T](#)
- typedef std::list< [FlightDate](#) \* > [FlightDateList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [FlightDate](#) \* > [FlightDateMap\\_T](#)
- typedef std::list< [FlightPeriod](#) \* > [FlightPeriodList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [FlightPeriod](#) \* > [FlightPeriodMap\\_T](#)
- typedef std::list< [GuillotineBlock](#) \* > [GuillotineBlockList\\_T](#)

- typedef std::map< const [MapKey\\_T](#), [GuillotineBlock](#) \* > [GuillotineBlockMap\\_T](#)
- typedef std::map< const [SegmentCabin](#) \*, [BlockNumber\\_T](#) > [SegmentCabinIndexMap\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [BlockIndex\\_T](#) > [ValueTypeIndexMap\\_T](#)
- typedef std::list< [Inventory](#) \* > [InventoryList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [Inventory](#) \* > [InventoryMap\\_T](#)
- typedef std::string [MapKey\\_T](#)
- typedef std::list< std::string > [KeyList\\_T](#)
- typedef std::list< [LegCabin](#) \* > [LegCabinList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [LegCabin](#) \* > [LegCabinMap\\_T](#)
- typedef std::list< [LegDate](#) \* > [LegDateList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [LegDate](#) \* > [LegDateMap\\_T](#)
- typedef std::list< [OnDDate](#) \* > [OnDDateList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [OnDDate](#) \* > [OnDDateMap\\_T](#)
- typedef std::pair< std::string, [YieldDemandPair\\_T](#) > [StringDemandStructPair\\_T](#)
- typedef std::map< std::string, [YieldDemandPair\\_T](#) > [StringDemandStructMap\\_T](#)
- typedef std::map< std::string, [CabinClassPairList\\_T](#) > [StringCabinClassPairListMap\\_T](#)
- typedef std::pair< std::string, [CabinClassPairList\\_T](#) > [StringCabinClassPair\\_T](#)
- typedef std::map< [CabinCode\\_T](#), [WTPDemandPair\\_T](#) > [CabinForecastMap\\_T](#)
- typedef std::pair< [CabinCode\\_T](#), [WTPDemandPair\\_T](#) > [CabinForecastPair\\_T](#)
- typedef boost::shared\_ptr< [OptimisationNotificationStruct](#) > [OptimisationNotificationPtr\\_T](#)
- typedef std::list< [PosChannel](#) \* > [PosChannelList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [PosChannel](#) \* > [PosChannelMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [PosChannel](#) \* > [PosChannelWithKey\\_T](#)
- typedef std::list< [PosChannelWithKey\\_T](#) > [PosChannelDetailedList\\_T](#)
- typedef boost::shared\_ptr< [RMEventStruct](#) > [RMEventPtr\\_T](#)
- typedef std::list< [RMEventStruct](#) > [RMEventList\\_T](#)
- typedef std::list< [SegmentCabin](#) \* > [SegmentCabinList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [SegmentCabin](#) \* > [SegmentCabinMap\\_T](#)
- typedef std::list< [SegmentDate](#) \* > [SegmentDateList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [SegmentDate](#) \* > [SegmentDateMap\\_T](#)
- typedef std::list< [SegmentPeriod](#) \* > [SegmentPeriodList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [SegmentPeriod](#) \* > [SegmentPeriodMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [SegmentPeriod](#) \* > [SegmentPeriodWithKey\\_T](#)
- typedef std::list< [SegmentPeriodWithKey\\_T](#) > [SegmentPeriodDetailedList\\_T](#)
- typedef boost::shared\_ptr< [SnapshotStruct](#) > [SnapshotPtr\\_T](#)
- typedef std::list< [TimePeriod](#) \* > [TimePeriodList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [TimePeriod](#) \* > [TimePeriodMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [TimePeriod](#) \* > [TimePeriodWithKey\\_T](#)
- typedef std::list< [TimePeriodWithKey\\_T](#) > [TimePeriodDetailedList\\_T](#)
- typedef std::list< [TravelSolutionStruct](#) > [TravelSolutionList\\_T](#)
- typedef [KeyList\\_T](#) [SegmentPath\\_T](#)
- typedef std::list< [SegmentPath\\_T](#) > [SegmentPathList\\_T](#)
- typedef std::map< const [ClassCode\\_T](#), [Availability\\_T](#) > [ClassAvailabilityMap\\_T](#)

- typedef std::list< [ClassAvailabilityMap\\_T](#) > [ClassAvailabilityMapHolder\\_T](#)
- typedef std::map< const [ClassCode\\_T](#), [YieldValue\\_T](#) > [ClassYieldMap\\_T](#)
- typedef std::list< [ClassYieldMap\\_T](#) > [ClassYieldMapHolder\\_T](#)
- typedef std::list< [BidPriceVector\\_T](#) > [BidPriceVectorHolder\\_T](#)
- typedef std::map< const [ClassCode\\_T](#), const [BidPriceVector\\_T](#) \* > [ClassBpvMap\\_T](#)
- typedef std::list< [ClassBpvMap\\_T](#) > [ClassBpvMapHolder\\_T](#)
- typedef std::list< [VirtualClassStruct](#) > [VirtualClassList\\_T](#)
- typedef std::map< const [Yield\\_T](#), [VirtualClassStruct](#) > [VirtualClassMap\\_T](#)
- typedef std::list< [YieldFeatures](#) \* > [YieldFeaturesList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [YieldFeatures](#) \* > [YieldFeaturesMap\\_T](#)
- typedef std::pair< [MapKey\\_T](#), [YieldFeatures](#) \* > [YieldFeaturesWithKey\\_T](#)
- typedef std::list< [YieldFeaturesWithKey\\_T](#) > [YieldFeaturesDetailedList\\_T](#)
- typedef std::list< [YieldStore](#) \* > [YieldStoreList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), [YieldStore](#) \* > [YieldStoreMap\\_T](#)
- typedef std::string [LocationCode\\_T](#)
- typedef unsigned long int [Distance\\_T](#)
- typedef [LocationCode\\_T](#) [AirportCode\\_T](#)
- typedef [LocationCode\\_T](#) [CityCode\\_T](#)
- typedef std::string [KeyDescription\\_T](#)
- typedef std::string [AirlineCode\\_T](#)
- typedef unsigned short [FlightNumber\\_T](#)
- typedef unsigned short [GuillotineNumber\\_T](#)
- typedef std::string [CabinCode\\_T](#)
- typedef std::string [FamilyCode\\_T](#)
- typedef std::string [ClassCode\\_T](#)
- typedef unsigned long [Identity\\_T](#)
- typedef std::string [TripType\\_T](#)
- typedef double [MonetaryValue\\_T](#)
- typedef double [RealNumber\\_T](#)
- typedef double [Percentage\\_T](#)
- typedef double [PriceValue\\_T](#)
- typedef double [YieldValue\\_T](#)
- typedef std::string [PriceCurrency\\_T](#)
- typedef double [Revenue\\_T](#)
- typedef double [Multiplier\\_T](#)
- typedef double [NbOfSeats\\_T](#)
- typedef unsigned int [Count\\_T](#)
- typedef short [PartySize\\_T](#)
- typedef double [NbOfRequests\\_T](#)
- typedef [NbOfRequests\\_T](#) [NbOfBookings\\_T](#)
- typedef [NbOfRequests\\_T](#) [NbOfCancellations\\_T](#)
- typedef unsigned short [NbOfTravelSolutions\\_T](#)
- typedef std::string [ClassList\\_String\\_T](#)
- typedef unsigned short [NbOfSegments\\_T](#)
- typedef unsigned short [NbOfAirlines\\_T](#)

- typedef double [Availability\\_T](#)
- typedef double [Fare\\_T](#)
- typedef bool [Flag\\_T](#)
- typedef unsigned int [UnsignedIndex\\_T](#)
- typedef std::string [Filename\\_T](#)
- typedef std::string [FileAddress\\_T](#)
- typedef float [ProgressPercentage\\_T](#)
- typedef boost::posix\_time::time\_duration [Duration\\_T](#)
- typedef boost::gregorian::date [Date\\_T](#)
- typedef boost::posix\_time::time\_duration [Time\\_T](#)
- typedef boost::posix\_time::ptime [DateTime\\_T](#)
- typedef boost::gregorian::date\_period [DatePeriod\\_T](#)
- typedef std::string [DOW\\_String\\_T](#)
- typedef boost::gregorian::date\_duration [DateOffset\\_T](#)
- typedef unsigned int [DayDuration\\_T](#)
- typedef bool [SaturdayStay\\_T](#)
- typedef long int [IntDuration\\_T](#)
- typedef unsigned long long int [LongDuration\\_T](#)
- typedef float [FloatDuration\\_T](#)
- typedef soci::session [DBSession\\_T](#)
- typedef soci::statement [DBRequestStatement\\_T](#)
- typedef std::string [DBConnectionName\\_T](#)
- typedef bool [ChangeFees\\_T](#)
- typedef bool [NonRefundable\\_T](#)
- typedef unsigned int [SaturdayStayRatio\\_T](#)
- typedef unsigned int [ChangeFeesRatio\\_T](#)
- typedef unsigned int [NonRefundableRatio\\_T](#)
- typedef std::string [PassengerType\\_T](#)
- typedef std::string [DistributionPatternId\\_T](#)
- typedef std::string [CancellationRateCurveId\\_T](#)
- typedef std::string [AirlinePreferenceId\\_T](#)
- typedef std::pair< [Percentage\\_T](#), [Percentage\\_T](#) > [CancellationNoShowRatePair\\_T](#)
- typedef std::string [CharacteristicsPatternId\\_T](#)
- typedef std::string [CharacteristicsIndex\\_T](#)
- typedef double [WTP\\_T](#)
- typedef boost::tuples::tuple< double, [WTP\\_T](#) > [CharacteristicsWTP\\_tuple\\_T](#)
- typedef std::pair< [WTP\\_T](#), [MeanStdDevPair\\_T](#) > [WTPDemandPair\\_T](#)
- typedef [NbOfRequests\\_T](#) [NbOfNoShows\\_T](#)
- typedef double [MatchingIndicator\\_T](#)
- typedef std::string [DemandStreamKeyStr\\_T](#)
- typedef std::string [ChannelLabel\\_T](#)
- typedef std::string [FrequentFlyer\\_T](#)
- typedef std::string [RequestStatus\\_T](#)
- typedef std::map< [Identity\\_T](#), [Identity\\_T](#) > [BookingTSIDMap\\_T](#)
- typedef std::pair< [CabinCode\\_T](#), [ClassCode\\_T](#) > [CabinClassPair\\_T](#)



- typedef std::list< CabinClassPair\_T > CabinClassPairList\_T
- typedef double ProportionFactor\_T
- typedef std::list< ProportionFactor\_T > ProportionFactorList\_T
- typedef std::string OnDString\_T
- typedef std::list< OnDString\_T > OnDStringList\_T
- typedef std::string EventName\_T
- typedef double NbOfEvents\_T
- typedef std::string EventQueueID\_T
- typedef std::string EventGeneratorKey\_T
- typedef double NbOfFareRules\_T
- typedef std::string NetworkID\_T
- typedef std::vector< AirlineCode\_T > AirlineCodeList\_T
- typedef std::vector< ClassList\_String\_T > ClassList\_StringList\_T
- typedef std::vector< ClassCode\_T > ClassCodeList\_T
- typedef unsigned short SubclassCode\_T
- typedef std::string FlightPathCode\_T
- typedef std::map< CabinCode\_T, ClassList\_String\_T > CabinBookingClassMap\_T
- typedef double CabinCapacity\_T
- typedef double NbOfFlightDates\_T
- typedef double CommittedSpace\_T
- typedef double UPR\_T
- typedef double BookingLimit\_T
- typedef double AuthorizationLevel\_T
- typedef double CapacityAdjustment\_T
- typedef double BlockSpace\_T
- typedef bool AvailabilityStatus\_T
- typedef std::vector< Availability\_T > BucketAvailabilities\_T
- typedef double NbOfYields\_T
- typedef double NbOfInventoryControlRules\_T
- typedef bool CensorshipFlag\_T
- typedef short DTD\_T
- typedef short DCP\_T
- typedef std::list< DCP\_T > DCPList\_T
- typedef std::map< DTD\_T, RealNumber\_T > DTDFractMap\_T
- typedef std::map< FloatDuration\_T, float > DTDProbMap\_T
- typedef std::vector< CensorshipFlag\_T > CensorshipFlagList\_T
- typedef double BookingRatio\_T
- typedef double Yield\_T
- typedef unsigned int YieldLevel\_T
- typedef std::map< YieldLevel\_T, MeanStdDevPair\_T > YieldLevelDemandMap\_T
- typedef std::pair< Yield\_T, MeanStdDevPair\_T > YieldDemandPair\_T
- typedef double BidPrice\_T
- typedef std::vector< BidPrice\_T > BidPriceVector\_T
- typedef unsigned int SeatIndex\_T

- typedef std::string [ControlMode\\_T](#)
- typedef double [OverbookingRate\\_T](#)
- typedef double [ProtectionLevel\\_T](#)
- typedef std::vector< double > [EmsrValueList\\_T](#)
- typedef std::vector< double > [BookingLimitVector\\_T](#)
- typedef std::vector< double > [ProtectionLevelVector\\_T](#)
- typedef boost::multi\_array< double, 2 > [SnapshotBlock\\_T](#)
- typedef SnapshotBlock\_T::index\_range [SnapshotBlockRange\\_T](#)
- typedef SnapshotBlock\_T::array\_view< 1 >::type [SegmentCabinDTDSnapshotView\\_T](#)
- typedef SnapshotBlock\_T::array\_view< 2 >::type [SegmentCabinDTDRangeSnapshotView\\_T](#)
- typedef SnapshotBlock\_T::const\_array\_view< 1 >::type [ConstSegmentCabinDTDSnapshotView\\_T](#)
- typedef SnapshotBlock\_T::const\_array\_view< 2 >::type [ConstSegmentCabinDTDRangeSnapshotView\\_T](#)
- typedef unsigned short [BlockNumber\\_T](#)
- typedef unsigned short [BlockIndex\\_T](#)
- typedef unsigned int [ReplicationNumber\\_T](#)
- typedef unsigned long int [ExponentialSeed\\_T](#)
- typedef unsigned long int [UniformSeed\\_T](#)
- typedef unsigned long int [RandomSeed\\_T](#)
- typedef boost::minstd\_rand [BaseGenerator\\_T](#)
- typedef boost::uniform\_real [UniformDistribution\\_T](#)
- typedef boost::variate\_generator< [BaseGenerator\\_T](#) &, [UniformDistribution\\_T](#) > [UniformGenerator\\_T](#)
- typedef boost::normal\_distribution [NormalDistribution\\_T](#)
- typedef boost::variate\_generator< [BaseGenerator\\_T](#) &, [NormalDistribution\\_T](#) > [NormalGenerator\\_T](#)
- typedef boost::exponential\_distribution [ExponentialDistribution\\_T](#)
- typedef boost::variate\_generator< [BaseGenerator\\_T](#) &, [ExponentialDistribution\\_T](#) > [ExponentialGenerator\\_T](#)
- typedef double [MeanValue\\_T](#)
- typedef double [StdDevValue\\_T](#)
- typedef std::pair< [MeanValue\\_T](#), [StdDevValue\\_T](#) > [MeanStdDevPair\\_T](#)
- typedef float [Probability\\_T](#)
- typedef std::string [ForecasterMode\\_T](#)
- typedef short [HistoricalDataLimit\\_T](#)
- typedef std::string [OptimizerMode\\_T](#)
- typedef [NbOfBookings\\_T](#) [PolicyDemand\\_T](#)
- typedef std::vector< double > [GeneratedDemandVector\\_T](#)
- typedef std::vector< [GeneratedDemandVector\\_T](#) > [GeneratedDemandVectorHolder\\_T](#)
- typedef double [SellupProbability\\_T](#)
- typedef std::vector< [SellupProbability\\_T](#) > [SellupProbabilityVector\\_T](#)
- typedef std::vector< double > [SellupFactorHolder\\_T](#)
- typedef boost::shared\_ptr< [STDAIR\\_Service](#) > [STDAIR\\_ServicePtr\\_T](#)

## Functions

- const std::string [DEFAULT\\_BOM\\_ROOT\\_KEY](#) (" -- ROOT -- ")
- const double [DEFAULT\\_EPSILON\\_VALUE](#) (0.0001)
- const unsigned int [DEFAULT\\_FLIGHT\\_SPEED](#) (900)
- const [NbOfFlightDates\\_T](#) [DEFAULT\\_NB\\_OF\\_FLIGHTDATES](#) (0.0)
- const [Duration\\_T](#) [NULL\\_BOOST\\_TIME\\_DURATION](#) (-1,-1,-1)
- const unsigned int [DEFAULT\\_NB\\_OF\\_DAYS\\_IN\\_A\\_YEAR](#) (365)
- const unsigned int [DEFAULT\\_NUMBER\\_OF\\_SUBDIVISIONS](#) (1000)
- const [DayDuration\\_T](#) [DEFAULT\\_DAY\\_DURATION](#) (0)
- const [DatePeriod\\_T](#) [BOOST\\_DEFAULT\\_DATE\\_PERIOD](#) ([Date\\_T](#)(2007, 1, 1), [Date\\_T](#)(2007, 1, 1))
- const [DOW\\_String\\_T](#) [DEFAULT\\_DOW\\_STRING](#) ("0000000")
- const [DateOffset\\_T](#) [DEFAULT\\_DATE\\_OFFSET](#) (0)
- const [Date\\_T](#) [DEFAULT\\_DATE](#) (2010, boost::gregorian::Jan, 1)
- const [DateTime\\_T](#) [DEFAULT\\_DATETIME](#) ([DEFAULT\\_DATE](#), [NULL\\_BOOST\\_TIME\\_DURATION](#))
- const [Duration\\_T](#) [DEFAULT\\_EPSILON\\_DURATION](#) (0, 0, 0, 1)
- const [Count\\_T](#) [SECONDS\\_IN\\_ONE\\_DAY](#) (86400)
- const [Count\\_T](#) [MILLISECONDS\\_IN\\_ONE\\_SECOND](#) (1000)
- const [RandomSeed\\_T](#) [DEFAULT\\_RANDOM\\_SEED](#) (120765987)
- const [AirportCode\\_T](#) [AIRPORT\\_LHR](#) ("LHR")
- const [AirportCode\\_T](#) [AIRPORT\\_SYD](#) ("SYD")
- const [CityCode\\_T](#) [POS\\_LHR](#) ("LHR")
- const [Date\\_T](#) [DATE\\_20110115](#) (2011, boost::gregorian::Jan, 15)
- const [Date\\_T](#) [DATE\\_20111231](#) (2011, boost::gregorian::Dec, 31)
- const [DayDuration\\_T](#) [NO\\_ADVANCE\\_PURCHASE](#) (0)
- const [SaturdayStay\\_T](#) [SATURDAY\\_STAY](#) (true)
- const [SaturdayStay\\_T](#) [NO\\_SATURDAY\\_STAY](#) (false)
- const [ChangeFees\\_T](#) [CHANGE\\_FEES](#) (true)
- const [ChangeFees\\_T](#) [NO\\_CHANGE\\_FEES](#) (false)
- const [NonRefundable\\_T](#) [NON\\_REFUNDABLE](#) (true)
- const [NonRefundable\\_T](#) [No\\_NON\\_REFUNDABLE](#) (false)
- const [SaturdayStay\\_T](#) [DEFAULT\\_BOM\\_TREE\\_SATURDAY\\_STAY](#) (true)
- const [ChangeFees\\_T](#) [DEFAULT\\_BOM\\_TREE\\_CHANGE\\_FEES](#) (true)
- const [NonRefundable\\_T](#) [DEFAULT\\_BOM\\_TREE\\_NON\\_REFUNDABLE](#) (true)
- const [DayDuration\\_T](#) [NO\\_STAY\\_DURATION](#) (0)
- const [AirlineCode\\_T](#) [AIRLINE\\_CODE\\_BA](#) ("BA")
- const [CabinCode\\_T](#) [CABIN\\_Y](#) ("Y")
- const [ClassCode\\_T](#) [CLASS\\_CODE\\_Y](#) ("Y")
- const [ClassCode\\_T](#) [CLASS\\_CODE\\_Q](#) ("Q")
- const [AirportCode\\_T](#) [AIRPORT\\_SIN](#) ("SIN")
- const [AirportCode\\_T](#) [AIRPORT\\_BKK](#) ("BKK")
- const [CityCode\\_T](#) [POS\\_SIN](#) ("SIN")
- const [CabinCode\\_T](#) [CABIN\\_ECO](#) ("Eco")
- const [FrequentFlyer\\_T](#) [FREQUENT\\_FLYER\\_MEMBER](#) ("M")
- const [ClassCode\\_T](#) [DEFAULT\\_FAMILY\\_CODE](#) ("0")

- const [NbOfAirlines\\_T](#) DEFAULT\_NBOFAIRLINES (0)
- const [FlightPathCode\\_T](#) DEFAULT\_FLIGHTPATH\_CODE ("" )
- const [Distance\\_T](#) DEFAULT\_DISTANCE\_VALUE (0)
- const [ClassCode\\_T](#) DEFAULT\_CLOSED\_CLASS\_CODE ("CC")
- const [NbOfBookings\\_T](#) DEFAULT\_CLASS\_NB\_OF\_BOOKINGS (0)
- const [NbOfBookings\\_T](#) DEFAULT\_CLASS\_TOTAL\_NB\_OF\_BOOKINGS (0)
- const [NbOfBookings\\_T](#) DEFAULT\_CLASS\_UNCONSTRAINED\_DEMAND (0)
- const [NbOfBookings\\_T](#) DEFAULT\_CLASS\_REMAINING\_DEMAND\_MEAN (0)
- const [NbOfBookings\\_T](#) DEFAULT\_CLASS\_REMAINING\_DEMAND\_STANDARD\_DEVIATION (0)
- const [NbOfCancellations\\_T](#) DEFAULT\_CLASS\_NB\_OF\_CANCELLATIONS (0)
- const [NbOfNoShows\\_T](#) DEFAULT\_CLASS\_NB\_OF\_NOSHOWS (0)
- const [CabinCapacity\\_T](#) DEFAULT\_CABIN\_CAPACITY (100.0)
- const [CommittedSpace\\_T](#) DEFAULT\_COMMITTED\_SPACE (0.0)
- const [BlockSpace\\_T](#) DEFAULT\_BLOCK\_SPACE (0.0)
- const [Availability\\_T](#) DEFAULT\_NULL\_AVAILABILITY (0.0)
- const [Availability\\_T](#) DEFAULT\_AVAILABILITY (9.0)
- const [Availability\\_T](#) MAXIMAL\_AVAILABILITY (9999.0)
- const [CensorshipFlag\\_T](#) DEFAULT\_CLASS\_CENSORSHIPFLAG (false)
- const [BookingLimit\\_T](#) DEFAULT\_CLASS\_BOOKING\_LIMIT (9999.0)
- const [AuthorizationLevel\\_T](#) DEFAULT\_CLASS\_AUTHORIZATION\_LEVEL (9999.0)
- const [AuthorizationLevel\\_T](#) DEFAULT\_CLASS\_MAX\_AUTHORIZATION\_LEVEL (9999.0)
- const [AuthorizationLevel\\_T](#) DEFAULT\_CLASS\_MIN\_AUTHORIZATION\_LEVEL (0.0)
- const [OverbookingRate\\_T](#) DEFAULT\_CLASS\_OVERBOOKING\_RATE (0.0)
- const [BookingRatio\\_T](#) DEFAULT\_OND\_BOOKING\_RATE (0.0)
- const [Fare\\_T](#) DEFAULT\_FARE\_VALUE (0.0)
- const [Yield\\_T](#) DEFAULT\_CLASS\_YIELD\_VALUE (0.0)
- const [Revenue\\_T](#) DEFAULT\_REVENUE\_VALUE (0.0)
- const [Percentage\\_T](#) DEFAULT\_LOAD\_FACTOR\_VALUE (100.0)
- const [Yield\\_T](#) DEFAULT\_YIELD\_VALUE (0.0)
- const [Yield\\_T](#) DEFAULT\_YIELD\_MAX\_VALUE (std::numeric\_limits< double >::max())
- const [NbOfBookings\\_T](#) DEFAULT\_YIELD\_NB\_OF\_BOOKINGS (0.0)
- const [Identity\\_T](#) DEFAULT\_BOOKING\_NUMBER (0)
- const [NbOfCancellations\\_T](#) DEFAULT\_YIELD\_NB\_OF\_CANCELLATIONS (0.0)
- const [NbOfNoShows\\_T](#) DEFAULT\_YIELD\_NB\_OF\_NOSHOWS (0.0)
- const [Availability\\_T](#) DEFAULT\_YIELD\_AVAILABILITY (0.0)
- const [CensorshipFlag\\_T](#) DEFAULT\_YIELD\_CENSORSHIPFLAG (false)
- const [BookingLimit\\_T](#) DEFAULT\_YIELD\_BOOKING\_LIMIT (0.0)
- const [OverbookingRate\\_T](#) DEFAULT\_YIELD\_OVERBOOKING\_RATE (0.0)
- const [Fare\\_T](#) DEFAULT\_OND\_FARE\_VALUE (0.0)
- const [EventQueueID\\_T](#) DEFAULT\_EVENT\_QUEUE\_ID ("EQ01")
- const [Count\\_T](#) DEFAULT\_PROGRESS\_STATUS (0)
- const [Date\\_T](#) DEFAULT\_EVENT\_OLDEST\_DATE (2008, boost::gregorian::Jan, 1)
- const [DateTime\\_T](#) DEFAULT\_EVENT\_OLDEST\_DATETIME (DEFAULT\_EVENT\_OLDEST\_DATE, NULL\_BOOST\_TIME\_DURATION)

- const [PartySize\\_T](#) DEFAULT\_PARTY\_SIZE (1)
- const [DayDuration\\_T](#) DEFAULT\_STAY\_DURATION (7)
- const [WTP\\_T](#) DEFAULT\_WTP (1000.0)
- const [Date\\_T](#) DEFAULT\_PREFERRED\_DEPARTURE\_DATE (DEFAULT\_DEPARTURE\_DATE)
- const [Duration\\_T](#) DEFAULT\_PREFERRED\_DEPARTURE\_TIME (8, 0, 0)
- const [DateOffset\\_T](#) DEFAULT\_ADVANCE\_PURCHASE (22)
- const [Date\\_T](#) DEFAULT\_REQUEST\_DATE (DEFAULT\_PREFERRED\_DEPARTURE\_DATE-DEFAULT\_ADVANCE\_PURCHASE)
- const [Duration\\_T](#) DEFAULT\_REQUEST\_TIME (8, 0, 0)
- const [DateTime\\_T](#) DEFAULT\_REQUEST\_DATE\_TIME (DEFAULT\_REQUEST\_DATE, DEFAULT\_REQUEST\_TIME)
- const [CabinCode\\_T](#) DEFAULT\_PREFERRED\_CABIN ("M")
- const [CityCode\\_T](#) DEFAULT\_POS ("ALL")
- const [ChannelLabel\\_T](#) DEFAULT\_CHANNEL ("DC")
- const [ChannelLabel\\_T](#) CHANNEL\_DN ("DN")
- const [ChannelLabel\\_T](#) CHANNEL\_IN ("IN")
- const [TripType\\_T](#) TRIP\_TYPE\_ONE\_WAY ("OW")
- const [TripType\\_T](#) TRIP\_TYPE\_ROUND\_TRIP ("RT")
- const [TripType\\_T](#) TRIP\_TYPE\_INBOUND ("RI")
- const [TripType\\_T](#) TRIP\_TYPE\_OUTBOUND ("RO")
- const [FrequentFlyer\\_T](#) DEFAULT\_FF\_TIER ("N")
- const [PriceValue\\_T](#) DEFAULT\_VALUE\_OF\_TIME (100.0)
- const [Duration\\_T](#) DEFAULT\_MINIMAL\_CONNECTION\_TIME (0, 30, 0)
- const [Duration\\_T](#) DEFAULT\_MAXIMAL\_CONNECTION\_TIME (24, 0, 0)
- const [MatchingIndicator\\_T](#) DEFAULT\_MATCHING\_INDICATOR (0.0)
- const [PriceCurrency\\_T](#) DEFAULT\_CURRENCY ("EUR")
- const [AvailabilityStatus\\_T](#) DEFAULT\_AVAILABILITY\_STATUS (false)
- const [AirlineCode\\_T](#) DEFAULT\_AIRLINE\_CODE ("XX")
- const [AirlineCode\\_T](#) DEFAULT\_NULL\_AIRLINE\_CODE ("")
- const [FlightNumber\\_T](#) DEFAULT\_FLIGHT\_NUMBER (9999)
- const [GuillotineNumber\\_T](#) DEFAULT\_GUILLOTINE\_NUMBER (9999)
- const [Date\\_T](#) DEFAULT\_DEPARTURE\_DATE (1900, boost::gregorian::Jan, 1)
- const [AirportCode\\_T](#) DEFAULT\_AIRPORT\_CODE ("XXX")
- const [AirportCode\\_T](#) DEFAULT\_NULL\_AIRPORT\_CODE ("")
- const [AirportCode\\_T](#) DEFAULT\_ORIGIN ("XXX")
- const [AirportCode\\_T](#) DEFAULT\_DESTINATION ("XXX")
- const [CabinCode\\_T](#) DEFAULT\_CABIN\_CODE ("X")
- const [FamilyCode\\_T](#) DEFAULT\_FARE\_FAMILY\_CODE ("EcoSaver")
- const [FamilyCode\\_T](#) DEFAULT\_NULL\_FARE\_FAMILY\_CODE ("NoFF")
- const [ClassCode\\_T](#) DEFAULT\_CLASS\_CODE ("X")
- const [ClassCode\\_T](#) DEFAULT\_NULL\_CLASS\_CODE ("")
- const [BidPrice\\_T](#) DEFAULT\_BID\_PRICE (0.0)
- const unsigned short MAXIMAL\_NUMBER\_OF\_LEGS\_IN\_FLIGHT (7)
- const unsigned short MAXIMAL\_NUMBER\_OF\_SEGMENTS\_IN\_OND (3)
- const [SeatIndex\\_T](#) DEFAULT\_SEAT\_INDEX (1)
- const std::string DEFAULT\_FARE\_FAMILY\_VALUE\_TYPE ("FF")

- const std::string [DEFAULT\\_SEGMENT\\_CABIN\\_VALUE\\_TYPE](#) ("SC")
- const std::string [DEFAULT\\_KEY\\_FLD\\_DELIMITER](#) (";")
- const std::string [DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#) (",")
- const boost::char\_separator< char > [DEFAULT\\_KEY\\_TOKEN\\_DELIMITER](#) (";",  
")
- template<int MIN, int MAX>  
[date\\_time\\_element](#)< MIN, MAX > [operator\\*](#) (const [date\\_time\\_element](#)< MIN,  
MAX > &o1, const [date\\_time\\_element](#)< MIN, MAX > &o2)
- template<int MIN, int MAX>  
[date\\_time\\_element](#)< MIN, MAX > [operator+](#) (const [date\\_time\\_element](#)< MIN,  
MAX > &o1, const [date\\_time\\_element](#)< MIN, MAX > &o2)
- template void [AirlineClassListKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#)  
&, unsigned int)
- template void [AirlineClassListKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#)  
&, unsigned int)
- template void [BomRootKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &,  
unsigned int)
- template void [BomRootKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &,  
unsigned int)
- void [intDisplay](#) (std::ostream &oStream, const int &iInt)
- template void [BucketKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &,  
unsigned int)
- template void [BucketKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, un-  
signed int)
- template void [FareFamilyKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#)  
&, unsigned int)
- template void [FareFamilyKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &,  
unsigned int)
- template void [FlightDateKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &,  
unsigned int)
- template void [FlightDateKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &,  
unsigned int)
- template void [GuillotineBlockKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#)  
&, unsigned int)
- template void [GuillotineBlockKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#)  
&, unsigned int)
- template void [InventoryKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &,  
unsigned int)
- template void [InventoryKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &,  
unsigned int)
- template void [OnDDateKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &,  
unsigned int)
- template void [OnDDateKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &,  
unsigned int)
- const boost::char\_separator< char > [TokeniserDashSeparator](#) ("-")
- const boost::char\_separator< char > [TokeniserTimeSeparator](#) (":")
- template void [SegmentCabinKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#)  
&, unsigned int)

- template void [SegmentCabinKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)
- template void [SegmentDateKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [SegmentDateKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)
- template<class Archive , class BOM\_OBJECT1 , class BOM\_OBJECT2 >  
void [serialiseHelper](#) (BOM\_OBJECT1 &ioObject1, Archive &ioArchive, const unsigned int iFileVersion)
- template void [BomRoot::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [BomRoot::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)
- template void [Inventory::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [Inventory::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)
- template void [FlightDate::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [FlightDate::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)
- template void [SegmentDate::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [SegmentDate::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)
- template void [SegmentCabin::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [SegmentCabin::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)

#### Variables

- const std::string [DOW\\_STR](#) []
- const [CensorshipFlagList\\_T](#) [DEFAULT\\_CLASS\\_CENSORSHIPFLAG\\_LIST](#)
- const [Date\\_T](#) [DEFAULT\\_DICO\\_STUDIED\\_DATE](#)
- const [AirlineCodeList\\_T](#) [DEFAULT\\_AIRLINE\\_CODE\\_LIST](#)
- const [ClassList\\_StringList\\_T](#) [DEFAULT\\_CLASS\\_CODE\\_LIST](#)
- const [BidPriceVector\\_T](#) [DEFAULT\\_BID\\_PRICE\\_VECTOR](#) = std::vector<[BidPrice\\_T](#)>()
- const int [DEFAULT\\_MAX\\_DTD](#) = 365
- const [DCPList\\_T](#) [DEFAULT\\_DCP\\_LIST](#) = [DefaultDCPList::init](#)()
- const [DTDFratMap\\_T](#) [DEFAULT\\_DTD\\_FRAT5COEF\\_MAP](#)
- const [DTDProbMap\\_T](#) [DEFAULT\\_DTD\\_PROB\\_MAP](#)
- const [OnDStringList\\_T](#) [DEFAULT\\_OND\\_STRING\\_LIST](#)
- const std::string [DISPLAY\\_LEVEL\\_STRING\\_ARRAY](#) [51]
- const std::string [DEFAULT\\_KEY\\_FLD\\_DELIMITER](#)
- const std::string [DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#)

- `const boost::char_separator< char > DEFAULT_KEY_TOKEN_DELIMITER`
- `const Distance_T DEFAULT_DISTANCE_VALUE`
- `const ClassCode_T DEFAULT_CLOSED_CLASS_CODE`
- `const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS`
- `const NbOfBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS`
- `const NbOfBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND`
- `const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN`
- `const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION`
- `const NbOfCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS`
- `const NbOfNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS`
- `const CabinCapacity_T DEFAULT_CABIN_CAPACITY`
- `const CommittedSpace_T DEFAULT_COMMITTED_SPACE`
- `const BlockSpace_T DEFAULT_BLOCK_SPACE`
- `const Availability_T DEFAULT_NULL_AVAILABILITY`
- `const Availability_T DEFAULT_AVAILABILITY`
- `const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG`
- `const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT`
- `const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL`
- `const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL`
- `const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL`
- `const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE`
- `const Fare_T DEFAULT_FARE_VALUE`
- `const Revenue_T DEFAULT_REVENUE_VALUE`
- `const PriceCurrency_T DEFAULT_CURRENCY`
- `const Percentage_T DEFAULT_LOAD_FACTOR_VALUE`
- `const DayDuration_T DEFAULT_DAY_DURATION`
- `const double DEFAULT_EPSILON_VALUE`
- `const AirportCode_T AIRPORT_LHR`
- `const AirportCode_T AIRPORT_SYD`
- `const CityCode_T POS_LHR`
- `const DayDuration_T NO_ADVANCE_PURCHASE`
- `const SaturdayStay_T SATURDAY_STAY`
- `const SaturdayStay_T NO_SATURDAY_STAY`
- `const ChangeFees_T CHANGE_FEES`
- `const ChangeFees_T NO_CHANGE_FEES`
- `const NonRefundable_T NON_REFUNDABLE`
- `const NonRefundable_T NO_NON_REFUNDABLE`
- `const DayDuration_T NO_STAY_DURATION`
- `const CabinCode_T CABIN_Y`
- `const AirlineCode_T AIRLINE_CODE_BA`
- `const ClassCode_T CLASS_CODE_Y`
- `const ClassCode_T CLASS_CODE_Q`
- `const AirportCode_T AIRPORT_SIN`
- `const AirportCode_T AIRPORT_BKK`
- `const CityCode_T POS_SIN`



- const [CabinCode\\_T](#) CABIN\_ECO
- const [FrequentFlyer\\_T](#) FREQUENT\_FLYER\_MEMBER
- const [EventQueueID\\_T](#) DEFAULT\_EVENT\_QUEUE\_ID
- const [Count\\_T](#) DEFAULT\_PROGRESS\_STATUS
- const [Date\\_T](#) DEFAULT\_EVENT\_OLDEST\_DATE
- const [DateTime\\_T](#) DEFAULT\_EVENT\_OLDEST\_DATETIME
- const [std::string](#) DEFAULT\_BOM\_ROOT\_KEY
- const [NbOfFlightDates\\_T](#) DEFAULT\_NB\_OF\_FLIGHTDATES
- const [unsigned int](#) DEFAULT\_FLIGHT\_SPEED
- const [BookingRatio\\_T](#) DEFAULT\_OND\_BOOKING\_RATE
- const [Count\\_T](#) SECONDS\_IN\_ONE\_DAY
- const [Count\\_T](#) MILLISECONDS\_IN\_ONE\_SECOND
- const [Date\\_T](#) DEFAULT\_DATE
- const [DateTime\\_T](#) DEFAULT\_DATETIME
- const [Duration\\_T](#) DEFAULT\_EPSILON\_DURATION
- const [RandomSeed\\_T](#) DEFAULT\_RANDOM\_SEED
- const [Duration\\_T](#) NULL\_BOOST\_TIME\_DURATION
- const [Fare\\_T](#) DEFAULT\_CLASS\_FARE\_VALUE
- const [NbOfAirlines\\_T](#) DEFAULT\_NB\_OF\_AIRLINES
- const [unsigned int](#) DEFAULT\_NB\_OF\_DAYS\_IN\_A\_YEAR
- const [ChannelLabel\\_T](#) DEFAULT\_CHANNEL
- const [unsigned int](#) DEFAULT\_NUMBER\_OF\_SUBDIVISIONS
- const [AirlineCode\\_T](#) DEFAULT\_AIRLINE\_CODE
- const [AirlineCode\\_T](#) DEFAULT\_NULL\_AIRLINE\_CODE
- const [FlightNumber\\_T](#) DEFAULT\_FLIGHT\_NUMBER
- const [GuillotineNumber\\_T](#) DEFAULT\_GUILLOTINE\_NUMBER
- const [Date\\_T](#) DEFAULT\_DEPARTURE\_DATE
- const [AirportCode\\_T](#) DEFAULT\_AIRPORT\_CODE
- const [AirportCode\\_T](#) DEFAULT\_NULL\_AIRPORT\_CODE
- const [AirportCode\\_T](#) DEFAULT\_ORIGIN
- const [AirportCode\\_T](#) DEFAULT\_DESTINATION
- const [CabinCode\\_T](#) DEFAULT\_CABIN\_CODE
- const [FamilyCode\\_T](#) DEFAULT\_FARE\_FAMILY\_CODE
- const [FamilyCode\\_T](#) DEFAULT\_NULL\_FARE\_FAMILY\_CODE
- const [ClassCode\\_T](#) DEFAULT\_CLASS\_CODE
- const [ClassCode\\_T](#) DEFAULT\_NULL\_CLASS\_CODE
- const [BidPrice\\_T](#) DEFAULT\_BID\_PRICE
- const [unsigned short](#) MAXIMAL\_NUMBER\_OF\_LEGS\_IN\_FLIGHT
- const [unsigned short](#) MAXIMAL\_NUMBER\_OF\_SEGMENTS\_IN\_OND
- const [Availability\\_T](#) MAXIMAL\_AVAILABILITY
- const [SeatIndex\\_T](#) DEFAULT\_SEAT\_INDEX
- const [std::string](#) DEFAULT\_FARE\_FAMILY\_VALUE\_TYPE
- const [std::string](#) DEFAULT\_SEGMENT\_CABIN\_VALUE\_TYPE
- const [DatePeriod\\_T](#) BOOST\_DEFAULT\_DATE\_PERIOD
- const [DOW\\_String\\_T](#) DEFAULT\_DOW\_STRING
- const [DateOffset\\_T](#) DEFAULT\_DATE\_OFFSET

- const [PartySize\\_T](#) DEFAULT\_PARTY\_SIZE
- const [DayDuration\\_T](#) DEFAULT\_STAY\_DURATION
- const [WTP\\_T](#) DEFAULT\_WTP
- const [CityCode\\_T](#) DEFAULT\_POS
- const [Date\\_T](#) DEFAULT\_PREFERRED\_DEPARTURE\_DATE
- const [Duration\\_T](#) DEFAULT\_PREFERRED\_DEPARTURE\_TIME
- const [DateOffset\\_T](#) DEFAULT\_ADVANCE\_PURCHASE
- const [Date\\_T](#) DEFAULT\_REQUEST\_DATE
- const [Duration\\_T](#) DEFAULT\_REQUEST\_TIME
- const [DateTime\\_T](#) DEFAULT\_REQUEST\_DATE\_TIME
- const [CabinCode\\_T](#) DEFAULT\_PREFERRED\_CABIN
- const [ChannelLabel\\_T](#) CHANNEL\_DN
- const [ChannelLabel\\_T](#) CHANNEL\_IN
- const [TripType\\_T](#) TRIP\_TYPE\_ONE\_WAY
- const [TripType\\_T](#) TRIP\_TYPE\_ROUND\_TRIP
- const [TripType\\_T](#) TRIP\_TYPE\_INBOUND
- const [TripType\\_T](#) TRIP\_TYPE\_OUTBOUND
- const [FrequentFlyer\\_T](#) DEFAULT\_FF\_TIER
- const [PriceValue\\_T](#) DEFAULT\_VALUE\_OF\_TIME
- const [Duration\\_T](#) DEFAULT\_MINIMAL\_CONNECTION\_TIME
- const [Duration\\_T](#) DEFAULT\_MAXIMAL\_CONNECTION\_TIME
- const [FlightPathCode\\_T](#) DEFAULT\_FLIGHTPATH\_CODE
- const [Availability\\_T](#) DEFAULT\_CLASS\_AVAILABILITY
- const [AvailabilityStatus\\_T](#) DEFAULT\_AVAILABILITY\_STATUS
- const unsigned short [DEFAULT\\_NUMBER\\_OF\\_REQUIRED\\_SEATS](#)
- const [MatchingIndicator\\_T](#) DEFAULT\_MATCHING\_INDICATOR
- const [AirlineCode\\_T](#) DEFAULT\_DICO\_STUDIED\_AIRLINE
- const [Yield\\_T](#) DEFAULT\_YIELD\_VALUE
- const [Yield\\_T](#) DEFAULT\_YIELD\_MAX\_VALUE

#### 33.5.1 Detailed Description

Handle on the StdAir library context.

##### Author

Anh Quan Nguyen <[quannaus@users.sourceforge.net](mailto:quannaus@users.sourceforge.net)>

##### Date

20/01/2010 StdAir aims at providing a clean API, and the corresponding C++ implementation, for the basis of Airline IT Business Object Model (BOM), that is, to be used by several other Open Source projects, such as RMOL and OpenTREP.

Install the StdAir library for Airline IT Standard C++ fundamentals.

### 33.5.2 Typedef Documentation

#### 33.5.2.1 `typedef date_time_element<0, 23> stdair::hour_t`

Type definitions for the date and time elements.

Definition at line 61 of file [BasParserHelperTypes.hpp](#).

#### 33.5.2.2 `typedef date_time_element<0, 59> stdair::minute_t`

Definition at line 62 of file [BasParserHelperTypes.hpp](#).

#### 33.5.2.3 `typedef date_time_element<0, 59> stdair::second_t`

Definition at line 63 of file [BasParserHelperTypes.hpp](#).

#### 33.5.2.4 `typedef date_time_element<1900, 2100> stdair::year_t`

Definition at line 64 of file [BasParserHelperTypes.hpp](#).

#### 33.5.2.5 `typedef date_time_element<1, 12> stdair::month_t`

Definition at line 65 of file [BasParserHelperTypes.hpp](#).

#### 33.5.2.6 `typedef date_time_element<1, 31> stdair::day_t`

Definition at line 66 of file [BasParserHelperTypes.hpp](#).

#### 33.5.2.7 `typedef std::istreambuf_iterator<char> stdair::base_iterator_t`

Definition at line 26 of file [BasParserTypes.hpp](#).

#### 33.5.2.8 `typedef boost::spirit::multi_pass<base_iterator_t> stdair::iterator_t`

Definition at line 27 of file [BasParserTypes.hpp](#).

#### 33.5.2.9 `typedef boost::spirit::qi::int_parser<unsigned int, 10, 1, 1> stdair::int1_p_t`

1-digit-integer parser

Definition at line 35 of file [BasParserTypes.hpp](#).

#### 33.5.2.10 `typedef boost::spirit::qi::uint_parser<int, 10, 2, 2> stdair::uint2_p_t`

2-digit-integer parser

Definition at line 38 of file [BasParserTypes.hpp](#).

#### 33.5.2.11 `typedef boost::spirit::qi::uint_parser<int, 10, 4, 4> stdair::uint4_p_t`

4-digit-integer parser

Definition at line 41 of file [BasParserTypes.hpp](#).

33.5.2.12 `typedef boost::spirit::qi::uint_parser<int, 10, 1, 4> stdair::uint1_4_p_t`

Up-to-4-digit-integer parser

Definition at line 44 of file [BasParserTypes.hpp](#).

33.5.2.13 `typedef boost::spirit::qi::uint_parser<hour_t, 10, 2, 2> stdair::hour_p_t`

Date & time element parsers.

Definition at line 47 of file [BasParserTypes.hpp](#).

33.5.2.14 `typedef boost::spirit::qi::uint_parser<minute_t, 10, 2, 2> stdair::minute_p_t`

Definition at line 48 of file [BasParserTypes.hpp](#).

33.5.2.15 `typedef boost::spirit::qi::uint_parser<second_t, 10, 2, 2> stdair::second_p_t`

Definition at line 49 of file [BasParserTypes.hpp](#).

33.5.2.16 `typedef boost::spirit::qi::uint_parser<year_t, 10, 4, 4> stdair::year_p_t`

Definition at line 50 of file [BasParserTypes.hpp](#).

33.5.2.17 `typedef boost::spirit::qi::uint_parser<month_t, 10, 2, 2> stdair::month_p_t`

Definition at line 51 of file [BasParserTypes.hpp](#).

33.5.2.18 `typedef boost::spirit::qi::uint_parser<day_t, 10, 2, 2> stdair::day_p_t`

Definition at line 52 of file [BasParserTypes.hpp](#).

33.5.2.19 `typedef unsigned short stdair::DictionaryKey_T`

Dictionary key.

Definition at line 17 of file [DictionaryManager.hpp](#).

33.5.2.20 `typedef std::list<AirlineClassList*> stdair::AirlineClassListList_T`

Define the segment-features list.

Definition at line 17 of file [AirlineClassListTypes.hpp](#).

33.5.2.21 `typedef std::map<const MapKey_T, AirlineClassList*>  
stdair::AirlineClassListMap_T`

Define the segment-features map.

Definition at line 23 of file [AirlineClassListTypes.hpp](#).

33.5.2.22 `typedef std::pair<MapKey_T, AirlineClassList*>  
stdair::AirlineClassListWithKey_T`

Define the list of pair<MapKey\_T, AirlineCodeList>.

Definition at line 26 of file [AirlineClassListTypes.hpp](#).

```
33.5.2.23  typedef std::list<AirlineClassListWithKey_T>
          stdair::AirlineClassListDetailedList_T
```

Definition at line 27 of file [AirlineClassListTypes.hpp](#).

```
33.5.2.24  typedef std::list<AirlineFeature*> stdair::AirlineFeatureList_T
```

Define the airline feature list.

Definition at line 17 of file [AirlineFeatureTypes.hpp](#).

```
33.5.2.25  typedef std::map<const MapKey_T, AirlineFeature*>
          stdair::AirlineFeatureMap_T
```

Define the airline feature map.

Definition at line 23 of file [AirlineFeatureTypes.hpp](#).

```
33.5.2.26  typedef std::list<AirportPair*> stdair::AirportPairList_T
```

Define the airport-pair list.

Definition at line 17 of file [AirportPairTypes.hpp](#).

```
33.5.2.27  typedef std::map<const MapKey_T, AirportPair*> stdair::AirportPairMap_T
```

Define the airport-pair map.

Definition at line 23 of file [AirportPairTypes.hpp](#).

```
33.5.2.28  typedef std::pair<MapKey_T, AirportPair*> stdair::AirportPairWithKey_T
```

Define the list of pair<MapKey\_T, AirportPair>.

Definition at line 26 of file [AirportPairTypes.hpp](#).

```
33.5.2.29  typedef std::list<AirportPairWithKey_T> stdair::AirportPairDetailedList_T
```

Definition at line 27 of file [AirportPairTypes.hpp](#).

```
33.5.2.30  typedef std::map<const std::type_info*, BomAbstract*> stdair::HolderMap_T
```

Definition at line 48 of file [BomAbstract.hpp](#).

```
33.5.2.31  typedef boost::tokenizer< boost::char_separator< char > > stdair::Tokeniser_T
```

Boost Tokeniser.

Definition at line 27 of file [BomKeyManager.cpp](#).

```
33.5.2.32  typedef std::list<BookingClass*> stdair::BookingClassList_T
```

Define the booking class list.

Definition at line 17 of file [BookingClassTypes.hpp](#).

```
33.5.2.33  typedef std::map<const MapKey_T, BookingClass*>
          stdair::BookingClassMap_T
```

Define the booking class map.

Definition at line 23 of file [BookingClassTypes.hpp](#).

```
33.5.2.34  typedef boost::shared_ptr<BookingRequestStruct>
          stdair::BookingRequestPtr_T
```

Define the smart pointer to a booking request.

Definition at line 14 of file [BookingRequestTypes.hpp](#).

```
33.5.2.35  typedef std::string stdair::DemandGeneratorKey_T
```

Define the hash key for the demand generator.

Definition at line 21 of file [BookingRequestTypes.hpp](#).

```
33.5.2.36  typedef std::list<Bucket*> stdair::BucketList_T
```

Define the bucket list.

Definition at line 17 of file [BucketTypes.hpp](#).

```
33.5.2.37  typedef std::map<const MapKey_T, Bucket*> stdair::BucketMap_T
```

Define the bucket map.

Definition at line 23 of file [BucketTypes.hpp](#).

```
33.5.2.38  typedef boost::shared_ptr<CancellationStruct> stdair::CancellationPtr_T
```

Define the smart pointer to a cancellation .

Definition at line 14 of file [CancellationTypes.hpp](#).

```
33.5.2.39  typedef std::list<DatePeriod*> stdair::DatePeriodList_T
```

Define the date-period list.

Definition at line 17 of file [DatePeriodTypes.hpp](#).

```
33.5.2.40  typedef std::map<const MapKey_T, DatePeriod*> stdair::DatePeriodMap_T
```

Define the date-period map.

Definition at line 23 of file [DatePeriodTypes.hpp](#).

```
33.5.2.41  typedef std::pair<MapKey_T, DatePeriod*> stdair::DatePeriodWithKey_T
```

Define the list of pair<MapKey\_T, DatePeriod>.

Definition at line 26 of file [DatePeriodTypes.hpp](#).

33.5.2.42 `typedef std::list<DatePeriodWithKey_T> stdair::DatePeriodDetailedList_T`

Definition at line 27 of file [DatePeriodTypes.hpp](#).

33.5.2.43 `typedef std::list<EventQueue*> stdair::EventQueueList_T`

Define the [EventQueue](#) list.

Definition at line 17 of file [EventQueueTypes.hpp](#).

33.5.2.44 `typedef std::map<const MapKey_T, EventQueue*>  
stdair::EventQueueMap_T`

Define the [EventQueue](#) map.

Definition at line 23 of file [EventQueueTypes.hpp](#).

33.5.2.45 `typedef std::pair<const LongDuration_T, EventStruct>  
stdair::EventListElement_T`

Define an element of a event list.

Definition at line 22 of file [EventTypes.hpp](#).

33.5.2.46 `typedef std::map<const LongDuration_T, EventStruct> stdair::EventList_T`

Define a list of events.

Definition at line 32 of file [EventTypes.hpp](#).

33.5.2.47 `typedef std::list<FareFamily*> stdair::FareFamilyList_T`

Define the fare family list.

Definition at line 17 of file [FareFamilyTypes.hpp](#).

33.5.2.48 `typedef std::map<const MapKey_T, FareFamily*> stdair::FareFamilyMap_T`

Define the fare family map.

Definition at line 23 of file [FareFamilyTypes.hpp](#).

33.5.2.49 `typedef std::list<FareFeatures*> stdair::FareFeaturesList_T`

Define the date-period list.

Definition at line 17 of file [FareFeaturesTypes.hpp](#).

33.5.2.50 `typedef std::map<const MapKey_T, FareFeatures*>  
stdair::FareFeaturesMap_T`

Define the date-period map.

Definition at line 23 of file [FareFeaturesTypes.hpp](#).

**33.5.2.51** `typedef std::pair<MapKey_T, FareFeatures*>  
stdair::FareFeaturesWithKey_T`

Define the list of `pair<MapKey_T, FareFeatures>`.

Definition at line 26 of file [FareFeaturesTypes.hpp](#).

**33.5.2.52** `typedef std::list<FareFeaturesWithKey_T>  
stdair::FareFeaturesDetailedList_T`

Definition at line 27 of file [FareFeaturesTypes.hpp](#).

**33.5.2.53** `typedef std::list<FareOptionStruct> stdair::FareOptionList_T`

Define the booking class list.

Definition at line 18 of file [FareOptionTypes.hpp](#).

**33.5.2.54** `typedef std::list<FlightDate*> stdair::FlightDateList_T`

Define the flight-date list.

Definition at line 17 of file [FlightDateTypes.hpp](#).

**33.5.2.55** `typedef std::map<const MapKey_T, FlightDate*> stdair::FlightDateMap_T`

Define the flight-date map.

Definition at line 24 of file [FlightDateTypes.hpp](#).

**33.5.2.56** `typedef std::list<FlightPeriod*> stdair::FlightPeriodList_T`

Define the flight-period list.

Definition at line 17 of file [FlightPeriodTypes.hpp](#).

**33.5.2.57** `typedef std::map<const MapKey_T, FlightPeriod*>  
stdair::FlightPeriodMap_T`

Define the flight-period map.

Definition at line 23 of file [FlightPeriodTypes.hpp](#).

**33.5.2.58** `typedef std::list<GuillotineBlock*> stdair::GuillotineBlockList_T`

Define the guillotine-block list.

Definition at line 20 of file [GuillotineBlockTypes.hpp](#).

**33.5.2.59** `typedef std::map<const MapKey_T, GuillotineBlock*>  
stdair::GuillotineBlockMap_T`

Define the guillotine-block map.

Definition at line 27 of file [GuillotineBlockTypes.hpp](#).



**33.5.2.60** `typedef std::map<const SegmentCabin*, BlockNumber_T>  
stdair::SegmentCabinIndexMap_T`

Define the map between the segment-cabins and the block number.

Definition at line 30 of file [GuillotineBlockTypes.hpp](#).

**33.5.2.61** `typedef std::map<const MapKey_T, BlockIndex_T>  
stdair::ValueTypeIndexMap_T`

Define the map between the value type of the snapshots and their index.

Definition at line 33 of file [GuillotineBlockTypes.hpp](#).

**33.5.2.62** `typedef std::list<Inventory*> stdair::InventoryList_T`

Define the [Inventory](#) list.

Definition at line 17 of file [InventoryTypes.hpp](#).

**33.5.2.63** `typedef std::map<const MapKey_T, Inventory*> stdair::InventoryMap_T`

Define the [Inventory](#) map.

Definition at line 23 of file [InventoryTypes.hpp](#).

**33.5.2.64** `typedef std::string stdair::MapKey_T`

Key of a STL map.

Definition at line 15 of file [key\\_types.hpp](#).

**33.5.2.65** `typedef std::list<std::string> stdair::KeyList_T`

List of keys.

Definition at line 18 of file [key\\_types.hpp](#).

**33.5.2.66** `typedef std::list<LegCabin*> stdair::LegCabinList_T`

Define the leg-cabin list.

Definition at line 17 of file [LegCabinTypes.hpp](#).

**33.5.2.67** `typedef std::map<const MapKey_T, LegCabin*> stdair::LegCabinMap_T`

Define the leg-cabin map.

Definition at line 23 of file [LegCabinTypes.hpp](#).

**33.5.2.68** `typedef std::list<LegDate*> stdair::LegDateList_T`

Define the leg-date list.

Definition at line 17 of file [LegDateTypes.hpp](#).

**33.5.2.69** `typedef std::map<const MapKey_T, LegDate*> stdair::LegDateMap_T`

Define the leg-date map.

Definition at line 23 of file [LegDateTypes.hpp](#).

**33.5.2.70** `typedef std::list<OnDDate*> stdair::OnDDateList_T`

Define the O&D date list.

Definition at line 19 of file [OnDDateTypes.hpp](#).

**33.5.2.71** `typedef std::map<const MapKey_T, OnDDate*> stdair::OnDDateMap_T`

Define the OnD date map.

Definition at line 25 of file [OnDDateTypes.hpp](#).

**33.5.2.72** `typedef std::pair<std::string, YieldDemandPair_T>  
stdair::StringDemandStructPair_T`

Define the yield mean and standard deviation for a certain cabin/class path. This map is mandatory when using the default BOM tree. This map can be empty if yields are charged otherwise (input file, ...)

Definition at line 32 of file [OnDDateTypes.hpp](#).

**33.5.2.73** `typedef std::map<std::string, YieldDemandPair_T>  
stdair::StringDemandStructMap_T`

Definition at line 33 of file [OnDDateTypes.hpp](#).

**33.5.2.74** `typedef std::map<std::string, CabinClassPairList_T>  
stdair::StringCabinClassPairListMap_T`

Define the string matching a (cabin,class) path. (i.e, the string is "Y:M;" for a one leg O&D with the cabin Y and the class M; the string is "Y:M;Y:Y;" for a two legs O&D with the cabin Y and the class M for the first leg, and the cabin Y and the class Y for the second leg).

Definition at line 41 of file [OnDDateTypes.hpp](#).

**33.5.2.75** `typedef std::pair<std::string, CabinClassPairList_T>  
stdair::StringCabinClassPair_T`

Definition at line 42 of file [OnDDateTypes.hpp](#).

**33.5.2.76** `typedef std::map<CabinCode_T, WTPDemandPair_T>  
stdair::CabinForecastMap_T`

Define the WTP mean and standard deviation for a certain cabin code. This information is needed to forecast O&D demand per cabin.

Definition at line 48 of file [OnDDateTypes.hpp](#).

33.5.2.77 `typedef std::pair<CabinCode_T, WTPDemandPair_T>  
stdair::CabinForecastPair_T`

Definition at line 49 of file [OnDDDateTypes.hpp](#).

33.5.2.78 `typedef boost::shared_ptr<OptimisationNotificationStruct>  
stdair::OptimisationNotificationPtr_T`

Define the smart pointer to a optimisation notification.

Definition at line 14 of file [OptimisationNotificationTypes.hpp](#).

33.5.2.79 `typedef std::list<PosChannel*> stdair::PosChannelList_T`

Define the fare-point\_of\_sale list.

Definition at line 17 of file [PosChannelTypes.hpp](#).

33.5.2.80 `typedef std::map<const MapKey_T, PosChannel*>  
stdair::PosChannelMap_T`

Define the fare-point\_of\_sale map.

Definition at line 23 of file [PosChannelTypes.hpp](#).

33.5.2.81 `typedef std::pair<MapKey_T, PosChannel*>  
stdair::PosChannelWithKey_T`

Define the list of pair<MapKey\_T, PosChannel>.

Definition at line 26 of file [PosChannelTypes.hpp](#).

33.5.2.82 `typedef std::list<PosChannelWithKey_T>  
stdair::PosChannelDetailedList_T`

Definition at line 27 of file [PosChannelTypes.hpp](#).

33.5.2.83 `typedef boost::shared_ptr<RMEventStruct> stdair::RMEventPtr_T`

Define the smart pointer to a RM event .

Definition at line 16 of file [RMEventTypes.hpp](#).

33.5.2.84 `typedef std::list<RMEventStruct> stdair::RMEventList_T`

Define the list of RM events.

Definition at line 23 of file [RMEventTypes.hpp](#).

33.5.2.85 `typedef std::list<SegmentCabin*> stdair::SegmentCabinList_T`

Define the segment-cabin list.

Definition at line 17 of file [SegmentCabinTypes.hpp](#).

**33.5.2.86** `typedef std::map<const MapKey_T, SegmentCabin*>  
stdair::SegmentCabinMap_T`

Define the segment-cabin map.

Definition at line 23 of file [SegmentCabinTypes.hpp](#).

**33.5.2.87** `typedef std::list<SegmentDate*> stdair::SegmentDateList_T`

Define the segment-date list.

Definition at line 17 of file [SegmentDateTypes.hpp](#).

**33.5.2.88** `typedef std::map<const MapKey_T, SegmentDate*>  
stdair::SegmentDateMap_T`

Define the segment-date map.

Definition at line 23 of file [SegmentDateTypes.hpp](#).

**33.5.2.89** `typedef std::list<SegmentPeriod*> stdair::SegmentPeriodList_T`

Define the segment-period list.

Definition at line 17 of file [SegmentPeriodTypes.hpp](#).

**33.5.2.90** `typedef std::map<const MapKey_T, SegmentPeriod*>  
stdair::SegmentPeriodMap_T`

Define the segment-period map.

Definition at line 23 of file [SegmentPeriodTypes.hpp](#).

**33.5.2.91** `typedef std::pair<MapKey_T, SegmentPeriod*>  
stdair::SegmentPeriodWithKey_T`

Define the list of pair<MapKey\_T, SegmentPeriod>.

Definition at line 26 of file [SegmentPeriodTypes.hpp](#).

**33.5.2.92** `typedef std::list<SegmentPeriodWithKey_T>  
stdair::SegmentPeriodDetailedList_T`

Definition at line 27 of file [SegmentPeriodTypes.hpp](#).

**33.5.2.93** `typedef boost::shared_ptr<SnapshotStruct> stdair::SnapshotPtr_T`

Define the smart pointer to a snapshot .

Definition at line 14 of file [SnapshotTypes.hpp](#).

**33.5.2.94** `typedef std::list<TimePeriod*> stdair::TimePeriodList_T`

Define the time-period list.

Definition at line 17 of file [TimePeriodTypes.hpp](#).

33.5.2.95 `typedef std::map<const MapKey_T, TimePeriod*>  
stdair::TimePeriodMap_T`

Define the time-period map.

Definition at line 23 of file [TimePeriodTypes.hpp](#).

33.5.2.96 `typedef std::pair<MapKey_T, TimePeriod*> stdair::TimePeriodWithKey_T`

Define the list of pair<MapKey\_T, TimePeriod>.

Definition at line 26 of file [TimePeriodTypes.hpp](#).

33.5.2.97 `typedef std::list<TimePeriodWithKey_T> stdair::TimePeriodDetailedList_  
T`

Definition at line 27 of file [TimePeriodTypes.hpp](#).

33.5.2.98 `typedef std::list<TravelSolutionStruct> stdair::TravelSolutionList_T`

Define the booking class list.

Definition at line 19 of file [TravelSolutionTypes.hpp](#).

33.5.2.99 `typedef KeyList_T stdair::SegmentPath_T`

Define the segment path key.

Definition at line 25 of file [TravelSolutionTypes.hpp](#).

33.5.2.100 `typedef std::list<SegmentPath_T> stdair::SegmentPathList_T`

Define the list of segment paths.

Definition at line 28 of file [TravelSolutionTypes.hpp](#).

33.5.2.101 `typedef std::map<const ClassCode_T, Availability_T>  
stdair::ClassAvailabilityMap_T`

Define booking class - availability map.

Definition at line 31 of file [TravelSolutionTypes.hpp](#).

33.5.2.102 `typedef std::list<ClassAvailabilityMap_T>  
stdair::ClassAvailabilityMapHolder_T`

Define list of booking class - availability maps.

Definition at line 34 of file [TravelSolutionTypes.hpp](#).

33.5.2.103 `typedef std::map<const ClassCode_T, YieldValue_T>  
stdair::ClassYieldMap_T`

Define booking class - yield map.

Definition at line 37 of file [TravelSolutionTypes.hpp](#).

**33.5.2.104** `typedef std::list<ClassYieldMap_T> stdair::ClassYieldMapHolder_T`

Define list of booking class - yield maps.

Definition at line 40 of file [TravelSolutionTypes.hpp](#).

**33.5.2.105** `typedef std::list<BidPriceVector_T> stdair::BidPriceVectorHolder_T`

Define list of bid price vectors.

Definition at line 43 of file [TravelSolutionTypes.hpp](#).

**33.5.2.106** `typedef std::map<const ClassCode_T, const BidPriceVector_T*>  
stdair::ClassBpvMap_T`

Define booking class - bid price reference map.

Definition at line 46 of file [TravelSolutionTypes.hpp](#).

**33.5.2.107** `typedef std::list<ClassBpvMap_T> stdair::ClassBpvMapHolder_T`

Define list of booking class - bid price reference maps.

Definition at line 49 of file [TravelSolutionTypes.hpp](#).

**33.5.2.108** `typedef std::list<VirtualClassStruct> stdair::VirtualClassList_T`

Define the booking class list.

Definition at line 17 of file [VirtualClassTypes.hpp](#).

**33.5.2.109** `typedef std::map<const Yield_T, VirtualClassStruct>  
stdair::VirtualClassMap_T`

Define the booking class map.

Definition at line 23 of file [VirtualClassTypes.hpp](#).

**33.5.2.110** `typedef std::list<YieldFeatures*> stdair::YieldFeaturesList_T`

Define the date-period list.

Definition at line 17 of file [YieldFeaturesTypes.hpp](#).

**33.5.2.111** `typedef std::map<const MapKey_T, YieldFeatures*>  
stdair::YieldFeaturesMap_T`

Define the date-period map.

Definition at line 23 of file [YieldFeaturesTypes.hpp](#).

**33.5.2.112** `typedef std::pair<MapKey_T, YieldFeatures*>  
stdair::YieldFeaturesWithKey_T`

Define the list of pair<MapKey\_T, YieldFeatures>.

Definition at line 26 of file [YieldFeaturesTypes.hpp](#).

33.5.2.113 `typedef std::list<YieldFeaturesWithKey_T>  
stdair::YieldFeaturesDetailedList_T`

Definition at line 27 of file [YieldFeaturesTypes.hpp](#).

33.5.2.114 `typedef std::list<YieldStore*> stdair::YieldStoreList_T`

Define the [Inventory](#) list.

Definition at line 17 of file [YieldStoreTypes.hpp](#).

33.5.2.115 `typedef std::map<const MapKey_T, YieldStore*> stdair::YieldStoreMap_T`

Define the [Inventory](#) map.

Definition at line 23 of file [YieldStoreTypes.hpp](#).

33.5.2.116 `typedef std::string stdair::LocationCode_T`

Location code (3-letter-code, e.g., LON).

Definition at line 16 of file [stdair\\_basic\\_types.hpp](#).

33.5.2.117 `typedef unsigned long int stdair::Distance_T`

Define a distance (kilometers).

Definition at line 19 of file [stdair\\_basic\\_types.hpp](#).

33.5.2.118 `typedef LocationCode_T stdair::AirportCode_T`

Define the Airport Code type (3-letter-code, e.g., LHR).

Definition at line 22 of file [stdair\\_basic\\_types.hpp](#).

33.5.2.119 `typedef LocationCode_T stdair::CityCode_T`

City code

Definition at line 25 of file [stdair\\_basic\\_types.hpp](#).

33.5.2.120 `typedef std::string stdair::KeyDescription_T`

Define the key description.

Definition at line 28 of file [stdair\\_basic\\_types.hpp](#).

33.5.2.121 `typedef std::string stdair::AirlineCode_T`

Define the Airline Code type (2-letter-code, e.g., BA).

Definition at line 31 of file [stdair\\_basic\\_types.hpp](#).

33.5.2.122 `typedef unsigned short stdair::FlightNumber_T`

Define the type for flight numbers.

Definition at line 34 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.123 typedef unsigned short stdair::GuillotineNumber\_T

Define the type for guillotine numbers.

Definition at line 37 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.124 typedef std::string stdair::CabinCode\_T

Define the cabin code (class of service, e.g., first, business, economy).

Definition at line 41 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.125 typedef std::string stdair::FamilyCode\_T

Define the code of the fare family (e.g., 1, 2, 3, etc.).

Definition at line 44 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.126 typedef std::string stdair::ClassCode\_T

Define the booking class code (product segment class, e.g., H, B, K, etc.).

Definition at line 48 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.127 typedef unsigned long stdair::Identity\_T

Define a identity number.

Definition at line 51 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.128 typedef std::string stdair::TripType\_T

Type of trip type (RO=outbound of round-trip, RI=inbound of round-trip, OW=one way).

Definition at line 55 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.129 typedef double stdair::MonetaryValue\_T

Monetary value

Definition at line 58 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.130 typedef double stdair::RealNumber\_T

Real number

Definition at line 61 of file [stdair\\_basic\\_types.hpp](#).

#### 33.5.2.131 typedef double stdair::Percentage\_T

Define a percentage value (between 0 and 100%).

Definition at line 64 of file [stdair\\_basic\\_types.hpp](#).



**33.5.2.132 typedef double stdair::PriceValue\_T**

Define a price value (e.g., 1000.0 Euros).

Definition at line 67 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.133 typedef double stdair::YieldValue\_T**

Define a yield value (e.g., 1000.0 Euros).

Definition at line 70 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.134 typedef std::string stdair::PriceCurrency\_T**

Define a price currency (e.g., EUR for Euros).

Definition at line 73 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.135 typedef double stdair::Revenue\_T**

Define an amount of revenue.

Definition at line 76 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.136 typedef double stdair::Multiplier\_T**

Define the name of a multiplier.

Definition at line 79 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.137 typedef double stdair::NbOfSeats\_T**

Define the number of seats (it can be non integer, because the overbooking can be applied at booking class or PNR level).

Definition at line 83 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.138 typedef unsigned int stdair::Count\_T**

Count

Definition at line 86 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.139 typedef short stdair::PartySize\_T**

Number of passengers (in a group) for a booking.

Definition at line 89 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.140 typedef double stdair::NbOfRequests\_T**

Define a number of requests.

Definition at line 92 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.141 typedef NbOfRequests\_T stdair::NbOfBookings\_T**

Define a number of bookings.

Definition at line 95 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.142 typedef NbOfRequests\_T stdair::NbOfCancellations\_T**

Define a number of cancellations.

Define a number of cancellations (travellers).

Definition at line 98 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.143 typedef unsigned short stdair::NbOfTravelSolutions\_T**

Define a number of travel solutions (in a travel solution block).

Definition at line 102 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.144 typedef std::string stdair::ClassList\_String\_T**

Define the list of class codes as a string.

Definition at line 105 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.145 typedef unsigned short stdair::NbOfSegments\_T**

Define a number of segment-dates (in a path).

Definition at line 108 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.146 typedef unsigned short stdair::NbOfAirlines\_T**

Define a number of airlines (in a path).

Definition at line 111 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.147 typedef double stdair::Availability\_T**

Define an availability.

Definition at line 114 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.148 typedef double stdair::Fare\_T**

Define the price of a travel solution.

Definition at line 117 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.149 typedef bool stdair::Flag\_T**

Define the censorship flag.

Definition at line 120 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.150 typedef unsigned int stdair::UnsignedIndex\_T**

Define the unsigned index type.

Definition at line 123 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.151 typedef std::string stdair::Filename\_T**

File or directory name.

It may contain paths, relative or absolute (e.g., /foo/bar or C:).

Definition at line 129 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.152 typedef std::string stdair::FileAddress\_T**

Define the file address type (e.g. "a\_directory/a\_filename").

NOTE: That type should be deprecated.

Definition at line 133 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.153 typedef float stdair::ProgressPercentage\_T**

Progress status (usually, a percentage expressed as a floating point number).

Definition at line 137 of file [stdair\\_basic\\_types.hpp](#).

**33.5.2.154 typedef boost::posix\_time::time\_duration stdair::Duration\_T**

Define the type for durations (e.g., elapsed in-flight time).

Definition at line 17 of file [stdair\\_date\\_time\\_types.hpp](#).

**33.5.2.155 typedef boost::gregorian::date stdair::Date\_T**

Define the type for date (e.g., departure date of a flight).

Definition at line 20 of file [stdair\\_date\\_time\\_types.hpp](#).

**33.5.2.156 typedef boost::posix\_time::time\_duration stdair::Time\_T**

Time

Definition at line 23 of file [stdair\\_date\\_time\\_types.hpp](#).

**33.5.2.157 typedef boost::posix\_time::ptime stdair::DateTime\_T**

Define an accurate time (date+time).

Definition at line 26 of file [stdair\\_date\\_time\\_types.hpp](#).

**33.5.2.158 typedef boost::gregorian::date\_period stdair::DatePeriod\_T**

Define the Period (e.g., period during which flights depart).

Definition at line 29 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.159 `typedef std::string stdair::DOW_String_T`

Define the Day-Of-the-Week as a string.

Definition at line 32 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.160 `typedef boost::gregorian::date_duration stdair::DateOffset_T`

Define the Date Offset (e.g., -1 ).

Definition at line 35 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.161 `typedef unsigned int stdair::DayDuration_T`

Define a duration in number of days.

Definition at line 38 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.162 `typedef bool stdair::SaturdayStay_T`

Define the Saturday stay status of a travel.

Define the saturday stay of a tickets.

Definition at line 41 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.163 `typedef long int stdair::IntDuration_T`

Time duration in (integer) number of seconds

Definition at line 44 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.164 `typedef unsigned long long int stdair::LongDuration_T`

Time duration in (unsigned long long integer) number of milliseconds

Definition at line 47 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.165 `typedef float stdair::FloatDuration_T`

Duration in (float) number of time units

Definition at line 50 of file [stdair\\_date\\_time\\_types.hpp](#).

33.5.2.166 `typedef soci::session stdair::DBSession_T`

Database session handler.

Definition at line 20 of file [stdair\\_db.hpp](#).

33.5.2.167 `typedef soci::statement stdair::DBRequestStatement_T`

Database request statement handler.

Definition at line 23 of file [stdair\\_db.hpp](#).

**33.5.2.168 typedef std::string stdair::DBConnectionName\_T**

Define the name of an database connection.

Definition at line 26 of file [stdair\\_db.hpp](#).

**33.5.2.169 typedef bool stdair::ChangeFees\_T**

Define the availability option allowing the ticket change.

Definition at line 29 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.170 typedef bool stdair::NonRefundable\_T**

Define the refundable availability of a tickets.

Definition at line 32 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.171 typedef unsigned int stdair::SaturdayStayRatio\_T**

Define the average ratio (between 0 and 100) of demand with a saturday stay status equal to TRUE.

Definition at line 39 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.172 typedef unsigned int stdair::ChangeFeesRatio\_T**

Define the average ratio of demand with change fee availability.

Definition at line 43 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.173 typedef unsigned int stdair::NonRefundableRatio\_T**

Define the average ratio of demand with non-refundable availability.

Definition at line 47 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.174 typedef std::string stdair::PassengerType\_T**

Define the passenger characteristics, leisure or business for instance (1-letter-code, e.g., L or B).

Definition at line 51 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.175 typedef std::string stdair::DistributionPatternId\_T**

Define the identifier of a distribution pattern (e.g., 1).

Definition at line 54 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.176 typedef std::string stdair::CancellationRateCurveId\_T**

Define the identifier of a cancellation rate curve (e.g., C1).

Definition at line 57 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.177** `typedef std::string stdair::AirlinePreferenceId_T`

Define the identifier of an airline preference set list (e.g., AP1).

Definition at line 60 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.178** `typedef std::pair<Percentage_T, Percentage_T>  
stdair::CancellationNoShowRatePair_T`

Define a cancellation & and no-show rate pair.

Definition at line 63 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.179** `typedef std::string stdair::CharacteristicsPatternId_T`

Define the identifier of a demand characteristics pattern (e.g. Ch12); for a customer choice model

Definition at line 67 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.180** `typedef std::string stdair::CharacteristicsIndex_T`

Define characteristics component index (e.g. W for WTP)

Definition at line 70 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.181** `typedef double stdair::WTP_T`

Define a Willingness-To-Pay (WTP) (e.g., 1000.0 Euros).

Definition at line 73 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.182** `typedef boost::tuples::tuple<double, WTP_T>  
stdair::CharacteristicsWTP_tuple_T`

Define the name of a WTP-component of characteristics pattern.

Definition at line 76 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.183** `typedef std::pair<WTP_T, MeanStdDevPair_T>  
stdair::WTPDemandPair_T`

Define the <WTP, demand> pair type.

Definition at line 79 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.184** `typedef NbOfRequests_T stdair::NbOfNoShows_T`

Define a number of no-shows.

Definition at line 85 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.185** `typedef double stdair::MatchingIndicator_T`

Define a indicator of demand to class matching.

Definition at line 88 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.186 typedef std::string stdair::DemandStreamKeyStr\_T**

Type definition for the hashed key of the DemandStreamKey object.

Definition at line 91 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.187 typedef std::string stdair::ChannelLabel\_T**

Type of booking channel (D=direct, I=indirect, N=oNline, F=oFfline).

Definition at line 94 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.188 typedef std::string stdair::FrequentFlyer\_T**

Type of frequent flyer (P=Platinum, G=Gold, S=Silver, M=Member, N=None).

Definition at line 97 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.189 typedef std::string stdair::RequestStatus\_T**

Define the Request status for booking (1-letter-code, e.g., B: booked, C: cancelled, R: Rejected).

Definition at line 101 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.190 typedef std::map<Identity\_T, Identity\_T> stdair::BookingTSIDMap\_T**

Define a map between a BookingID and a TravelSolutionID.

Definition at line 104 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.191 typedef std::pair<CabinCode\_T, ClassCode\_T> stdair::CabinClassPair\_T**

Define a pair (cabin code, class code) e.g., (economy, K).

Definition at line 107 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.192 typedef std::list<CabinClassPair\_T> stdair::CabinClassPairList\_T**

Define a list of pair (cabin code, class code).

Definition at line 110 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.193 typedef double stdair::ProportionFactor\_T**

Define the forecast booking requests proportion.

Definition at line 113 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.194 typedef std::list<ProportionFactor\_T> stdair::ProportionFactorList\_T**

Define the list of forecast booking requests proportions.

Definition at line 116 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.195** `typedef std::string stdair::OnDString_T`

Define the O&D string key (e.g. "SQ;11,2010-Feb-08;SIN,BKK").

Definition at line 119 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.196** `typedef std::list<OnDString_T> stdair::OnDStringList_T`

Define the list of O&D string key.

Definition at line 122 of file [stdair\\_demand\\_types.hpp](#).

**33.5.2.197** `typedef std::string stdair::EventName_T`

Define the name of an event.

Definition at line 14 of file [stdair\\_event\\_types.hpp](#).

**33.5.2.198** `typedef double stdair::NbOfEvents_T`

Define a number of events.

Definition at line 17 of file [stdair\\_event\\_types.hpp](#).

**33.5.2.199** `typedef std::string stdair::EventQueueID_T`

Define an ID for an [EventQueue](#) object.

Definition at line 20 of file [stdair\\_event\\_types.hpp](#).

**33.5.2.200** `typedef std::string stdair::EventGeneratorKey_T`

Define a key string of an event generator.

Definition at line 23 of file [stdair\\_event\\_types.hpp](#).

**33.5.2.201** `typedef double stdair::NbOfFareRules_T`

Define a number of fare rules.

Definition at line 12 of file [stdair\\_fare\\_types.hpp](#).

**33.5.2.202** `typedef std::string stdair::NetworkID_T`

Define the type for network ID.

Definition at line 23 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.203** `typedef std::vector<AirlineCode_T> stdair::AirlineCodeList_T`

Define a list of airline code.

Definition at line 26 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.204** `typedef std::vector<ClassList_String_T> stdair::ClassList_StringList_T`

Define the list of list of class codes as a string.



Definition at line 29 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.205** `typedef std::vector<ClassCode_T> stdair::ClassCodeList_T`

Define a list of class code.

Definition at line 32 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.206** `typedef unsigned short stdair::SubclassCode_T`

Define the sub-class code (e.g., 0, 1, 2, etc.). The subclass is a sub-structure for the booking class, allowing to have specific rules for some criteria like POS.

Definition at line 37 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.207** `typedef std::string stdair::FlightPathCode_T`

Define the flight path code (code made by a suite of flight numbers).

Definition at line 40 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.208** `typedef std::map<CabinCode_T, ClassList_String_T>  
stdair::CabinBookingClassMap_T`

Map between the cabin codes and the booking class codes within each cabin.

Definition at line 44 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.209** `typedef double stdair::CabinCapacity_T`

Define the cabin capacity (resource, e.g., 200 seats).

The capacity is expressed as a double to cope with overbooking.

Definition at line 48 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.210** `typedef double stdair::NbOfFlightDates_T`

Define a number of flight dates.

Definition at line 51 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.211** `typedef double stdair::CommittedSpace_T`

Define the committed space of a cabin.

Definition at line 54 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.212** `typedef double stdair::UPR_T`

Define the unsold protection (UPR).

Definition at line 57 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.213** `typedef double stdair::BookingLimit_T`

Define the value of the booking limit.

Define the Booking Limit.

It is a double, as it allows for overbooking.

Definition at line 60 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.214 `typedef double stdair::AuthorizationLevel_T`

Define the value of the authorization level.

Definition at line 63 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.215 `typedef double stdair::CapacityAdjustment_T`

Define the value of the adjustment for cabin capacity.

Definition at line 66 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.216 `typedef double stdair::BlockSpace_T`

Define the number of seat which could not be used for the booking.

Definition at line 69 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.217 `typedef bool stdair::AvailabilityStatus_T`

Define an availability status (AVS).

Definition at line 72 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.218 `typedef std::vector<Availability_T> stdair::BucketAvailabilities_T`

Define a list of availabilities.

Definition at line 75 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.219 `typedef double stdair::NbOfYields_T`

Define a number of yields.

Definition at line 78 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.220 `typedef double stdair::NbOfInventoryControlRules_T`

Define a number of InventoryControlRules.

Definition at line 81 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.221 `typedef bool stdair::CensorshipFlag_T`

Define availability of booking limit.

Definition at line 84 of file [stdair\\_inventory\\_types.hpp](#).

#### 33.5.2.222 `typedef short stdair::DTD_T`

Define the type of day-to-departure.

Definition at line 87 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.223** `typedef short stdair::DCP_T`

Define the type of data collection point.

Definition at line 90 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.224** `typedef std::list<DCP_T> stdair::DCPList_T`

Define the type of data collection point list.

Definition at line 93 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.225** `typedef std::map<DTD_T, RealNumber_T> stdair::DTDFratMap_T`

Define the DTD (days to departure) frat5 coef map.

Definition at line 96 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.226** `typedef std::map<FloatDuration_T, float> stdair::DTDProbMap_T`

Define the DTD (days to departure) probability map.

Definition at line 99 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.227** `typedef std::vector<CensorshipFlag_T> stdair::CensorshipFlagList_T`

Define the list of censorship flags (une list per booking class, one censorship flag per DCP).

Definition at line 103 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.228** `typedef double stdair::BookingRatio_T`

Define the bookingRatio (for instance OnD bookings over whole class bookings).

Definition at line 107 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.229** `typedef double stdair::Yield_T`

Define the yield of a virtual class.

Definition at line 110 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.230** `typedef unsigned int stdair::YieldLevel_T`

Define the yield level (yield as an integer).

Definition at line 113 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.231** `typedef std::map<YieldLevel_T, MeanStdDevPair_T>  
stdair::YieldLevelDemandMap_T`

Define the <YieldLevel, demand> demand map.

Definition at line 116 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.232** `typedef std::pair<Yield_T, MeanStdDevPair_T>  
stdair::YieldDemandPair_T`

Define the <Yield, demand> pair type.

Definition at line 119 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.233** `typedef double stdair::BidPrice_T`

Define the Bid-Price.

Definition at line 122 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.234** `typedef std::vector<BidPrice_T> stdair::BidPriceVector_T`

Define a Bid-Price Vector.

Definition at line 125 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.235** `typedef unsigned int stdair::SeatIndex_T`

Define the current index of a Bid-Price Vector (for a given [LegCabin](#)).

Definition at line 128 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.236** `typedef std::string stdair::ControlMode_T`

Mode of inventory control.

Definition at line 131 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.237** `typedef double stdair::OverbookingRate_T`

Define the rate of overbooking

Definition at line 134 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.238** `typedef double stdair::ProtectionLevel_T`

Define the Protection Level.

It is a double, as it allows for overbooking.

Definition at line 142 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.239** `typedef std::vector<double> stdair::EmsrValueList_T`

Define the list of EMSR values for the EMSR algorithm.

Definition at line 145 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.240** `typedef std::vector<double> stdair::BookingLimitVector_T`

Define the vector of booking limits.

It is a vector of double.

Definition at line 149 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.241 `typedef std::vector<double> stdair::ProtectionLevelVector_T`

Define the vector of protection levels.

It is a vector of double.

Definition at line 153 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.242 `typedef boost::multi_array<double, 2> stdair::SnapshotBlock_T`

Define a snapshot block.

Definition at line 156 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.243 `typedef SnapshotBlock_T::index_range stdair::SnapshotBlockRange_T`

Define a range for array view.

Definition at line 159 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.244 `typedef SnapshotBlock_T::array_view<1>::type  
stdair::SegmentCabinDTDSnapshotView_T`

Define a view for a given DTD.

Definition at line 162 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.245 `typedef SnapshotBlock_T::array_view<2>::type  
stdair::SegmentCabinDTRangeSnapshotView_T`

Define a view for a given range of DTD.

Definition at line 165 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.246 `typedef SnapshotBlock_T::const_array_view<1>::type  
stdair::ConstSegmentCabinDTDSnapshotView_T`

Define a const view for a given DTD.

Definition at line 168 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.247 `typedef SnapshotBlock_T::const_array_view<2>::type  
stdair::ConstSegmentCabinDTRangeSnapshotView_T`

Define a const view for a given range of DTD.

Definition at line 171 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.248 `typedef unsigned short stdair::BlockNumber_T`

Define the snapshot block number.

Definition at line 174 of file [stdair\\_inventory\\_types.hpp](#).

33.5.2.249 `typedef unsigned short stdair::BlockIndex_T`

Define the index type within a snapshot block.

Definition at line 177 of file [stdair\\_inventory\\_types.hpp](#).

**33.5.2.250** `typedef unsigned int stdair::ReplicationNumber_T`

Define the replication number.

Definition at line 24 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.251** `typedef unsigned long int stdair::ExponentialSeed_T`

Define the seed type of an Exponential function.

Definition at line 29 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.252** `typedef unsigned long int stdair::UniformSeed_T`

Define the seed type of an Uniform function.

Definition at line 34 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.253** `typedef unsigned long int stdair::RandomSeed_T`

Seed for the random generation, so that it can be reproducible.

Definition at line 39 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.254** `typedef boost::minstd_rand stdair::BaseGenerator_T`

Random number generator.

Definition at line 44 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.255** `typedef boost::uniform_real stdair::UniformDistribution_T`

Uniform distribution of real numbers (by default, double).

Definition at line 49 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.256** `typedef boost::variate_generator<BaseGenerator_T&, UniformDistribution_T> stdair::UniformGenerator_T`

Uniform random generator.

Definition at line 55 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.257** `typedef boost::normal_distribution stdair::NormalDistribution_T`

Normal distribution of real numbers (by default, double).

Definition at line 60 of file [stdair\\_maths\\_types.hpp](#).

**33.5.2.258** `typedef boost::variate_generator<BaseGenerator_T&, NormalDistribution_T> stdair::NormalGenerator_T`

Normal random generator.

Definition at line 66 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.259 `typedef boost::exponential_distribution stdair::ExponentialDistribution_T`

Type definiton for the exponential distribution (characteristics).

Definition at line 69 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.260 `typedef boost::variate_generator<BaseGenerator_T&, ExponentialDistribution_T> stdair::ExponentialGenerator_T`

Type definition for the exponential distribution random generator.

Definition at line 74 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.261 `typedef double stdair::MeanValue_T`

Define a mean value (e.g., 20.2).

Definition at line 79 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.262 `typedef double stdair::StdDevValue_T`

Define a standard deviation value (e.g., 1.5).

Definition at line 84 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.263 `typedef std::pair<MeanValue_T, StdDevValue_T> stdair::MeanStdDevPair_T`

Define a couple (mean, standart deviation) (e.g., (20.2,1.5)).

Definition at line 89 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.264 `typedef float stdair::Probability_T`

Probability.

Definition at line 94 of file [stdair\\_maths\\_types.hpp](#).

33.5.2.265 `typedef std::string stdair::ForecasterMode_T`

Mode of the forecaster.

Definition at line 17 of file [stdair\\_rm\\_types.hpp](#).

33.5.2.266 `typedef short stdair::HistoricalDataLimit_T`

Limit of similar flight-dates used in the forecaster.

Definition at line 20 of file [stdair\\_rm\\_types.hpp](#).

33.5.2.267 `typedef std::string stdair::OptimizerMode_T`

Mode of the forecaster.

Definition at line 23 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.268** `typedef NbOfBookings_T stdair::PolicyDemand_T`

Define the demand for a policy.

Definition at line 26 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.269** `typedef std::vector<double> stdair::GeneratedDemandVector_T`

Define the vector of generated demand (for MC integration use).

It is a vector of double.

Definition at line 30 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.270** `typedef std::vector<GeneratedDemandVector_T>  
stdair::GeneratedDemandVectorHolder_T`

Define the holder of the generated demand vectors.

Definition at line 33 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.271** `typedef double stdair::SellupProbability_T`

Define the sellup probability.

Definition at line 36 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.272** `typedef std::vector<SellupProbability_T>  
stdair::SellupProbabilityVector_T`

Define the sellup probability vector.

Definition at line 39 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.273** `typedef std::vector<double> stdair::SellupFactorHolder_T`

Define the holder of sellup factors (used for computing Q-eq bookings)

Definition at line 42 of file [stdair\\_rm\\_types.hpp](#).

**33.5.2.274** `typedef boost::shared_ptr<STDAIR_Service>  
stdair::STDAIR_ServicePtr_T`

Pointer on the STDAIR Service handler.

Definition at line 13 of file [stdair\\_service\\_types.hpp](#).

**33.5.3** Function Documentation**33.5.3.1** `const std::string stdair::DEFAULT_BOM_ROOT_KEY ( " -- ROOT -- " )`

Default value for the BOM tree root key (" -- ROOT --").



33.5.3.2 `const double stdair::DEFAULT_EPSILON_VALUE ( 0.0001 )`

Default very small value.

33.5.3.3 `const unsigned int stdair::DEFAULT_FLIGHT_SPEED ( 900 )`

Default flight speed (number of kilometers per hour).

33.5.3.4 `const NbOfFlightDates_T stdair::DEFAULT_NB_OF_FLIGHTDATES ( 0.0 )`

Default number of generated flight dates.

33.5.3.5 `const Duration_T stdair::NULL_BOOST_TIME_DURATION ( -1, -1, -1 )`

Null time duration (in boost::time\_duration unit).

33.5.3.6 `const unsigned int stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR ( 365 )`

Default number of days in a year.

33.5.3.7 `const unsigned int stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS ( 1000 )`

Higher value per thousand

33.5.3.8 `const DayDuration_T stdair::DEFAULT_DAY_DURATION ( 0 )`

Default number of duration days.

33.5.3.9 `const DatePeriod_T stdair::BOOST_DEFAULT_DATE_PERIOD ( Date_T(2007, 1, 1), Date_T(2007, 1, 1) )`

Default date period (0-length, i.e., it lasts one day).

33.5.3.10 `const DOW_String_T stdair::DEFAULT_DOW_STRING ( "0000000" )`

Default DOW String (e.g., "0000000").

33.5.3.11 `const DateOffset_T stdair::DEFAULT_DATE_OFFSET ( 0 )`

Default Date Offset (e.g., 0).

33.5.3.12 `const Date_T stdair::DEFAULT_DATE ( 2010, boost::gregorian::Jan, 1 )`

Default date for the General.

33.5.3.13 `const DateTime_T stdair::DEFAULT_DATETIME ( DEFAULT_DATE, NULL_BOOST_TIME_DURATION )`

Default date-time.

33.5.3.14 `const Duration_T stdair::DEFAULT_EPSILON_DURATION ( 0, 0, 0, 1 )`

Default epsilon duration (1 nanosecond).

33.5.3.15 `const Count_T stdair::SECONDS_IN_ONE_DAY ( 86400 )`

Number of seconds in one day.

33.5.3.16 `const Count_T stdair::MILLISECONDS_IN_ONE_SECOND ( 1000 )`

Number of milliseconds in one second

33.5.3.17 `const RandomSeed_T stdair::DEFAULT_RANDOM_SEED ( 120765987 )`

Default random seed.

33.5.3.18 `const AirportCode_T stdair::AIRPORT_LHR ( "LHR" )`

Default origin airport (e.g., "LHR").

33.5.3.19 `const AirportCode_T stdair::AIRPORT_SYD ( "SYD" )`

Default destination airport (e.g., "SYD").

33.5.3.20 `const CityCode_T stdair::POS_LHR ( "LHR" )`

London city code (e.g., "LHR").

33.5.3.21 `const Date_T stdair::DATE_20110115 ( 2011 , boost::gregorian::Jan , 15 )`

Date.

33.5.3.22 `const Date_T stdair::DATE_20111231 ( 2011 , boost::gregorian::Dec , 31 )`

33.5.3.23 `const DayDuration_T stdair::NO_ADVANCE_PURCHASE ( 0 )`

Advance purchase 0 day.

33.5.3.24 `const SaturdayStay_T stdair::SATURDAY_STAY ( true )`

Default saturdayStay value (true).

33.5.3.25 `const SaturdayStay_T stdair::NO_SATURDAY_STAY ( false )`

Default saturdayStay value (false).

33.5.3.26 `const ChangeFees_T stdair::CHANGE_FEES ( true )`

Default change fees value (true).

33.5.3.27 `const ChangeFees_T stdair::NO_CHANGE_FEES ( false )`

Default change fees value (false).

33.5.3.28 `const NonRefundable_T stdair::NON_REFUNDABLE ( true )`

Default non refundable value (true).

33.5.3.29 `const NonRefundable_T stdair::No_NON_REFUNDABLE ( false )`

Default refundable value (false).

33.5.3.30 `const SaturdayStay_T stdair::DEFAULT_BOM_TREE_SATURDAY_STAY ( true )`

Default saturdayStay value (true).

33.5.3.31 `const ChangeFees_T stdair::DEFAULT_BOM_TREE_CHANGE_FEES ( true )`

Default change fees value (true).

33.5.3.32 `const NonRefundable_T stdair::DEFAULT_BOM_TREE_NON_REFUNDABLE ( true )`

Default non refundable value (true).

33.5.3.33 `const DayDuration_T stdair::NO_STAY_DURATION ( 0 )`

Stay duration 0 day.

33.5.3.34 `const AirlineCode_T stdair::AIRLINE_CODE_BA ( "BA" )`

Airline code "BA".

33.5.3.35 `const CabinCode_T stdair::CABIN_Y ( "Y" )`

Cabin 'Y'.

33.5.3.36 `const ClassCode_T stdair::CLASS_CODE_Y ( "Y" )`

Class code 'Y'.

33.5.3.37 `const ClassCode_T stdair::CLASS_CODE_Q ( "Q" )`

Class code 'Q'.

33.5.3.38 `const AirportCode_T stdair::AIRPORT_SIN ( "SIN" )`

Singapour airport (e.g., "SIN").

33.5.3.39 `const AirportCode_T stdair::AIRPORT_BKK ( "BKK" )`

Bangkok airport (e.g., "BKK").

33.5.3.40 `const CityCode_T stdair::POS_SIN ( "SIN" )`

Singapour city code (e.g., "SIN").

33.5.3.41 `const CabinCode_T stdair::CABIN_ECO ( "Eco" )`

Economic cabin (e.g., "Eco").

33.5.3.42 `const FrequentFlyer_T stdair::FREQUENT_FLYER_MEMBER ( "M" )`

Frequent flyer tier (e.g., "M" meaning member).

33.5.3.43 `const ClassCode_T stdair::DEFAULT_FAMILY_CODE ( "0" )`

Default family code value ("X").

33.5.3.44 `const NbOfAirlines_T stdair::DEFAULT_NBOFAIRLINES ( 0 )`

Default number of airlines.

33.5.3.45 `const FlightPathCode_T stdair::DEFAULT_FLIGHTPATH_CODE ( "" )`

Default flight-path code value ("").

33.5.3.46 `const Distance_T stdair::DEFAULT_DISTANCE_VALUE ( 0 )`

Default distance value (kilometers).

33.5.3.47 `const ClassCode_T stdair::DEFAULT_CLOSED_CLASS_CODE ( "CC" )`

Default closed class code.

33.5.3.48 `const NbOfBookings_T stdair::DEFAULT_CLASS_NB_OF_BOOKINGS ( 0 )`

Default number of bookings (with counted cancellation) for [BookingClass](#).

33.5.3.49 `const NbOfBookings_T stdair::DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS ( 0 )`

Default number of booking (without cancellation) demands for [BookingClass](#).

33.5.3.50 `const NbOfBookings_T stdair::DEFAULT_CLASS_UNCONSTRAINED_DEMAND ( 0 )`

Default unconstrained demand for [BookingClass](#).

33.5.3.51 `const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_MEAN ( 0 )`

Default remaining future demand mean for [BookingClass](#).

33.5.3.52 `const NbOfBookings_T stdair::DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION ( 0 )`

Default remaining futre demand standard deviation for [BookingClass](#).

33.5.3.53 `const NbOfCancellations_T stdair::DEFAULT_CLASS_NB_OF_CANCELLATIONS ( 0 )`

Default number of cancellations for [BookingClass](#).

33.5.3.54 `const NbOfNoShows_T stdair::DEFAULT_CLASS_NB_OF_NOSHOWS ( 0 )`

Default number of no-shows for [BookingClass](#).

33.5.3.55 `const CabinCapacity_T stdair::DEFAULT_CABIN_CAPACITY ( 100. 0 )`

Default cabin capacity for Leg cabins.

33.5.3.56 `const CommittedSpace_T stdair::DEFAULT_COMMITTED_SPACE ( 0. 0 )`

Default committed space value for Leg cabins.

33.5.3.57 `const BlockSpace_T stdair::DEFAULT_BLOCK_SPACE ( 0. 0 )`

Default committed space value for Leg cabins.

33.5.3.58 `const Availability_T stdair::DEFAULT_NULL_AVAILABILITY ( 0. 0 )`

Default null availability (0.0).

33.5.3.59 `const Availability_T stdair::DEFAULT_AVAILABILITY ( 9. 0 )`

Default availability (9.0).

33.5.3.60 `const Availability_T stdair::MAXIMAL_AVAILABILITY ( 9999. 0 )`

Maximal offered capacity in a cabin.

33.5.3.61 `const CensorshipFlag_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG ( false )`

Default boolean for censorship flag given the status of availability for [BookingClass](#).

33.5.3.62 `const BookingLimit_T stdair::DEFAULT_CLASS_BOOKING_LIMIT ( 9999. 0 )`

Default booking limit value for [BookingClass](#).

33.5.3.63 `const AuthorizationLevel_T stdair::DEFAULT_CLASS_AUTHORIZATION_LEVEL ( 9999. 0 )`

Default authorization level for [BookingClass](#).

33.5.3.64 `const AuthorizationLevel_T stdair::DEFAULT_ -  
CLASS_MAX_AUTHORIZATION_LEVEL ( 9999. 0  
)`

Default MAX value of authorization level for [BookingClass](#).

33.5.3.65 `const AuthorizationLevel_T stdair::DEFAULT_CLASS_MIN_ -  
AUTHORIZATION_LEVEL ( 0. 0 )`

Default MIN value of authorization level for [BookingClass](#).

33.5.3.66 `const OverbookingRate_T stdair::DEFAULT_CLASS_OVERBOOKING_ -  
RATE ( 0. 0 )`

Default over-booking rate for [BookingClass](#).

33.5.3.67 `const BookingRatio_T stdair::DEFAULT_OND_BOOKING_RATE ( 0. 0 )`

Default booking rate for OnD bookings over overall class bookings.

33.5.3.68 `const Fare_T stdair::DEFAULT_FARE_VALUE ( 0. 0 )`

Default Fare value.

33.5.3.69 `const Yield_T stdair::DEFAULT_CLASS_YIELD_VALUE ( 0. 0 )`

Default yield value for a virtual class.

33.5.3.70 `const Revenue_T stdair::DEFAULT_REVENUE_VALUE ( 0. 0 )`

Default Revenue value.

33.5.3.71 `const Percentage_T stdair::DEFAULT_LOAD_FACTOR_VALUE ( 100. 0 )`

Default load factor value (100%).

33.5.3.72 `const Yield_T stdair::DEFAULT_YIELD_VALUE ( 0. 0 )`

Default yield value.

33.5.3.73 `const Yield_T stdair::DEFAULT_YIELD_MAX_VALUE ( std::numeric_limits<  
double >:: max() )`

Default yield max value.

33.5.3.74 `const NbOfBookings_T stdair::DEFAULT_YIELD_NB_OF_BOOKINGS ( 0. 0 )`

Default number of bookings for YieldRangeStruct\_T.

33.5.3.75 `const Identity_T stdair::DEFAULT_BOOKING_NUMBER ( 0 )`

Default booking number.

33.5.3.76 `const NbOfCancellations_T stdair::DEFAULT_YIELD_NB_OF_CANCELLATIONS ( 0. 0 )`

Default cancellation number for YieldRangeStruct\_T.

33.5.3.77 `const NbOfNoShows_T stdair::DEFAULT_YIELD_NB_OF_NOSHOWS ( 0. 0 )`

Default no-shows number for YieldRangeStruct\_T.

33.5.3.78 `const Availability_T stdair::DEFAULT_YIELD_AVAILABILITY ( 0. 0 )`

Default availability for YieldRangeStruct\_T.

33.5.3.79 `const CensorshipFlag_T stdair::DEFAULT_YIELD_CENSORSHIPFLAG ( false )`

Default boolean for booking limit availability for YieldRangeStruct\_T.

33.5.3.80 `const BookingLimit_T stdair::DEFAULT_YIELD_BOOKING_LIMIT ( 0. 0 )`

Default booking limit value for YieldRangeStruct\_T.

33.5.3.81 `const OverbookingRate_T stdair::DEFAULT_YIELD_OVERBOOKING_RATE ( 0. 0 )`

Default over-booking rate for YieldRangeStruct\_T.

33.5.3.82 `const Fare_T stdair::DEFAULT_OND_FARE_VALUE ( 0. 0 )`

Default value of Fare.

33.5.3.83 `const EventQueueID_T stdair::DEFAULT_EVENT_QUEUE_ID ( "EQ01" )`

Default ID for the event queue.

33.5.3.84 `const Count_T stdair::DEFAULT_PROGRESS_STATUS ( 0 )`

Default progress status.

33.5.3.85 `const Date_T stdair::DEFAULT_EVENT_OLDEST_DATE ( 2008 , boost::gregorian::Jan , 1 )`

Default reference (oldest) date for the events. No event can occur before that date.

33.5.3.86 `const DateTime_T stdair::DEFAULT_EVENT_OLDEST_DATETIME ( DEFAULT_EVENT_OLDEST_DATE , NULL_BOOST_TIME_DURATION )`

Default reference (oldest) date-time for the events. No event can occur before that date-time.

33.5.3.87 `const PartySize_T stdair::DEFAULT_PARTY_SIZE ( 1 )`

Default party size in a request.

**33.5.3.88** `const DayDuration_T stdair::DEFAULT_STAY_DURATION ( 7 )`

Default duration for a stay.

**33.5.3.89** `const WTP_T stdair::DEFAULT_WTP ( 1000. 0 )`

Default Willingness-to-Pay (WTP, as expressed as a monetary unit).

**33.5.3.90** `const Date_T stdair::DEFAULT_PREFERRED_DEPARTURE_DATE (   
DEFAULT_DEPARTURE_DATE )`

Default departure date.

**33.5.3.91** `const Duration_T stdair::DEFAULT_PREFERRED_DEPARTURE_TIME ( 8 ,   
0 , 0 )`

Default preferred departure time (08:00).

**33.5.3.92** `const DateOffset_T stdair::DEFAULT_ADVANCE_PURCHASE ( 22 )`

Default advance purchase.

**33.5.3.93** `const Date_T stdair::DEFAULT_REQUEST_DATE (   
DEFAULT_PREFERRED_DEPARTURE_DATE- DEFAULT_ADVANCE_PURCHASE )`

Default request date.

**33.5.3.94** `const Duration_T stdair::DEFAULT_REQUEST_TIME ( 8 , 0 , 0 )`

Default preferred departure time (08:00).

**33.5.3.95** `const DateTime_T stdair::DEFAULT_REQUEST_DATE_TIME (   
DEFAULT_REQUEST_DATE , DEFAULT_REQUEST_TIME )`

Default request date-time.

**33.5.3.96** `const CabinCode_T stdair::DEFAULT_PREFERRED_CABIN ( "M" )`

Default preferred cabin.

**33.5.3.97** `const CityCode_T stdair::DEFAULT_POS ( "ALL" )`

Default point-of-sale.

**33.5.3.98** `const ChannelLabel_T stdair::DEFAULT_CHANNEL ( "DC" )`

Default channel (e.g., "DC" meaning Different Channels).

**33.5.3.99** `const ChannelLabel_T stdair::CHANNEL_DN ( "DN" )`

DN channel (e.g., direct on-line).



33.5.3.100 **const ChannelLabel\_T stdair::CHANNEL\_IN ( "IN" )**

IN channel (e.g., indirect on-line).

33.5.3.101 **const TripType\_T stdair::TRIP\_TYPE\_ONE\_WAY ( "OW" )**

Trip type one-way (e.g., "OW").

33.5.3.102 **const TripType\_T stdair::TRIP\_TYPE\_ROUND\_TRIP ( "RT" )**

Trip type round-trip (e.g., "RT").

33.5.3.103 **const TripType\_T stdair::TRIP\_TYPE\_INBOUND ( "RI" )**

Trip type inbound (e.g., "RI").

33.5.3.104 **const TripType\_T stdair::TRIP\_TYPE\_OUTBOUND ( "RO" )**

Trip type outbound (e.g., "RO").

33.5.3.105 **const FrequentFlyer\_T stdair::DEFAULT\_FF\_TIER ( "N" )**

Default frequent flyer tier (non member).

33.5.3.106 **const PriceValue\_T stdair::DEFAULT\_VALUE\_OF\_TIME ( 100.0 )**

Default value of time (expressed as a monetary unit per hour).

33.5.3.107 **const Duration\_T stdair::DEFAULT\_MINIMAL\_CONNECTION\_TIME ( 0 , 30 , 0 )**

Default Minimal connection time.

33.5.3.108 **const Duration\_T stdair::DEFAULT\_MAXIMAL\_CONNECTION\_TIME ( 24 , 0 , 0 )**

Default maximal connection time.

33.5.3.109 **const MatchingIndicator\_T stdair::DEFAULT\_MATCHING\_INDICATOR ( 0.0 )**

Default Matching Indicator value.

33.5.3.110 **const PriceCurrency\_T stdair::DEFAULT\_CURRENCY ( "EUR" )**

Default currency (euro).

33.5.3.111 **const AvailabilityStatus\_T stdair::DEFAULT\_AVAILABILITY\_STATUS ( false )**

Default availability status for a travel solution.

33.5.3.112 `const AirlineCode_T stdair::DEFAULT_AIRLINE_CODE ( "XX" )`

Default airline code value ("XX").

33.5.3.113 `const AirlineCode_T stdair::DEFAULT_NULL_AIRLINE_CODE ( "" )`

Default airline code value ("").

33.5.3.114 `const FlightNumber_T stdair::DEFAULT_FLIGHT_NUMBER ( 9999 )`

Default flight number (9999).

33.5.3.115 `const GuillotineNumber_T stdair::DEFAULT_GUILLOTINE_NUMBER ( 9999 )`

Default guillotine number (9999).

33.5.3.116 `const Date_T stdair::DEFAULT_DEPARTURE_DATE ( 1900 , boost::gregorian::Jan , 1 )`

Default flight departure date (01/01/1900).

33.5.3.117 `const AirportCode_T stdair::DEFAULT_AIRPORT_CODE ( "XXX" )`

Default airport code value ("XXX").

33.5.3.118 `const AirportCode_T stdair::DEFAULT_NULL_AIRPORT_CODE ( "" )`

Default airport code value ("").

33.5.3.119 `const AirportCode_T stdair::DEFAULT_ORIGIN ( "XXX" )`

Default Origin.

33.5.3.120 `const AirportCode_T stdair::DEFAULT_DESTINATION ( "XXX" )`

Default destination.

33.5.3.121 `const CabinCode_T stdair::DEFAULT_CABIN_CODE ( "X" )`

Default cabin code.

33.5.3.122 `const FamilyCode_T stdair::DEFAULT_FARE_FAMILY_CODE ( "EcoSaver" )`

Default fare family Code.

33.5.3.123 `const FamilyCode_T stdair::DEFAULT_NULL_FARE_FAMILY_CODE ( "NoFF" )`

Default null fare family Code ("NoFF").

33.5.3.124 `const ClassCode_T stdair::DEFAULT_CLASS_CODE ( "X" )`

Default class code value ("X").

33.5.3.125 `const ClassCode_T stdair::DEFAULT_NULL_CLASS_CODE ( "" )`

Default null class code value ("").

33.5.3.126 `const BidPrice_T stdair::DEFAULT_BID_PRICE ( 0.0 )`

Default Bid-Price.

33.5.3.127 `const unsigned short stdair::MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT ( 7 )`

Maximal number of legs linked to a single flight-date.

Note that the number of derived segments is  $n*(n+1)/2$  if  $n$  is the number of legs.

33.5.3.128 `const unsigned short stdair::MAXIMAL_NUMBER_OF_SEGMENTS_IN_O&D ( 3 )`

Maximal number of segments linked to a single O&D (Origin & Destination).

33.5.3.129 `const SeatIndex_T stdair::DEFAULT_SEAT_INDEX ( 1 )`

Default seat index (for a bucket and/or Bid-Price Vector slot).

33.5.3.130 `const std::string stdair::DEFAULT_FARE_FAMILY_VALUE_TYPE ( "FF" )`

Default value type (within a guillotine block) for fare family.

33.5.3.131 `const std::string stdair::DEFAULT_SEGMENT_CABIN_VALUE_TYPE ( "SC" )`

Default value type (within a guillotine block) for segment-cabin.

33.5.3.132 `const std::string stdair::DEFAULT_KEY_FLD_DELIMITER ( ";" )`

Default delimiter for string display (e.g delimiter for inventory key and flight-date key).

33.5.3.133 `const std::string stdair::DEFAULT_KEY_SUB_FLD_DELIMITER ( ", " )`

Default sub delimiter for string display (e.g delimiter for flight number and departure date of a flight-date key).

33.5.3.134 `const boost::char_separator<char> stdair::DEFAULT_KEY_TOKEN_DELIMITER ( ";", " " )`

Default token for decoding a full string display.

33.5.3.135 `template<int MIN, int MAX> date_time_element<MIN, MAX> stdair::operator* ( const date_time_element< MIN, MAX > & o1, const date_time_element< MIN, MAX > & o2 ) [inline]`

Operator\* overload.

Definition at line 47 of file [BasParserHelperTypes.hpp](#).

References [stdair::date\\_time\\_element< MIN, MAX >::\\_value](#).

33.5.3.136 `template<int MIN, int MAX> date_time_element<MIN, MAX> stdair::operator+ ( const date_time_element< MIN, MAX > & o1, const date_time_element< MIN, MAX > & o2 ) [inline]`

Operator+ overload.

Definition at line 55 of file [BasParserHelperTypes.hpp](#).

References [stdair::date\\_time\\_element< MIN, MAX >::\\_value](#).

33.5.3.137 `template void stdair::AirlineClassListKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

33.5.3.138 `template void stdair::AirlineClassListKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

33.5.3.139 `template void stdair::BomRootKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

33.5.3.140 `template void stdair::BomRootKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

33.5.3.141 `void stdair::intDisplay ( std::ostream & oStream, const int & iInt )`

Definition at line 137 of file [BookingRequestStruct.cpp](#).

33.5.3.142 `template void stdair::BucketKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

33.5.3.143 `template void stdair::BucketKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

33.5.3.144 `template void stdair::FareFamilyKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

33.5.3.145 `template void stdair::FareFamilyKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

33.5.3.146 `template void stdair::FlightDateKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

33.5.3.147 `template void stdair::FlightDateKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

- 33.5.3.148 `template void stdair::GuillotineBlockKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.149 `template void stdair::GuillotineBlockKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.150 `template void stdair::InventoryKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.151 `template void stdair::InventoryKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.152 `template void stdair::OnDDateKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.153 `template void stdair::OnDDateKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.154 `const boost::char_separator<char> stdair::TokeniserDashSeparator ( "-" )`
- Dash delimiter for the tokenisation process.
- Referenced by [stdair::ParsedKey::getFlightDateKey\(\)](#).
- 33.5.3.155 `const boost::char_separator<char> stdair::TokeniserTimeSeparator ( ":" )`
- Time delimiter for the tokenisation process.
- Referenced by [stdair::ParsedKey::getBoardingTime\(\)](#).
- 33.5.3.156 `template void stdair::SegmentCabinKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.157 `template void stdair::SegmentCabinKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.158 `template void stdair::SegmentDateKey::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.159 `template void stdair::SegmentDateKey::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.160 `template<class Archive , class BOM_OBJECT1 , class BOM_OBJECT2 > void stdair::serialiseHelper ( BOM_OBJECT1 & ioObject1, Archive & ioArchive, const unsigned int iFileVersion )`

Definition at line 34 of file [CmdBomSerialiser.cpp](#).

References [stdair::BomHolder< BOM >::\\_bomList](#), [stdair::BomHolder< BOM >::\\_bomMap](#), and [stdair::FacBomManager::linkWithParent\(\)](#).

- 33.5.3.161 `template void stdair::BomRoot::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`

- 33.5.3.162 `template void stdair::BomRoot::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.163 `template void stdair::Inventory::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.164 `template void stdair::Inventory::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.165 `template void stdair::FlightDate::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.166 `template void stdair::FlightDate::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.167 `template void stdair::SegmentDate::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.168 `template void stdair::SegmentDate::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`
- 33.5.3.169 `template void stdair::SegmentCabin::serialize< ba::text_oarchive > ( ba::text_oarchive & , unsigned int )`
- 33.5.3.170 `template void stdair::SegmentCabin::serialize< ba::text_iarchive > ( ba::text_iarchive & , unsigned int )`

#### 33.5.4 Variable Documentation

##### 33.5.4.1 `const std::string stdair::DOW_STR`

**Initial value:**

```
{ "Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun" }
```

Day names (in English).

Representation of Dow-Of-the-Week

Definition at line 49 of file [BasConst.cpp](#).

Referenced by [stdair::DoWStruct::describe\(\)](#).

##### 33.5.4.2 `const CensorshipFlagList_T stdair::DEFAULT_CLASS_CENSORSHIPFLAG_LIST`

**Initial value:**

```
std::vector<CensorshipFlag_T>()
```

Default list of censorship flag given the status of availability for [BookingClass](#).

Definition at line 220 of file [BasConst.cpp](#).

#### 33.5.4.3 const Date\_T stdair::DEFAULT\_DICO\_STUDIED\_DATE

Default DICO studied date.

Definition at line 390 of file [BasConst.cpp](#).

#### 33.5.4.4 const AirlineCodeList\_T stdair::DEFAULT\_AIRLINE\_CODE\_LIST

Default airline code list value (empty vector).

Definition at line 400 of file [BasConst.cpp](#).

#### 33.5.4.5 const ClassList\_StringList\_T stdair::DEFAULT\_CLASS\_CODE\_LIST

Default class code list value (empty vector).

Definition at line 439 of file [BasConst.cpp](#).

#### 33.5.4.6 const BidPriceVector\_T stdair::DEFAULT\_BID\_PRICE\_VECTOR = std::vector<BidPrice\_T>()

Default Bid-Price Vector.

Default Bid-Price Vector (empty vector).

Definition at line 445 of file [BasConst.cpp](#).

#### 33.5.4.7 const int stdair::DEFAULT\_MAX\_DTD = 365

Default value for max day-to-departure (365).

Definition at line 466 of file [BasConst.cpp](#).

Referenced by [stdair::GuillotineBlock::initSnapshotBlocks\(\)](#).

#### 33.5.4.8 const DCPList\_T stdair::DEFAULT\_DCP\_LIST = DefaultDCPList::init()

Default data collection point list.

Definition at line 469 of file [BasConst.cpp](#).

#### 33.5.4.9 const DTDFratMap\_T stdair::DEFAULT\_DTD\_FRAT5COEF\_MAP

**Initial value:**

```
DefaultDtdFratMap::init()
```

Default frat5 coef map for demand to come forecaster.

Default frat5 coef map.

Definition at line 487 of file [BasConst.cpp](#).

#### 33.5.4.10 const DTDProbMap\_T stdair::DEFAULT\_DTD\_PROB\_MAP

**Initial value:**

```
DefaultDtdProbMap::init()
```

Default arrival pattern map.

Definition at line 504 of file [BasConst.cpp](#).

#### 33.5.4.11 const OnDStringList\_T stdair::DEFAULT\_OND\_STRING\_LIST

Default list of full keys.

Definition at line 529 of file [BasConst.cpp](#).

#### 33.5.4.12 const std::string stdair::DISPLAY\_LEVEL\_STRING\_ARRAY

Array with the indentation spaces needed for all the BOM hierarchical levels.

Definition at line 535 of file [BasConst.cpp](#).

#### 33.5.4.13 const std::string stdair::DEFAULT\_KEY\_FLD\_DELIMITER

Default delimiter for string display (e.g delimiter for inventory key and flight-date key). Typically set to ','.

Referenced by [stdair::SegmentCabin::getFullerKey\(\)](#), [stdair::LegCabin::getFullerKey\(\)](#), and [stdair::ParsedKey::toString\(\)](#).

#### 33.5.4.14 const std::string stdair::DEFAULT\_KEY\_SUB\_FLD\_DELIMITER

Default sub delimiter for string display (e.g delimiter for flight number and departure date of a flight-date key). Typically set to ','.

Referenced by [stdair::SegmentDateKey::toString\(\)](#), [stdair::PosChannelKey::toString\(\)](#), [stdair::ParsedKey::toString\(\)](#), [stdair::FlightDateKey::toString\(\)](#), [stdair::AirportPairKey::toString\(\)](#), and [stdair::AirlineClassListKey::toString\(\)](#).

#### 33.5.4.15 const boost::char\_separator<char> stdair::DEFAULT\_KEY\_TOKEN\_DELIMITER

Default token for decoding a full string display.

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#).

#### 33.5.4.16 const Distance\_T stdair::DEFAULT\_DISTANCE\_VALUE

Default distance value, in kilometers (0).

Default distance value (kilometers).

Definition at line 30 of file [BasConst\\_General.hpp](#).



**33.5.4.17 const ClassCode\_T stdair::DEFAULT\_CLOSED\_CLASS\_CODE**

Default closed class code ("CC").

**33.5.4.18 const NbOfBookings\_T stdair::DEFAULT\_CLASS\_NB\_OF\_BOOKINGS**

Default number of bookings (with counted cancellation) for [BookingClass](#) (0).

Default number of bookings for [BookingClass](#).

Default number of bookings (0).

Definition at line 27 of file [BasConst\\_General.hpp](#).

**33.5.4.19 const NbOfBookings\_T stdair::DEFAULT\_CLASS\_TOTAL\_NB\_OF\_BOOKINGS**

Default number of bookings (without cancellation) for [BookingClass](#) (0).

**33.5.4.20 const NbOfBookings\_T stdair::DEFAULT\_CLASS\_UNCONSTRAINED\_DEMAND**

Default unconstrained demand for [BookingClass](#) (0).

**33.5.4.21 const NbOfBookings\_T stdair::DEFAULT\_CLASS\_REMAINING\_DEMAND\_MEAN**

Default remaining future demand mean for [BookingClass](#) (0).

**33.5.4.22 const NbOfBookings\_T stdair::DEFAULT\_CLASS\_REMAINING\_DEMAND\_STANDARD\_DEVIATION**

Default remaining future demand standard deviation for [BookingClass](#) (0).

**33.5.4.23 const NbOfCancellations\_T stdair::DEFAULT\_CLASS\_NB\_OF\_CANCELLATIONS**

Default number of cancellations for [BookingClass](#) (0).

**33.5.4.24 const NbOfNoShows\_T stdair::DEFAULT\_CLASS\_NB\_OF\_NOSHOWS**

Default number of no-shows for [BookingClass](#) (0).

**33.5.4.25 const CabinCapacity\_T stdair::DEFAULT\_CABIN\_CAPACITY**

Default cabin capacity for Leg cabins (0.0).

Default cabin capacity for Leg cabins.

Definition at line 21 of file [BasConst\\_General.hpp](#).

**33.5.4.26 const CommittedSpace\_T stdair::DEFAULT\_COMMITTED\_SPACE**

Default committed space value for Leg cabins (0.0).

**33.5.4.27 const BlockSpace\_T stdair::DEFAULT\_BLOCK\_SPACE**

Default committed space value for Leg cabins (0.0).

**33.5.4.28 const Availability\_T stdair::DEFAULT\_NULL\_AVAILABILITY**

Default null availability (0.0).

**33.5.4.29 const Availability\_T stdair::DEFAULT\_AVAILABILITY**

Default availability (9.0).

**33.5.4.30 const CensorshipFlag\_T stdair::DEFAULT\_CLASS\_CENSORSHIPFLAG**

Default boolean for censorship flag given the status of availability for [BookingClass](#).

**33.5.4.31 const BookingLimit\_T stdair::DEFAULT\_CLASS\_BOOKING\_LIMIT**

Default booking limit value for [BookingClass](#).

**33.5.4.32 const AuthorizationLevel\_T stdair::DEFAULT\_CLASS\_AUTHORIZATION\_LEVEL**

Default authorization level for [BookingClass](#).

**33.5.4.33 const AuthorizationLevel\_T stdair::DEFAULT\_CLASS\_MAX\_AUTHORIZATION\_LEVEL**

Default MAX value of authorization level for [BookingClass](#).

**33.5.4.34 const AuthorizationLevel\_T stdair::DEFAULT\_CLASS\_MIN\_AUTHORIZATION\_LEVEL**

Default MIN value of authorization level for [BookingClass](#).

**33.5.4.35 const OverbookingRate\_T stdair::DEFAULT\_CLASS\_OVERBOOKING\_RATE**

Default over-booking rate for [BookingClass](#).

**33.5.4.36 const Fare\_T stdair::DEFAULT\_FARE\_VALUE**

Default fare.

Default value of Fare.

Definition at line 36 of file [BasConst\\_General.hpp](#).

**33.5.4.37 const Revenue\_T stdair::DEFAULT\_REVENUE\_VALUE**

Default revenue value for [BookingClass](#).

Default revenue value.

Definition at line 42 of file [BasConst\\_General.hpp](#).

#### 33.5.4.38 const PriceCurrency\_T stdair::DEFAULT\_CURRENCY

Default currency (euro).

Definition at line 39 of file [BasConst\\_General.hpp](#).

#### 33.5.4.39 const Percentage\_T stdair::DEFAULT\_LOAD\_FACTOR\_VALUE

Default load factor value (100%).

#### 33.5.4.40 const DayDuration\_T stdair::DEFAULT\_DAY\_DURATION

Default number of duration days (0).

Default Duration in days (e.g., 0).

Definition at line 26 of file [BasConst\\_Period\\_BOM.hpp](#).

#### 33.5.4.41 const double stdair::DEFAULT\_EPSILON\_VALUE

Default epsilon value between customer requirements and a fare rule.

Default epsilon value (1e-4).

Definition at line 18 of file [BasConst\\_General.hpp](#).

#### 33.5.4.42 const AirportCode\_T stdair::AIRPORT\_LHR

London Heathrow airport (e.g., "LHR").

#### 33.5.4.43 const AirportCode\_T stdair::AIRPORT\_SYD

Sydney airport (e.g., "SYD").

#### 33.5.4.44 const CityCode\_T stdair::POS\_LHR

London city code (e.g., "LHR").

#### 33.5.4.45 const DayDuration\_T stdair::NO\_ADVANCE\_PURCHASE

Advance purchase 0 day.

#### 33.5.4.46 const SaturdayStay\_T stdair::SATURDAY\_STAY

Default saturdayStay value (true).

#### 33.5.4.47 const SaturdayStay\_T stdair::NO\_SATURDAY\_STAY

Default saturdayStay value (false).

#### 33.5.4.48 const ChangeFees\_T stdair::CHANGE\_FEES

Default change fees value (true).

**33.5.4.49 const ChangeFees\_T stdair::NO\_CHANGE\_FEES**

Default change fees value (false).

**33.5.4.50 const NonRefundable\_T stdair::NON\_REFUNDABLE**

Default non refundable value (true).

**33.5.4.51 const NonRefundable\_T stdair::NO\_NON\_REFUNDABLE**

Default refundable value (false).

**33.5.4.52 const DayDuration\_T stdair::NO\_STAY\_DURATION**

Stay duration 0 day.

**33.5.4.53 const CabinCode\_T stdair::CABIN\_Y**

Cabin 'Y'.

**33.5.4.54 const AirlineCode\_T stdair::AIRLINE\_CODE\_BA**

Airline code "BA".

**33.5.4.55 const ClassCode\_T stdair::CLASS\_CODE\_Y**

Class code 'Y'.

**33.5.4.56 const ClassCode\_T stdair::CLASS\_CODE\_Q**

Class code 'Q'.

**33.5.4.57 const AirportCode\_T stdair::AIRPORT\_SIN**

Singapour airport (e.g., "SIN").

**33.5.4.58 const AirportCode\_T stdair::AIRPORT\_BKK**

Bangkok airport (e.g., "BKK").

**33.5.4.59 const CityCode\_T stdair::POS\_SIN**

Singapour city code (e.g., "SIN").

**33.5.4.60 const CabinCode\_T stdair::CABIN\_ECO**

Economic cabin (e.g., "Eco").

**33.5.4.61 const FrequentFlyer\_T stdair::FREQUENT\_FLYER\_MEMBER**

Frequent flyer tier (e.g., "M" meaning member).

**33.5.4.62 const EventQueueID\_T stdair::DEFAULT\_EVENT\_QUEUE\_ID**

Default ID for the event queue.

**33.5.4.63 const Count\_T stdair::DEFAULT\_PROGRESS\_STATUS**

Default progress status.

Referenced by [stdair::ProgressStatus::reset\(\)](#).

**33.5.4.64 const Date\_T stdair::DEFAULT\_EVENT\_OLDEST\_DATE**

Default reference (oldest) date for the events. No event can occur before that date.

**33.5.4.65 const DateTime\_T stdair::DEFAULT\_EVENT\_OLDEST\_DATETIME**

Default reference (oldest) date-time for the events. No event can occur before that date-time.

Referenced by [stdair::EventStruct::describe\(\)](#), and [stdair::EventStruct::EventStruct\(\)](#).

**33.5.4.66 const std::string stdair::DEFAULT\_BOM\_ROOT\_KEY**

Default value for the BOM tree root key (" -- ROOT -- ").

**33.5.4.67 const NbOfFlightDates\_T stdair::DEFAULT\_NB\_OF\_FLIGHTDATES**

Default number of generated flight dates (0).

**33.5.4.68 const unsigned int stdair::DEFAULT\_FLIGHT\_SPEED**

Default flight speed (number of kilometers per hour).

**33.5.4.69 const BookingRatio\_T stdair::DEFAULT\_OND\_BOOKING\_RATE**

Default booking rate for OnD bookings over overall class bookings.

**33.5.4.70 const Count\_T stdair::SECONDS\_IN\_ONE\_DAY**

Number of seconds in one day (86400).

**33.5.4.71 const Count\_T stdair::MILLISECONDS\_IN\_ONE\_SECOND**

Number of milliseconds in one second (1000).

**33.5.4.72 const Date\_T stdair::DEFAULT\_DATE**

Default date for the General (1-Jan-2010).

**33.5.4.73 const DateTime\_T stdair::DEFAULT\_DATETIME**

Default date-time (1-Jan-2010).

**33.5.4.74 const Duration\_T stdair::DEFAULT\_EPSILON\_DURATION**

Default epsilon duration (1 nanosecond).

**33.5.4.75 const RandomSeed\_T stdair::DEFAULT\_RANDOM\_SEED**

Default random seed (120765987).

Referenced by [stdair::BookingClass::generateDemandSamples\(\)](#).

**33.5.4.76 const Duration\_T stdair::NULL\_BOOST\_TIME\_DURATION**

Null time duration (in boost::time\_duration unit).

Definition at line 23 of file [BasConst\\_TravelSolution.hpp](#).

**33.5.4.77 const Fare\_T stdair::DEFAULT\_CLASS\_FARE\_VALUE**

Default value of Availability.

**33.5.4.78 const NbOfAirlines\_T stdair::DEFAULT\_NBOFAIRLINES**

Default number of airlines (0).

**33.5.4.79 const unsigned int stdair::DEFAULT\_NB\_OF\_DAYS\_IN\_A\_YEAR**

Default number of days in a year (365).

**33.5.4.80 const ChannelLabel\_T stdair::DEFAULT\_CHANNEL**

Default channel.

Default channel (e.g., direct on-line).

Definition at line 48 of file [BasConst\\_Request.hpp](#).

**33.5.4.81 const unsigned int stdair::DEFAULT\_NUMBER\_OF\_SUBDIVISIONS**

Higher value per thousand

Referenced by [stdair::DictionaryManager::keyToValue\(\)](#), and [stdair::DictionaryManager::valueToKey\(\)](#).

**33.5.4.82 const AirlineCode\_T stdair::DEFAULT\_AIRLINE\_CODE**

Default airline code value ("XX").

Referenced by [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#), and [stdair::BomRetriever::retrieveDummySegmentCab](#)

**33.5.4.83 const AirlineCode\_T stdair::DEFAULT\_NULL\_AIRLINE\_CODE**

Default airline code value ("").

**33.5.4.84 const FlightNumber\_T stdair::DEFAULT\_FLIGHT\_NUMBER**

Default flight number (9999).

Referenced by [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#), and [stdair::BomRetriever::retrieveDummySegmentCab](#)

#### 33.5.4.85 const GuillotineNumber\_T stdair::DEFAULT\_GUILLOTINE\_NUMBER

Default guillotine number (9999).

#### 33.5.4.86 const Date\_T stdair::DEFAULT\_DEPARTURE\_DATE

Default flight departure date (01/01/1900).

Referenced by [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#), and [stdair::BomRetriever::retrieveDummySegmentCab](#)

#### 33.5.4.87 const AirportCode\_T stdair::DEFAULT\_AIRPORT\_CODE

Default airport code value ("XXX").

#### 33.5.4.88 const AirportCode\_T stdair::DEFAULT\_NULL\_AIRPORT\_CODE

Default airport code value ("").

#### 33.5.4.89 const AirportCode\_T stdair::DEFAULT\_ORIGIN

Default Origin ("XXX").

Referenced by [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#), and [stdair::BomRetriever::retrieveDummySegmentCab](#)

#### 33.5.4.90 const AirportCode\_T stdair::DEFAULT\_DESTINATION

Default Destination ("XXX").

Referenced by [stdair::BomRetriever::retrieveDummySegmentCabin\(\)](#).

#### 33.5.4.91 const CabinCode\_T stdair::DEFAULT\_CABIN\_CODE

Default Cabin Code ("X").

Referenced by [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#), and [stdair::BomRetriever::retrieveDummySegmentCab](#)

#### 33.5.4.92 const FamilyCode\_T stdair::DEFAULT\_FARE\_FAMILY\_CODE

Default Fare Family Code ("EcoSaver").

#### 33.5.4.93 const FamilyCode\_T stdair::DEFAULT\_NULL\_FARE\_FAMILY\_CODE

Default null fare family Code ("NoFF").

#### 33.5.4.94 const ClassCode\_T stdair::DEFAULT\_CLASS\_CODE

Default class code value ("X").

#### 33.5.4.95 const ClassCode\_T stdair::DEFAULT\_NULL\_CLASS\_CODE

Default null class code value ("").

**33.5.4.96 const BidPrice\_T stdair::DEFAULT\_BID\_PRICE**

Default Bid-Price (0.0).

**33.5.4.97 const unsigned short stdair::MAXIMAL\_NUMBER\_OF\_LEGS\_IN\_FLIGHT**

Maximal number of legs linked to a single flight-date (e.g., 7).

Note that the number of derived segments is  $n*(n+1)/2$  if  $n$  is the number of legs.

**33.5.4.98 const unsigned short stdair::MAXIMAL\_NUMBER\_OF\_SEGMENTS\_IN\_OND**

Maximal number of segments linked to a single O&D (Origin & Destination)(e.g., 3).

**33.5.4.99 const Availability\_T stdair::MAXIMAL\_AVAILABILITY**

Maximal offered capacity in a cabin.

**33.5.4.100 const SeatIndex\_T stdair::DEFAULT\_SEAT\_INDEX**

Default seat index (for a bucket and/or Bid-Price Vector slot)(e.g., 1).

**33.5.4.101 const std::string stdair::DEFAULT\_FARE\_FAMILY\_VALUE\_TYPE**

Default value type (within a guillotine block) for fare family.

**33.5.4.102 const std::string stdair::DEFAULT\_SEGMENT\_CABIN\_VALUE\_TYPE**

Default value type (within a guillotine block) for segment-cabin.

**33.5.4.103 const DatePeriod\_T stdair::BOOST\_DEFAULT\_DATE\_PERIOD**

Default date period (0-length, i.e., it lasts one day).

**33.5.4.104 const DOW\_String\_T stdair::DEFAULT\_DOW\_STRING**

Default DOW String (e.g., "1111100").

Referenced by [stdair::DoWStruct::intersection\(\)](#), and [stdair::DoWStruct::shift\(\)](#).

**33.5.4.105 const DateOffset\_T stdair::DEFAULT\_DATE\_OFFSET**

Default Date Offset (e.g., 0).

**33.5.4.106 const PartySize\_T stdair::DEFAULT\_PARTY\_SIZE**

Default party size in a request (e.g., 1).

**33.5.4.107 const DayDuration\_T stdair::DEFAULT\_STAY\_DURATION**

Default duration for a stay (e.g., 7 days).



**33.5.4.108 const WTP\_T stdair::DEFAULT\_WTP**

Default Willingness-to-Pay (WTP, as expressed as a monetary unit).

**33.5.4.109 const CityCode\_T stdair::DEFAULT\_POS**

Default Point-Of-Sale (POS, e.g., "WORLD").

**33.5.4.110 const Date\_T stdair::DEFAULT\_PREFERRED\_DEPARTURE\_DATE**

Default departure date (e.g., 01-Jan-2011).

**33.5.4.111 const Duration\_T stdair::DEFAULT\_PREFERRED\_DEPARTURE\_TIME**

Default preferred departure time (e.g., 08:00).

**33.5.4.112 const DateOffset\_T stdair::DEFAULT\_ADVANCE\_PURCHASE**

Default advance purchase (e.g., 22 days).

**33.5.4.113 const Date\_T stdair::DEFAULT\_REQUEST\_DATE**

Default request date (e.g., 10-Jan-2011).

**33.5.4.114 const Duration\_T stdair::DEFAULT\_REQUEST\_TIME**

Default preferred departure time (e.g., 08:00).

**33.5.4.115 const DateTime\_T stdair::DEFAULT\_REQUEST\_DATE\_TIME**

Default request date-time (e.g., 08:00).

**33.5.4.116 const CabinCode\_T stdair::DEFAULT\_PREFERRED\_CABIN**

Default preferred cabin (e.g., 'M').

**33.5.4.117 const ChannelLabel\_T stdair::CHANNEL\_DN**

DN channel (e.g., direct on-line).

**33.5.4.118 const ChannelLabel\_T stdair::CHANNEL\_IN**

IN channel (e.g., indirect on-line).

**33.5.4.119 const TripType\_T stdair::TRIP\_TYPE\_ONE\_WAY**

Trip type one-way (e.g., "OW").

Referenced by [stdair::BookingRequestStruct::display\(\)](#).

**33.5.4.120 const TripType\_T stdair::TRIP\_TYPE\_ROUND\_TRIP**

Trip type round-trip (e.g., "RT").

Referenced by [stdair::YieldFeatures::isTripTypeValid\(\)](#), and [stdair::FareFeatures::isTripTypeValid\(\)](#).

#### 33.5.4.121 `const TripType_T stdair::TRIP_TYPE_INBOUND`

Trip type inbound (e.g., "RI").

Referenced by [stdair::YieldFeatures::isTripTypeValid\(\)](#), and [stdair::FareFeatures::isTripTypeValid\(\)](#).

#### 33.5.4.122 `const TripType_T stdair::TRIP_TYPE_OUTBOUND`

Trip type outbound (e.g., "RO").

Referenced by [stdair::YieldFeatures::isTripTypeValid\(\)](#), and [stdair::FareFeatures::isTripTypeValid\(\)](#).

#### 33.5.4.123 `const FrequentFlyer_T stdair::DEFAULT_FF_TIER`

Default frequent flyer tier (e.g., non member).

#### 33.5.4.124 `const PriceValue_T stdair::DEFAULT_VALUE_OF_TIME`

Default value of time (expressed as a monetary unit per hour).

#### 33.5.4.125 `const Duration_T stdair::DEFAULT_MINIMAL_CONNECTION_TIME`

Default Minimal connection time.

#### 33.5.4.126 `const Duration_T stdair::DEFAULT_MAXIMAL_CONNECTION_TIME`

Default maximal connection time.

#### 33.5.4.127 `const FlightPathCode_T stdair::DEFAULT_FLIGHTPATH_CODE`

Default flightPathCode value ("").

#### 33.5.4.128 `const Availability_T stdair::DEFAULT_CLASS_AVAILABILITY`

Default value of Availability.

#### 33.5.4.129 `const AvailabilityStatus_T stdair::DEFAULT_AVAILABILITY_STATUS`

Default availability status for a travel solution.

#### 33.5.4.130 `const unsigned short stdair::DEFAULT_NUMBER_OF_REQUIRED_SEATS`

Default number of required seats by the demand.

#### 33.5.4.131 `const MatchingIndicator_T stdair::DEFAULT_MATCHING_INDICATOR`

Default Matching Indicator value between customer requirements and a fare rule.

#### 33.5.4.132 `const AirlineCode_T stdair::DEFAULT_DICO_STUDIED_AIRLINE`

Default DICO studied airline.

## 33.5.4.133 const Yield\_T stdair::DEFAULT\_YIELD\_VALUE

Default yield value.

## 33.5.4.134 const Yield\_T stdair::DEFAULT\_YIELD\_MAX\_VALUE

Default yield max value.

## 33.6 stdair::LOG Namespace Reference

## Enumerations

- enum [EN\\_LogLevel](#) {  
    [CRITICAL](#) = 0, [ERROR](#), [NOTIFICATION](#), [WARNING](#),  
    [DEBUG](#), [VERBOSE](#), [LAST\\_VALUE](#) }

## Variables

- static const std::string [\\_logLevels](#) [[LAST\\_VALUE](#)]

## 33.6.1 Detailed Description

Level of logs.

## 33.6.2 Enumeration Type Documentation

## 33.6.2.1 enum stdair::LOG::EN\_LogLevel

## Enumerator:

***CRITICAL***  
***ERROR***  
***NOTIFICATION***  
***WARNING***  
***DEBUG***  
***VERBOSE***  
***LAST\_VALUE***

Definition at line 18 of file [stdair\\_log.hpp](#).

## 33.6.3 Variable Documentation

33.6.3.1 const std::string stdair::LOG::\_logLevels[[LAST\\_VALUE](#)] [[static](#)]

## Initial value:

```
{ "C", "E", "N", "W", "D", "V" }
```

Definition at line 28 of file [stdair\\_log.hpp](#).

Referenced by [stdair::Logger::log\(\)](#), [stdair::BasLogParams::toShortString\(\)](#), and [stdair::BasLogParams::toString\(\)](#).

## 33.7 stdair\_test Namespace Reference

### Classes

- struct [BookingClass](#)
- struct [Cabin](#)

#### 33.7.1 Detailed Description

Namespace gathering classes and structures for test purposes

## 33.8 swift Namespace Reference

The wrapper namespace.

### Classes

- class [SKeymap](#)  
*The readline keymap wrapper.*
- class [SReadline](#)  
*The readline library wrapper.*

#### 33.8.1 Detailed Description

The wrapper namespace. The namespace is also used for other library elements.

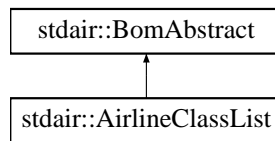
## 34 Class Documentation

### 34.1 stdair::AirlineClassList Class Reference

Class representing the actual attributes for a segment-features.

```
#include <stdair/bom/AirlineClassList.hpp>
```

Inheritance diagram for `stdair::AirlineClassList`:



### Public Types

- typedef [AirlineClassListKey](#) [Key\\_T](#)

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [AirlineCodeList\\_T](#) & [getAirlineCodeList](#) () const
- const [ClassList\\_StringList\\_T](#) & [getClassCodeList](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [stdair::Yield\\_T](#) & [getYield](#) () const
- const [stdair::Fare\\_T](#) & [getFare](#) () const
- void [setYield](#) (const [Yield\\_T](#) &iYield)
- void [setFare](#) (const [Fare\\_T](#) &iFare)
- void [toStream](#) (std::ostream &iOut) const
- void [fromStream](#) (std::istream &iIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Protected Member Functions

- [AirlineClassList](#) (const [Key\\_T](#) &)
- virtual [~AirlineClassList](#) ()

### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)
- [Yield\\_T\\_yield](#)
- [Fare\\_T\\_fare](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

### 34.1.1 Detailed Description

Class representing the actual attributes for a segment-features.

Definition at line 27 of file [AirlineClassList.hpp](#).

### 34.1.2 Member Typedef Documentation

#### 34.1.2.1 typedef AirlineClassListKey stdair::AirlineClassList::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 37 of file [AirlineClassList.hpp](#).

### 34.1.3 Constructor & Destructor Documentation

#### 34.1.3.1 stdair::AirlineClassList::AirlineClassList ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 32 of file [AirlineClassList.cpp](#).

#### 34.1.3.2 stdair::AirlineClassList::~~AirlineClassList ( ) [protected, virtual]

Destructor.

Definition at line 37 of file [AirlineClassList.cpp](#).

### 34.1.4 Member Function Documentation

#### 34.1.4.1 const Key\_T& stdair::AirlineClassList::getKey ( ) const [inline]

Get the airline class list key.

Definition at line 43 of file [AirlineClassList.hpp](#).

References [\\_key](#).

#### 34.1.4.2 BomAbstract\* const stdair::AirlineClassList::getParent ( ) const [inline]

Get the parent object.

Definition at line 48 of file [AirlineClassList.hpp](#).

References [\\_parent](#).

#### 34.1.4.3 const AirlineCodeList\_T& stdair::AirlineClassList::getAirlineCodeList ( ) const [inline]

Get the airline code list (part of the primary key).

Definition at line 53 of file [AirlineClassList.hpp](#).

References [\\_key](#), and [stdair::AirlineClassListKey::getAirlineCodeList\(\)](#).

34.1.4.4 `const ClassList_StringList_T& stdair::AirlineClassList::getClassCodeList ( )`  
`const [inline]`

Get the class code list (part of the primary key).

Definition at line 58 of file [AirlineClassList.hpp](#).

References [\\_key](#), and [stdair::AirlineClassListKey::getClassCodeList\(\)](#).

34.1.4.5 `const HolderMap_T& stdair::AirlineClassList::getHolderMap ( ) const`  
`[inline]`

Get the map of children holders.

Definition at line 63 of file [AirlineClassList.hpp](#).

References [\\_holderMap](#).

34.1.4.6 `const stdair::Yield_T& stdair::AirlineClassList::getYield ( ) const [inline]`

Get the yield.

Definition at line 68 of file [AirlineClassList.hpp](#).

References [\\_yield](#).

34.1.4.7 `const stdair::Fare_T& stdair::AirlineClassList::getFare ( ) const [inline]`

Get the fare.

Definition at line 73 of file [AirlineClassList.hpp](#).

References [\\_fare](#).

34.1.4.8 `void stdair::AirlineClassList::setYield ( const Yield_T & iYield ) [inline]`

Definition at line 79 of file [AirlineClassList.hpp](#).

References [\\_yield](#).

34.1.4.9 `void stdair::AirlineClassList::setFare ( const Fare_T & iFare ) [inline]`

Definition at line 83 of file [AirlineClassList.hpp](#).

References [\\_fare](#).

34.1.4.10 `void stdair::AirlineClassList::toStream ( std::ostream & ioOut ) const [inline, virtual]`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 94 of file [AirlineClassList.hpp](#).

References [toString\(\)](#).

34.1.4.11 `void stdair::AirlineClassList::fromStream ( std::istream & ioIn )` `[inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 103 of file [AirlineClassList.hpp](#).

34.1.4.12 `std::string stdair::AirlineClassList::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 41 of file [AirlineClassList.cpp](#).

References [\\_fare](#), [\\_yield](#), and [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.1.4.13 `const std::string stdair::AirlineClassList::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 114 of file [AirlineClassList.hpp](#).

References [\\_key](#), and [stdair::AirlineClassListKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.1.4.14 `template<class Archive > void stdair::AirlineClassList::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 63 of file [AirlineClassList.cpp](#).

References [\\_fare](#), [\\_key](#), and [\\_yield](#).

#### 34.1.5 Friends And Related Function Documentation

34.1.5.1 `friend class FacBom` `[friend]`

Definition at line 28 of file [AirlineClassList.hpp](#).

34.1.5.2 `friend class FacBomManager` `[friend]`

Definition at line 29 of file [AirlineClassList.hpp](#).



## 34.1.5.3 friend class boost::serialization::access [friend]

Definition at line 30 of file [AirlineClassList.hpp](#).

## 34.1.6 Member Data Documentation

## 34.1.6.1 Key\_T stdair::AirlineClassList::\_key [protected]

Primary key (flight number and departure date).

Definition at line 164 of file [AirlineClassList.hpp](#).

Referenced by [describeKey\(\)](#), [getAirlineCodeList\(\)](#), [getClassCodeList\(\)](#), [getKey\(\)](#), and [serialize\(\)](#).

## 34.1.6.2 BomAbstract\* stdair::AirlineClassList::\_parent [protected]

Pointer on the parent class ([Inventory](#)).

Definition at line 169 of file [AirlineClassList.hpp](#).

Referenced by [getParent\(\)](#).

## 34.1.6.3 HolderMap\_T stdair::AirlineClassList::\_holderMap [protected]

Map holding the children ([SegmentDate](#) and [LegDate](#) objects).

Definition at line 174 of file [AirlineClassList.hpp](#).

Referenced by [getHolderMap\(\)](#).

## 34.1.6.4 Yield\_T stdair::AirlineClassList::\_yield [protected]

Definition at line 179 of file [AirlineClassList.hpp](#).

Referenced by [getYield\(\)](#), [serialize\(\)](#), [setYield\(\)](#), and [toString\(\)](#).

## 34.1.6.5 Fare\_T stdair::AirlineClassList::\_fare [protected]

Definition at line 184 of file [AirlineClassList.hpp](#).

Referenced by [getFare\(\)](#), [serialize\(\)](#), [setFare\(\)](#), and [toString\(\)](#).

The documentation for this class was generated from the following files:

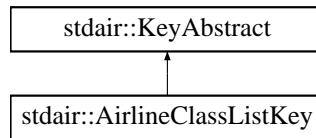
- [stdair/bom/AirlineClassList.hpp](#)
- [stdair/bom/AirlineClassList.cpp](#)

## 34.2 stdair::AirlineClassListKey Struct Reference

Key of airport-pair.

```
#include <stdair/bom/AirlineClassListKey.hpp>
```

Inheritance diagram for stdair::AirlineClassListKey:



### Public Member Functions

- [AirlineClassListKey](#) (const [AirlineCodeList\\_T](#) &, const [ClassList\\_StringList\\_T](#) &)
- [AirlineClassListKey](#) (const [AirlineClassListKey](#) &)
- [~AirlineClassListKey](#) ()
- const [AirlineCodeList\\_T](#) & [getAirlineCodeList](#) () const
- const [ClassList\\_StringList\\_T](#) & [getClassCodeList](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Friends

- class [boost::serialization::access](#)

#### 34.2.1 Detailed Description

Key of airport-pair.

Definition at line 25 of file [AirlineClassListKey.hpp](#).

#### 34.2.2 Constructor & Destructor Documentation

34.2.2.1 `stdair::AirlineClassListKey::AirlineClassListKey ( const AirlineCodeList\_T & iAirlineCodeList, const ClassList\_StringList\_T & iClassCodeList )`

Constructor.

Definition at line 24 of file [AirlineClassListKey.cpp](#).

34.2.2.2 `stdair::AirlineClassListKey::AirlineClassListKey ( const AirlineClassListKey & iKey )`

Copy constructor.

Definition at line 30 of file [AirlineClassListKey.cpp](#).

### 34.2.2.3 stdair::AirlineClassListKey::~~AirlineClassListKey ( )

Destructor.

Definition at line 36 of file [AirlineClassListKey.cpp](#).

### 34.2.3 Member Function Documentation

#### 34.2.3.1 const AirlineCodeList\_T& stdair::AirlineClassListKey::getAirlineCodeList ( ) const [inline]

Get the airline code list.

Definition at line 56 of file [AirlineClassListKey.hpp](#).

Referenced by [stdair::AirlineClassList::getAirlineCodeList\(\)](#).

#### 34.2.3.2 const ClassList\_StringList\_T& stdair::AirlineClassListKey::getClassCodeList ( ) const [inline]

Get the class code list.

Definition at line 61 of file [AirlineClassListKey.hpp](#).

Referenced by [stdair::AirlineClassList::getClassCodeList\(\)](#).

#### 34.2.3.3 void stdair::AirlineClassListKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 40 of file [AirlineClassListKey.cpp](#).

References [toString\(\)](#).

#### 34.2.3.4 void stdair::AirlineClassListKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 45 of file [AirlineClassListKey.cpp](#).

34.2.3.5 `const std::string stdair::AirlineClassListKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 49 of file [AirlineClassListKey.cpp](#).

References [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#).

Referenced by [stdair::AirlineClassList::describeKey\(\)](#), and [toStream\(\)](#).

34.2.3.6 `template<class Archive > void stdair::AirlineClassListKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 86 of file [AirlineClassListKey.cpp](#).

#### 34.2.4 Friends And Related Function Documentation

34.2.4.1 `friend class boost::serialization::access` `[friend]`

Definition at line 26 of file [AirlineClassListKey.hpp](#).

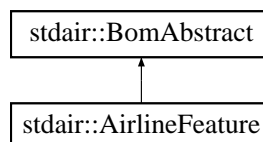
The documentation for this struct was generated from the following files:

- [stdair/bom/AirlineClassListKey.hpp](#)
- [stdair/bom/AirlineClassListKey.cpp](#)

### 34.3 stdair::AirlineFeature Class Reference

```
#include <stdair/bom/AirlineFeature.hpp>
```

Inheritance diagram for `stdair::AirlineFeature`:



#### Public Types

- typedef [AirlineFeatureKey](#) `Key_T`

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- void [init](#) (const [ForecasterMode\\_T](#) &, const [HistoricalDataLimit\\_T](#) &, const [ControlMode\\_T](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const

#### Protected Member Functions

- [AirlineFeature](#) ()
- [AirlineFeature](#) (const [AirlineFeature](#) &)
- [AirlineFeature](#) (const [Key\\_T](#) &)
- virtual [~AirlineFeature](#) ()

#### Protected Attributes

- [Key\\_T\\_key](#)
- [ForecasterMode\\_T\\_forecasterMode](#)
- [HistoricalDataLimit\\_T\\_historicalDataLimit](#)
- [ControlMode\\_T\\_controlMode](#)

#### Friends

- class [FacBom](#)

##### 34.3.1 Detailed Description

Class representing the actual attributes for an airline booking class.

Definition at line 16 of file [AirlineFeature.hpp](#).

##### 34.3.2 Member Typedef Documentation

###### 34.3.2.1 typedef AirlineFeatureKey stdair::AirlineFeature::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 22 of file [AirlineFeature.hpp](#).

##### 34.3.3 Constructor & Destructor Documentation

###### 34.3.3.1 stdair::AirlineFeature::AirlineFeature ( ) [protected]

Default constructors.

34.3.3.2 `stdair::AirlineFeature::AirlineFeature ( const AirlineFeature & )` [protected]

34.3.3.3 `stdair::AirlineFeature::AirlineFeature ( const Key_T & iKey )` [protected]

Definition at line 13 of file [AirlineFeature.cpp](#).

34.3.3.4 `stdair::AirlineFeature::~AirlineFeature ( )` [protected, virtual]

Destructor.

Definition at line 17 of file [AirlineFeature.cpp](#).

#### 34.3.4 Member Function Documentation

34.3.4.1 `const Key_T& stdair::AirlineFeature::getKey ( ) const` [inline]

Get the airline feature key.

Definition at line 27 of file [AirlineFeature.hpp](#).

References [\\_key](#).

34.3.4.2 `void stdair::AirlineFeature::init ( const ForecasterMode_T & iForecasterMode, const HistoricalDataLimit_T & iHistoricalDataLimit, const ControlMode_T & iControlMode )`

Initialization method.

Definition at line 21 of file [AirlineFeature.cpp](#).

References [\\_controlMode](#), [\\_forecasterMode](#), and [\\_historicalDataLimit](#).

34.3.4.3 `void stdair::AirlineFeature::toStream ( std::ostream & ioOut ) const` [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 41 of file [AirlineFeature.hpp](#).

References [toString\(\)](#).

34.3.4.4 `void stdair::AirlineFeature::fromStream ( std::istream & ioIn )` [inline, virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 45 of file [AirlineFeature.hpp](#).

#### 34.3.4.5 std::string stdair::AirlineFeature::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 30 of file [AirlineFeature.cpp](#).

References [\\_controlMode](#), [\\_forecasterMode](#), [\\_historicalDataLimit](#), and [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

#### 34.3.4.6 const std::string stdair::AirlineFeature::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 51 of file [AirlineFeature.hpp](#).

References [\\_key](#), and [stdair::AirlineFeatureKey::toString\(\)](#).

Referenced by [toString\(\)](#).

### 34.3.5 Friends And Related Function Documentation

#### 34.3.5.1 friend class FacBom [friend]

Definition at line 17 of file [AirlineFeature.hpp](#).

### 34.3.6 Member Data Documentation

#### 34.3.6.1 Key\_T stdair::AirlineFeature::\_key [protected]

The key of both structure and objects.

Definition at line 64 of file [AirlineFeature.hpp](#).

Referenced by [describeKey\(\)](#), and [getKey\(\)](#).

#### 34.3.6.2 ForecasterMode\_T stdair::AirlineFeature::\_forecasterMode [protected]

The type of forecaster.

Definition at line 67 of file [AirlineFeature.hpp](#).

Referenced by [init\(\)](#), and [toString\(\)](#).

#### 34.3.6.3 HistoricalDataLimit\_T stdair::AirlineFeature::\_historicalDataLimit [protected]

The size of the moving average window.

Definition at line 70 of file [AirlineFeature.hpp](#).

Referenced by [init\(\)](#), and [toString\(\)](#).

#### 34.3.6.4 ControlMode\_T stdair::AirlineFeature::\_controlMode [protected]

The type of inventory control.

Definition at line 73 of file [AirlineFeature.hpp](#).

Referenced by [init\(\)](#), and [toString\(\)](#).

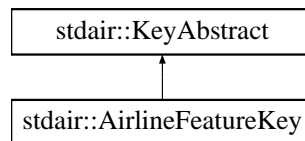
The documentation for this class was generated from the following files:

- [stdair/bom/AirlineFeature.hpp](#)
- [stdair/bom/AirlineFeature.cpp](#)

## 34.4 stdair::AirlineFeatureKey Struct Reference

```
#include <stdair/bom/AirlineFeatureKey.hpp>
```

Inheritance diagram for stdair::AirlineFeatureKey:



### Public Member Functions

- [AirlineFeatureKey](#) (const [AirlineCode\\_T](#) &iAirlineCode)
- [~AirlineFeatureKey](#) ()
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.4.1 Detailed Description

Key of [AirlineFeature](#).

Definition at line 15 of file [AirlineFeatureKey.hpp](#).

#### 34.4.2 Constructor & Destructor Documentation

##### 34.4.2.1 stdair::AirlineFeatureKey::AirlineFeatureKey ( const [AirlineCode\\_T](#) & iAirlineCode )

Constructor.



Definition at line 12 of file [AirlineFeatureKey.cpp](#).

#### 34.4.2.2 stdair::AirlineFeatureKey::~~AirlineFeatureKey ( )

Destructor.

Definition at line 17 of file [AirlineFeatureKey.cpp](#).

### 34.4.3 Member Function Documentation

#### 34.4.3.1 const AirlineCode\_T& stdair::AirlineFeatureKey::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 27 of file [AirlineFeatureKey.hpp](#).

#### 34.4.3.2 void stdair::AirlineFeatureKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 21 of file [AirlineFeatureKey.cpp](#).

References [toString\(\)](#).

#### 34.4.3.3 void stdair::AirlineFeatureKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 26 of file [AirlineFeatureKey.cpp](#).

#### 34.4.3.4 const std::string stdair::AirlineFeatureKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 30 of file [AirlineFeatureKey.cpp](#).

Referenced by [stdair::AirlineFeature::describeKey\(\)](#), and [toStream\(\)](#).

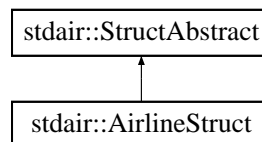
The documentation for this struct was generated from the following files:

- [stdair/bom/AirlineFeatureKey.hpp](#)
- [stdair/bom/AirlineFeatureKey.cpp](#)

## 34.5 stdair::AirlineStruct Struct Reference

```
#include <stdair/bom/AirlineStruct.hpp>
```

Inheritance diagram for stdair::AirlineStruct:



### Public Member Functions

- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- const std::string & [getAirlineName](#) () const
- void [setAirlineCode](#) (const [AirlineCode\\_T](#) & iAirlineCode)
- void [setAirlineName](#) (const std::string & iAirlineName)
- void [toStream](#) (std::ostream & ioOut) const
- void [fromStream](#) (std::istream & ioIn)
- const std::string [describe](#) () const
- [AirlineStruct](#) (const [AirlineCode\\_T](#) &, const std::string & iAirlineName)
- [AirlineStruct](#) ()
- [AirlineStruct](#) (const [AirlineStruct](#) &)
- [~AirlineStruct](#) ()

### 34.5.1 Detailed Description

Structure holding parameters describing an airline.

Definition at line 18 of file [AirlineStruct.hpp](#).

### 34.5.2 Constructor & Destructor Documentation

#### 34.5.2.1 stdair::AirlineStruct::AirlineStruct ( const [AirlineCode\\_T](#) & iAirlineCode, const std::string & iAirlineName )

Main constructor.

Definition at line 24 of file [AirlineStruct.cpp](#).

#### 34.5.2.2 stdair::AirlineStruct::AirlineStruct ( )

Default constructor.

Definition at line 15 of file [AirlineStruct.cpp](#).

#### 34.5.2.3 stdair::AirlineStruct::AirlineStruct ( const AirlineStruct & iAirlineStruct )

Default copy constructor.

Definition at line 19 of file [AirlineStruct.cpp](#).

#### 34.5.2.4 stdair::AirlineStruct::~~AirlineStruct ( )

Destructor.

Definition at line 30 of file [AirlineStruct.cpp](#).

### 34.5.3 Member Function Documentation

#### 34.5.3.1 const AirlineCode\_T& stdair::AirlineStruct::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 22 of file [AirlineStruct.hpp](#).

Referenced by [soci::type\\_conversion< stdair::AirlineStruct >::to\\_base\(\)](#), and [stdair::DBManagerForAirlines::updateAirline](#).

#### 34.5.3.2 const std::string& stdair::AirlineStruct::getAirlineName ( ) const [inline]

Get the airline name.

Definition at line 27 of file [AirlineStruct.hpp](#).

Referenced by [soci::type\\_conversion< stdair::AirlineStruct >::to\\_base\(\)](#), and [stdair::DBManagerForAirlines::updateAirline](#).

#### 34.5.3.3 void stdair::AirlineStruct::setAirlineCode ( const AirlineCode\_T & iAirlineCode ) [inline]

Set the airline code.

Definition at line 33 of file [AirlineStruct.hpp](#).

Referenced by [soci::type\\_conversion< stdair::AirlineStruct >::from\\_base\(\)](#).

#### 34.5.3.4 void stdair::AirlineStruct::setAirlineName ( const std::string & iAirlineName ) [inline]

Set the airline name.

Definition at line 38 of file [AirlineStruct.hpp](#).

Referenced by [soci::type\\_conversion< stdair::AirlineStruct >::from\\_base\(\)](#).

34.5.3.5 void stdair::AirlineStruct::toStream ( std::ostream & *ioOut* ) const

Dump a Business Object into an output stream.

#### Parameters

<i>ostream</i> & the output stream.
-------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 34 of file [AirlineStruct.cpp](#).

References [describe\(\)](#).

34.5.3.6 void stdair::AirlineStruct::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream</i> & the input stream.
------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 39 of file [AirlineStruct.cpp](#).

34.5.3.7 const std::string stdair::AirlineStruct::describe ( ) const [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 43 of file [AirlineStruct.cpp](#).

Referenced by [toStream\(\)](#).

The documentation for this struct was generated from the following files:

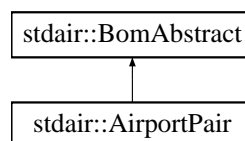
- [stdair/bom/AirlineStruct.hpp](#)
- [stdair/bom/AirlineStruct.cpp](#)

## 34.6 stdair::AirportPair Class Reference

Class representing the actual attributes for an airport-pair.

```
#include <stdair/bom/AirportPair.hpp>
```

Inheritance diagram for stdair::AirportPair:



### Public Types

- typedef [AirportPairKey](#) [Key\\_T](#)

### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const [Key\\_T](#) & [getKey](#) () const
- const [AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [AirportCode\\_T](#) & [getOffPoint](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const

### Protected Member Functions

- [AirportPair](#) (const [Key\\_T](#) &)
- virtual [~AirportPair](#) ()

### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T \\_holderMap](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.6.1 Detailed Description

Class representing the actual attributes for an airport-pair.

Definition at line 18 of file [AirportPair.hpp](#).

#### 34.6.2 Member Typedef Documentation

##### 34.6.2.1 typedef [AirportPairKey](#) stdair::AirportPair::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file [AirportPair.hpp](#).

### 34.6.3 Constructor & Destructor Documentation

#### 34.6.3.1 stdair::AirportPair::AirportPair ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 28 of file [AirportPair.cpp](#).

#### 34.6.3.2 stdair::AirportPair::~~AirportPair ( ) [protected, virtual]

Destructor.

Definition at line 33 of file [AirportPair.cpp](#).

### 34.6.4 Member Function Documentation

#### 34.6.4.1 void stdair::AirportPair::toStream ( std::ostream & ioOut ) const [inline, virtual]

Dump a Business Object into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 36 of file [AirportPair.hpp](#).

References [toString\(\)](#).

#### 34.6.4.2 void stdair::AirportPair::fromStream ( std::istream & ioln ) [inline, virtual]

Read a Business Object from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 45 of file [AirportPair.hpp](#).

#### 34.6.4.3 std::string stdair::AirportPair::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [AirportPair.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.6.4.4 `const std::string stdair::AirportPair::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 56 of file [AirportPair.hpp](#).

References [\\_key](#), and [stdair::AirportPairKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.6.4.5 `const Key_T& stdair::AirportPair::getKey ( ) const` `[inline]`

Get the primary key (origin airport, destination airport).

Definition at line 65 of file [AirportPair.hpp](#).

References [\\_key](#).

34.6.4.6 `const AirportCode_T& stdair::AirportPair::getBoardingPoint ( ) const`  
`[inline]`

Get the origin airport.

Definition at line 72 of file [AirportPair.hpp](#).

References [\\_key](#), and [stdair::AirportPairKey::getBoardingPoint\(\)](#).

34.6.4.7 `const AirportCode_T& stdair::AirportPair::getOffPoint ( ) const` `[inline]`

Get the destination airport.

Definition at line 79 of file [AirportPair.hpp](#).

References [\\_key](#), and [stdair::AirportPairKey::getOffPoint\(\)](#).

34.6.4.8 `BomAbstract* const stdair::AirportPair::getParent ( ) const` `[inline]`

Get a reference on the parent object instance.

Definition at line 86 of file [AirportPair.hpp](#).

References [\\_parent](#).

34.6.4.9 `const HolderMap_T& stdair::AirportPair::getHolderMap ( ) const` `[inline]`

Get a reference on the children holder.

Definition at line 93 of file [AirportPair.hpp](#).

References [\\_holderMap](#).

### 34.6.5 Friends And Related Function Documentation

34.6.5.1 `friend class FacBom` `[friend]`

Definition at line 19 of file [AirportPair.hpp](#).

## 34.6.5.2 friend class FacBomManager [friend]

Definition at line 20 of file [AirportPair.hpp](#).

## 34.6.6 Member Data Documentation

## 34.6.6.1 Key\_T stdair::AirportPair::\_key [protected]

Primary key (flight number and departure date).

Definition at line 123 of file [AirportPair.hpp](#).

Referenced by [describeKey\(\)](#), [getBoardingPoint\(\)](#), [getKey\(\)](#), and [getOffPoint\(\)](#).

## 34.6.6.2 BomAbstract\* stdair::AirportPair::\_parent [protected]

Pointer on the parent class ([Inventory](#)).

Definition at line 128 of file [AirportPair.hpp](#).

Referenced by [getParent\(\)](#).

## 34.6.6.3 HolderMap\_T stdair::AirportPair::\_holderMap [protected]

Map holding the children.

Definition at line 133 of file [AirportPair.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

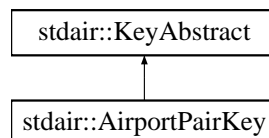
- [stdair/bom/AirportPair.hpp](#)
- [stdair/bom/AirportPair.cpp](#)

## 34.7 stdair::AirportPairKey Struct Reference

Key of airport-pair.

```
#include <stdair/bom/AirportPairKey.hpp>
```

Inheritance diagram for stdair::AirportPairKey:



## Public Member Functions

- [AirportPairKey](#) (const [stdair::AirportCode\\_T](#) &, const [stdair::AirportCode\\_T](#) &)



- [AirportPairKey](#) (const [AirportPairKey](#) &)
- [~AirportPairKey](#) ()
- const [stdair::AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [stdair::AirportCode\\_T](#) & [getOffPoint](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.7.1 Detailed Description

Key of airport-pair.

Definition at line 16 of file [AirportPairKey.hpp](#).

#### 34.7.2 Constructor & Destructor Documentation

**34.7.2.1** `stdair::AirportPairKey::AirportPairKey ( const stdair::AirportCode_T & iBoardingPoint, const stdair::AirportCode_T & iOffPoint )`

Main constructor.

Definition at line 22 of file [AirportPairKey.cpp](#).

**34.7.2.2** `stdair::AirportPairKey::AirportPairKey ( const AirportPairKey & iKey )`

Copy constructor.

Definition at line 28 of file [AirportPairKey.cpp](#).

**34.7.2.3** `stdair::AirportPairKey::~~AirportPairKey ( )`

Destructor.

Definition at line 34 of file [AirportPairKey.cpp](#).

#### 34.7.3 Member Function Documentation

**34.7.3.1** `const stdair::AirportCode_T& stdair::AirportPairKey::getBoardingPoint ( ) const`  
[inline]

Get the boarding point.

Definition at line 36 of file [AirportPairKey.hpp](#).

Referenced by [stdair::AirportPair::getBoardingPoint\(\)](#).

**34.7.3.2** `const stdair::AirportCode_T& stdair::AirportPairKey::getOffPoint ( ) const`  
[inline]

Get the arrival point.

Definition at line 43 of file [AirportPairKey.hpp](#).

Referenced by [stdair::AirportPair::getOffPoint\(\)](#).

**34.7.3.3** void stdair::AirportPairKey::toStream ( std::ostream & *ioOut* ) const [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 38 of file [AirportPairKey.cpp](#).

References [toString\(\)](#).

**34.7.3.4** void stdair::AirportPairKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 43 of file [AirportPairKey.cpp](#).

**34.7.3.5** const std::string stdair::AirportPairKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 47 of file [AirportPairKey.cpp](#).

References [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#).

Referenced by [stdair::AirportPair::describeKey\(\)](#), [stdair::BomRetriever::retrieveAirportPairFromKeySet\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/AirportPairKey.hpp](#)
- [stdair/bom/AirportPairKey.cpp](#)

## 34.8 stdair::BasChronometer Struct Reference

```
#include <stdair/basic/BasChronometer.hpp>
```

#### Public Member Functions

- [BasChronometer](#) ()

- void [start](#) ()
- std::string [getStart](#) () const
- double [elapsed](#) () const

#### 34.8.1 Detailed Description

Structure allowing measuring the time elapsed between two events.

Definition at line 14 of file [BasChronometer.hpp](#).

#### 34.8.2 Constructor & Destructor Documentation

##### 34.8.2.1 stdair::BasChronometer::BasChronometer ( )

Constructor.

Definition at line 12 of file [BasChronometer.cpp](#).

#### 34.8.3 Member Function Documentation

##### 34.8.3.1 void stdair::BasChronometer::start ( )

Start the chronometer from the local time

The elapsed time given is the one elapsed since the start is launched.

Definition at line 16 of file [BasChronometer.cpp](#).

##### 34.8.3.2 std::string stdair::BasChronometer::getStart ( ) const `[inline]`

Get the start time.

Definition at line 24 of file [BasChronometer.hpp](#).

##### 34.8.3.3 double stdair::BasChronometer::elapsed ( ) const

Return the time elapsed since the structure has been instanciated.

That elapsed time is expressed in seconds.

Definition at line 26 of file [BasChronometer.cpp](#).

The documentation for this struct was generated from the following files:

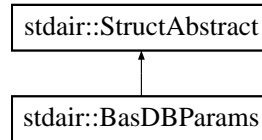
- stdair/basic/[BasChronometer.hpp](#)
- stdair/basic/[BasChronometer.cpp](#)

## 34.9 stdair::BasDBParams Struct Reference

Structure holding the parameters for connection to a database.

```
#include <stdair/basic/BasDBParams.hpp>
```

Inheritance diagram for stdair::BasDBParams:



#### Public Member Functions

- const std::string & [getUser](#) () const
- const std::string & [getPassword](#) () const
- const std::string & [getHost](#) () const
- const std::string & [getPort](#) () const
- const std::string & [getDBName](#) () const
- void [setUser](#) (const std::string &iUser)
- void [setPassword](#) (const std::string &iPasswd)
- void [setHost](#) (const std::string &iHost)
- void [setPort](#) (const std::string &iPort)
- void [setDBName](#) (const std::string &iDBName)
- bool [check](#) () const
- const std::string [describe](#) () const
- std::string [toShortString](#) () const
- std::string [toString](#) () const
- [BasDBParams](#) (const std::string &iDBUser, const std::string &iDBPasswd, const std::string &iDBHost, const std::string &iDBPort, const std::string &iDBName)
- [BasDBParams](#) ()
- [BasDBParams](#) (const [BasDBParams](#) &)
- [~BasDBParams](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

##### 34.9.1 Detailed Description

Structure holding the parameters for connection to a database.

Definition at line 19 of file [BasDBParams.hpp](#).

##### 34.9.2 Constructor & Destructor Documentation

**34.9.2.1** stdair::BasDBParams::BasDBParams ( const std::string & *iDBUser*, const std::string & *iDBPasswd*, const std::string & *iDBHost*, const std::string & *iDBPort*, const std::string & *iDBName* )

Main Constructor.

Definition at line 24 of file [BasDBParams.cpp](#).

#### 34.9.2.2 stdair::BasDBParams::BasDBParams ( )

Default Constructor.

Definition at line 13 of file [BasDBParams.cpp](#).

#### 34.9.2.3 stdair::BasDBParams::BasDBParams ( const BasDBParams & iDBParams )

Default copy constructor.

Definition at line 17 of file [BasDBParams.cpp](#).

#### 34.9.2.4 stdair::BasDBParams::~~BasDBParams ( )

Destructor.

Definition at line 34 of file [BasDBParams.cpp](#).

### 34.9.3 Member Function Documentation

#### 34.9.3.1 const std::string& stdair::BasDBParams::getUser ( ) const [inline]

Get the database user name.

Definition at line 23 of file [BasDBParams.hpp](#).

#### 34.9.3.2 const std::string& stdair::BasDBParams::getPassword ( ) const [inline]

Get the database user password.

Definition at line 28 of file [BasDBParams.hpp](#).

#### 34.9.3.3 const std::string& stdair::BasDBParams::getHost ( ) const [inline]

Get the database host name.

Definition at line 33 of file [BasDBParams.hpp](#).

#### 34.9.3.4 const std::string& stdair::BasDBParams::getPort ( ) const [inline]

Get the database port number.

Definition at line 38 of file [BasDBParams.hpp](#).

#### 34.9.3.5 const std::string& stdair::BasDBParams::getDBName ( ) const [inline]

Get the database name.

Definition at line 43 of file [BasDBParams.hpp](#).

#### 34.9.3.6 void stdair::BasDBParams::setUser ( const std::string & iUser ) [inline]

Set the database user name.

Definition at line 50 of file [BasDBParams.hpp](#).

**34.9.3.7** void stdair::BasDBParams::setPassword ( const std::string & *iPasswd* ) [inline]

Set the database password.

Definition at line 55 of file [BasDBParams.hpp](#).

**34.9.3.8** void stdair::BasDBParams::setHost ( const std::string & *iHost* ) [inline]

Set the database host name.

Definition at line 60 of file [BasDBParams.hpp](#).

**34.9.3.9** void stdair::BasDBParams::setPort ( const std::string & *iPort* ) [inline]

Set the database port number.

Definition at line 65 of file [BasDBParams.hpp](#).

**34.9.3.10** void stdair::BasDBParams::setDBName ( const std::string & *iDBName* )  
[inline]

Set the database name.

Definition at line 70 of file [BasDBParams.hpp](#).

**34.9.3.11** bool stdair::BasDBParams::check ( ) const

Check that all the parameters are fine.

Definition at line 57 of file [BasDBParams.cpp](#).

**34.9.3.12** const std::string stdair::BasDBParams::describe ( ) const [virtual]

Get the serialised version of the DBParams structure.

Implements [stdair::StructAbstract](#).

Definition at line 38 of file [BasDBParams.cpp](#).

References [toString\(\)](#).

**34.9.3.13** std::string stdair::BasDBParams::toShortString ( ) const

Get a short display of the DBParams structure.

Definition at line 43 of file [BasDBParams.cpp](#).

**34.9.3.14** std::string stdair::BasDBParams::toString ( ) const

Get the serialised version of the DBParams structure.

Definition at line 50 of file [BasDBParams.cpp](#).

Referenced by [describe\(\)](#).

34.9.3.15 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const` `[inline, inherited]`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream</i> & the output stream.
-------------------------------------

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.9.3.16 `virtual void stdair::StructAbstract::fromStream ( std::istream & ioIn )` `[inline, virtual, inherited]`

Read a Business Object from an input stream.

#### Parameters

<i>istream</i> & the input stream.
------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/basic/BasDBParams.hpp](#)
- [stdair/basic/BasDBParams.cpp](#)

## 34.10 stdair::BasFileMgr Struct Reference

```
#include <stdair/basic/BasFileMgr.hpp>
```

#### Static Public Member Functions

- static bool [doesExistAndIsReadable](#) (const std::string &iFilepath)

## 34.10.1 Detailed Description

Helper class for operations on files and on the file-system.

Definition at line 13 of file [BasFileMgr.hpp](#).

## 34.10.2 Member Function Documentation

34.10.2.1 `bool stdair::BasFileMgr::doesExistAndIsReadable ( const std::string & iFilepath )`  
`[static]`

Definition at line 23 of file [BasFileMgr.cpp](#).

The documentation for this struct was generated from the following files:

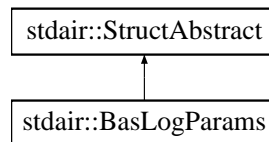
- [stdair/basic/BasFileMgr.hpp](#)
- [stdair/basic/BasFileMgr.cpp](#)

## 34.11 stdair::BasLogParams Struct Reference

Structure holding parameters for logging.

```
#include <stdair/basic/BasLogParams.hpp>
```

Inheritance diagram for stdair::BasLogParams:



## Public Member Functions

- const [LOG::EN\\_LogLevel](#) & [getLogLevel](#) () const
- std::ostream & [getLogStream](#) () const
- const bool [getForcedInitialisationFlag](#) () const
- void [setForcedInitialisationFlag](#) (const bool iForceMultipleInstance)
- bool [check](#) () const
- const std::string [describe](#) () const
- std::string [toShortString](#) () const
- std::string [toString](#) () const
- [BasLogParams](#) (const [LOG::EN\\_LogLevel](#) iLogLevel, std::ostream &ioLogOutputStream, const bool iForceMultipleInstance=false)
- [BasLogParams](#) (const [BasLogParams](#) &)
- [~BasLogParams](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)



## Friends

- class [Logger](#)

## 34.11.1 Detailed Description

Structure holding parameters for logging.

Definition at line 19 of file [BasLogParams.hpp](#).

## 34.11.2 Constructor &amp; Destructor Documentation

34.11.2.1 `stdair::BasLogParams::BasLogParams ( const LOG::EN_LogLevel iLogLevel, std::ostream & ioLogOutputStream, const bool iForceMultipleInstance = false )`

Main Constructor.

## Parameters

<i>in</i>	<i>const</i>	<a href="#">LOG::EN_LogLevel</a> Level of the log (e.g., DEBUG)
	<i>inout</i>	std::ostream& (STL) Stream to log into.
<i>in</i>	<i>const</i>	bool Whether or not multiple initialisation should be forced.

Definition at line 27 of file [BasLogParams.cpp](#).

34.11.2.2 `stdair::BasLogParams::BasLogParams ( const BasLogParams & iLogParams )`

Copy constructor.

Definition at line 21 of file [BasLogParams.cpp](#).

34.11.2.3 `stdair::BasLogParams::~BasLogParams ( )`

Destructor.

Definition at line 35 of file [BasLogParams.cpp](#).

## 34.11.3 Member Function Documentation

34.11.3.1 `const LOG::EN_LogLevel& stdair::BasLogParams::getLogLevel ( ) const`  
[inline]

Get the log level.

Definition at line 26 of file [BasLogParams.hpp](#).

34.11.3.2 `std::ostream& stdair::BasLogParams::getLogStream ( ) const` [inline]

Get the log output stream.

Definition at line 33 of file [BasLogParams.hpp](#).

34.11.3.3 `const bool stdair::BasLogParams::getForcedInitialisationFlag ( ) const`  
`[inline]`

State whether or not multiple initialisations are to be forced.

Definition at line 40 of file [BasLogParams.hpp](#).

34.11.3.4 `void stdair::BasLogParams::setForcedInitialisationFlag ( const bool`  
`iForceMultipleInstance ) [inline]`

State whether or not multiple initialisations are to be forced.

Definition at line 49 of file [BasLogParams.hpp](#).

34.11.3.5 `bool stdair::BasLogParams::check ( ) const`

Check that all the parameters are fine.

34.11.3.6 `const std::string stdair::BasLogParams::describe ( ) const` `[virtual]`

Get the serialised version of the DBParams structure.

Implements [stdair::StructAbstract](#).

Definition at line 39 of file [BasLogParams.cpp](#).

References [toString\(\)](#).

34.11.3.7 `std::string stdair::BasLogParams::toShortString ( ) const`

Get a short display of the LOGParams structure.

Definition at line 44 of file [BasLogParams.cpp](#).

References [stdair::LOG::\\_logLevels](#).

34.11.3.8 `std::string stdair::BasLogParams::toString ( ) const`

Get the serialised version of the LOGParams structure.

Definition at line 52 of file [BasLogParams.cpp](#).

References [stdair::LOG::\\_logLevels](#).

Referenced by [describe\(\)](#).

34.11.3.9 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const` `[inline,`  
`inherited]`

Dump a Business Object into an output stream.

#### Parameters

<code>ostream&amp;</code> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#),

[stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

```
34.11.3.10 virtual void stdair::StructAbstract::fromStream ( std::istream & ioln ) [inline,
virtual, inherited]
```

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

#### 34.11.4 Friends And Related Function Documentation

```
34.11.4.1 friend class Logger [friend]
```

Definition at line 20 of file [BasLogParams.hpp](#).

The documentation for this struct was generated from the following files:

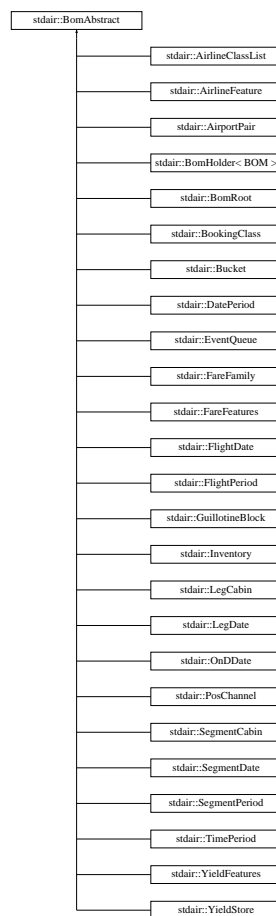
- [stdair/basic/BasLogParams.hpp](#)
- [stdair/basic/BasLogParams.cpp](#)

## 34.12 stdair::BomAbstract Class Reference

Base class for the Business Object Model (BOM) layer.

```
#include <stdair/bom/BomAbstract.hpp>
```

Inheritance diagram for [stdair::BomAbstract](#):



### Public Member Functions

- virtual void [toStream](#) (std::ostream &ioOut) const =0
- virtual void [fromStream](#) (std::istream &ioIn)=0
- virtual std::string [toString](#) () const =0
- virtual [~BomAbstract](#) ()

### Protected Member Functions

- [BomAbstract](#) ()
- [BomAbstract](#) (const [BomAbstract](#) &)

#### 34.12.1 Detailed Description

Base class for the Business Object Model (BOM) layer.

Definition at line 23 of file [BomAbstract.hpp](#).

## 34.12.2 Constructor &amp; Destructor Documentation

## 34.12.2.1 stdair::BomAbstract::BomAbstract ( ) [inline, protected]

Protected Default Constructor to ensure this class is abstract.

Definition at line 40 of file [BomAbstract.hpp](#).

## 34.12.2.2 stdair::BomAbstract::BomAbstract ( const BomAbstract &amp; ) [inline, protected]

Definition at line 41 of file [BomAbstract.hpp](#).

## 34.12.2.3 virtual stdair::BomAbstract::~~BomAbstract ( ) [inline, virtual]

Destructor.

Definition at line 44 of file [BomAbstract.hpp](#).

## 34.12.3 Member Function Documentation

## 34.12.3.1 virtual void stdair::BomAbstract::toStream ( std::ostream &amp; ioOut ) const [pure virtual]

Dump a Business Object into an output stream.

## Parameters

<i>ostream&amp;</i> the output stream.
--

Implemented in [stdair::AirlineClassList](#), [stdair::AirlineFeature](#), [stdair::AirportPair](#), [stdair::BomHolder< BOM >](#), [stdair::BomRoot](#), [stdair::BookingClass](#), [stdair::Bucket](#), [stdair::DatePeriod](#), [stdair::EventQueue](#), [stdair::FareFamily](#), [stdair::FareFeatures](#), [stdair::FlightDate](#), [stdair::FlightPeriod](#), [stdair::GuillotineBlock](#), [stdair::Inventory](#), [stdair::LegCabin](#), [stdair::LegDate](#), [stdair::OnDDate](#), [stdair::PosChannel](#), [stdair::SegmentCabin](#), [stdair::SegmentDate](#), [stdair::SegmentPeriod](#), [stdair::TimePeriod](#), [stdair::YieldFeatures](#), and [stdair::YieldStore](#).

Referenced by [operator<<\(\)](#).

## 34.12.3.2 virtual void stdair::BomAbstract::fromStream ( std::istream &amp; ioln ) [pure virtual]

Read a Business Object from an input stream.

## Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implemented in [stdair::AirlineClassList](#), [stdair::AirlineFeature](#), [stdair::AirportPair](#), [stdair::BomHolder< BOM >](#), [stdair::BomRoot](#), [stdair::BookingClass](#), [stdair::Bucket](#), [stdair::DatePeriod](#), [stdair::EventQueue](#), [stdair::FareFamily](#), [stdair::FareFeatures](#), [stdair::FlightDate](#), [stdair::FlightPeriod](#), [stdair::GuillotineBlock](#), [stdair::Inventory](#), [stdair::LegCabin](#), [stdair::LegDate](#), [stdair::OnDDate](#), [stdair::PosChannel](#), [stdair::SegmentCabin](#), [stdair::SegmentDate](#), [stdair::SegmentPeriod](#), [stdair::TimePeriod](#),

[stdair::YieldFeatures](#), and [stdair::YieldStore](#).

Referenced by [operator>>\(\)](#).

**34.12.3.3** virtual std::string stdair::BomAbstract::toString ( ) const [pure virtual]

Get the serialised version of the Business Object.

Implemented in [stdair::AirlineClassList](#), [stdair::AirlineFeature](#), [stdair::AirportPair](#), [stdair::BomHolder<BOM>](#), [stdair::BomRoot](#), [stdair::BookingClass](#), [stdair::Bucket](#), [stdair::DatePeriod](#), [stdair::EventQueue](#), [stdair::FareFamily](#), [stdair::FareFeatures](#), [stdair::FlightDate](#), [stdair::FlightPeriod](#), [stdair::GuillotineBlock](#), [stdair::Inventory](#), [stdair::LegCabin](#), [stdair::LegDate](#), [stdair::OnDDate](#), [stdair::PosChannel](#), [stdair::SegmentCabin](#), [stdair::SegmentDate](#), [stdair::SegmentPeriod](#), [stdair::TimePeriod](#), [stdair::YieldFeatures](#), and [stdair::YieldStore](#).

The documentation for this class was generated from the following file:

- [stdair/bom/BomAbstract.hpp](#)

## 34.13 stdair::BomArchive Class Reference

Utility class to archive/restore BOM objects with Boost serialisation.

```
#include <stdair/bom/BomArchive.hpp>
```

### Static Public Member Functions

- static void [archive](#) (const [BomRoot](#) &)
- static std::string [archive](#) (const [Inventory](#) &)
- static void [restore](#) (const std::string &iArchive, [Inventory](#) &)
- static void [archive](#) (const [FlightDate](#) &)

### 34.13.1 Detailed Description

Utility class to archive/restore BOM objects with Boost serialisation.

Definition at line 28 of file [BomArchive.hpp](#).

### 34.13.2 Member Function Documentation

**34.13.2.1** void stdair::BomArchive::archive ( const [BomRoot](#) & *iBomRoot* ) [static]

Recursively archive (dump in the underlying STL string) the objects of the BOM tree.

#### Parameters

<i>const</i> <a href="#">BomRoot</a> & Root of the BOM tree to be archived.
---

Definition at line 32 of file [BomArchive.cpp](#).

34.13.2.2 `std::string stdair::BomArchive::archive ( const Inventory & iInventory )`  
`[static]`

Recursively archive (dump in the underlying STL string) the objects of the BOM tree.

#### Parameters

<code>const</code> <a href="#">Inventory</a> & Root of the BOM tree to be archived.
---

Definition at line 36 of file [BomArchive.cpp](#).

34.13.2.3 `void stdair::BomArchive::restore ( const std::string & iArchive, Inventory & iInventory )`  
`[static]`

Recursively restore (from the underlying STL string) the objects of the BOM tree.

#### Parameters

<code>const</code> <code>std::string&amp;</code> String holding the serialised objects.
<code>Inventory&amp;</code> Root of the BOM tree to be restored.

Definition at line 44 of file [BomArchive.cpp](#).

34.13.2.4 `void stdair::BomArchive::archive ( const FlightDate & iFlightDate )`  
`[static]`

Recursively archive (dump in the underlying STL string) the objects of the BOM tree.

#### Parameters

<code>const</code> <a href="#">FlightDate</a> & Root of the BOM tree to be archived.
--

Definition at line 52 of file [BomArchive.cpp](#).

The documentation for this class was generated from the following files:

- [stdair/bom/BomArchive.hpp](#)
- [stdair/bom/BomArchive.cpp](#)

## 34.14 stdair::BomDisplay Class Reference

Utility class to display StdAir objects with a pretty format.

```
#include <stdair/bom/BomDisplay.hpp>
```

#### Static Public Member Functions

- static `std::string` [csvDisplay](#) (const [EventQueue](#) &)
- static void [list](#) (std::ostream &, const [BomRoot](#) &, const [AirlineCode\\_T](#) & iAirlineCode="all", const [FlightNumber\\_T](#) & iFlightNumber=0)

- static void [list](#) (std::ostream &, const [Inventory](#) &, const unsigned short inventoryIndex=0, const [FlightNumber\\_T](#) & iFlightNumber=0)
- static void [listAirportPairDateRange](#) (std::ostream &, const [BomRoot](#) &)
- static void [csvDisplay](#) (std::ostream &, const [BomRoot](#) &)
- static void [csvDisplay](#) (std::ostream &, const [Inventory](#) &)
- static void [csvDisplay](#) (std::ostream &, const [OnDDate](#) &)
- static void [csvDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvLegDateDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvSegmentDateDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvLegCabinDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvSegmentCabinDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvFareFamilyDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvBucketDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvBookingClassDisplay](#) (std::ostream &, const [BookingClass](#) &, const std::string & iLeadingString)
- static void [csvBookingClassDisplay](#) (std::ostream &, const [FlightDate](#) &)
- static void [csvDisplay](#) (std::ostream &, const [TravelSolutionList\\_T](#) &)
- static void [csvDisplay](#) (std::ostream &, const [DatePeriodList\\_T](#) &)
- static void [csvSimFQTAirRACDisplay](#) (std::ostream &, const [BomRoot](#) &)
- static void [csvAirportPairDisplay](#) (std::ostream &, const [AirportPair](#) &)
- static void [csvDateDisplay](#) (std::ostream &, const [DatePeriod](#) &)
- static void [csvPosChannelDisplay](#) (std::ostream &, const [PosChannel](#) &)
- static void [csvTimeDisplay](#) (std::ostream &, const [TimePeriod](#) &)
- template<typename FEATURE\_TYPE >  
static void [csvFeatureListDisplay](#) (std::ostream & oStream, const [TimePeriod](#) &)
- template<typename FEATURE\_TYPE >  
static void [csvFeaturesDisplay](#) (std::ostream & oStream, const FEATURE\_TYPE &)
- static void [csvAirlineClassDisplay](#) (std::ostream &, const [AirlineClassList](#) &)

#### 34.14.1 Detailed Description

Utility class to display StdAir objects with a pretty format.

Definition at line 39 of file [BomDisplay.hpp](#).

#### 34.14.2 Member Function Documentation

34.14.2.1 static std::string stdair::BomDisplay::csvDisplay ( const [EventQueue](#) & )  
[static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

##### Parameters

const <a href="#">stdair::EventQueue</a> & Root of the BOM tree to be displayed.
--



**Returns**

std::string Output string in which the BOM tree should be logged/dumped.

34.14.2.2 `static void stdair::BomDisplay::list ( std::ostream & , const BomRoot & , const AirlineCode_T & iAirlineCode = "all", const FlightNumber_T & iFlightNumber = 0 ) [static]`

Display (dump in the underlying output log stream) the list of flight-dates contained within the given BOM tree.

**Parameters**

<code>std::ostream&amp;</code>	Output stream in which the flight-date keys should be logged/dumped.
<code>const BomRoot&amp;</code>	Root of the BOM tree to be displayed.
<code>const AirlineCode_T &amp;</code>	Airline for which the flight-dates should be displayed. If set to "all" (default), all the inventories will be displayed.
<code>const FlightNumber_T &amp;</code>	Flight number for which all the departure dates should be displayed. If set to 0 (the default), all the flight numbers will be displayed.

34.14.2.3 `static void stdair::BomDisplay::list ( std::ostream & , const Inventory & , const unsigned short iInventoryIndex = 0, const FlightNumber_T & iFlightNumber = 0 ) [static]`

Display (dump in the underlying output log stream) the list of flight-dates contained within the given BOM tree.

**Parameters**

<code>std::ostream&amp;</code>	Output stream in which the flight-date keys should be logged/dumped.
<code>const Inventory&amp;</code>	Root of the BOM tree to be displayed.
<code>const unsigned short iInventoryIndex</code>	Index, within the list, of the inventory. It is 0 when that inventory is displayed alone.
<code>const FlightNumber_T &amp;</code>	Flight number for which all the departure dates should be displayed. If set to 0 (the default), all the flight numbers will be displayed.

34.14.2.4 `static void stdair::BomDisplay::listAirportPairDateRange ( std::ostream & , const BomRoot & ) [static]`

Display the list of airports pairs and date ranges (contained within the BOM tree)

**Parameters**

<code>std::ostream&amp;</code>	Output stream in which the airport pairs and date ranges are logged/dumped.
<code>const BomRoot&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.5 `static void stdair::BomDisplay::csvDisplay ( std::ostream & , const BomRoot & )`  
`[static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const BomRoot&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.6 `static void stdair::BomDisplay::csvDisplay ( std::ostream & , const Inventory & )`  
`[static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given [Inventory](#).

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const Inventory&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.7 `static void stdair::BomDisplay::csvDisplay ( std::ostream & , const OnDDate & )`  
`[static]`

Display the O&D date object information.

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const OnDDate&amp;</code>	the BOM to be displayed.

34.14.2.8 `static void stdair::BomDisplay::csvDisplay ( std::ostream & , const FlightDate & )`  
`[static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given [FlightDate](#).

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const FlightDate&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.9 `static void stdair::BomDisplay::csvLegDateDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the leg-date level objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">FlightDate&amp;</a>	Root of the BOM tree to be displayed.

34.14.2.10 `static void stdair::BomDisplay::csvSegmentDateDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the segment-date level objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">FlightDate&amp;</a>	Root of the BOM tree to be displayed.

34.14.2.11 `static void stdair::BomDisplay::csvLegCabinDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the leg-cabin level objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">FlightDate&amp;</a>	Root of the BOM tree to be displayed.

34.14.2.12 `static void stdair::BomDisplay::csvSegmentCabinDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the segment-cabin level objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">FlightDate&amp;</a>	Root of the BOM tree to be displayed.

34.14.2.13 `static void stdair::BomDisplay::csvFareFamilyDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the fare families level objects of the BOM tree.

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const FlightDate&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.14 `static void stdair::BomDisplay::csvBucketDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the bucket holder level objects of the BOM tree.

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const FlightDate&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.15 `static void stdair::BomDisplay::csvBookingClassDisplay ( std::ostream & , const BookingClass & , const std::string & iLeadingString ) [static]`

Display (dump in the underlying output log stream) the segment-class, without going recursively deeper in the BOM tree.

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const BookingClass&amp;</code>	Root of the BOM tree to be displayed.
<code>const std::string&amp;</code>	Leading string to be displayed.

34.14.2.16 `static void stdair::BomDisplay::csvBookingClassDisplay ( std::ostream & , const FlightDate & ) [static]`

Recursively display (dump in the underlying output log stream) the segment-class level objects of the BOM tree.

#### Parameters

<code>std::ostream&amp;</code>	Output stream in which the BOM tree should be logged/dumped.
<code>const FlightDate&amp;</code>	Root of the BOM tree to be displayed.

34.14.2.17 `static void stdair::BomDisplay::csvDisplay ( std::ostream & , const TravelSolutionList_T & ) [static]`

Display (dump in the underlying output log stream) the full list of travel solution structures.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the list of travel solutions is logged/dumped.
<i>TravelSolutionList_T&amp;</i>	List of travel solutions to display.

34.14.2.18 `static void stdair::BomDisplay::csvDisplay ( std::ostream & , const DatePeriodList_T & ) [static]`

Display (dump in the underlying output log stream) the full list of date period fare rule sub bom tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the list of travel solutions is logged/dumped.
<i>DatePeriodList_T&amp;</i>	List of date period to display.

34.14.2.19 `static void stdair::BomDisplay::csvSimFQTAirRACDisplay ( std::ostream & , const BomRoot & ) [static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const BomRoot&amp;</i>	Root of the BOM tree to be displayed.

34.14.2.20 `static void stdair::BomDisplay::csvAirportPairDisplay ( std::ostream & , const AirportPair & ) [static]`

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given airport pair.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const AirportPair&amp;</i>	Root of the BOM tree to be displayed.

34.14.2.21 static void stdair::BomDisplay::csvDateDisplay ( std::ostream & , const DatePeriod & ) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given date range.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">DatePeriod</a> &	Root of the BOM tree to be displayed.

34.14.2.22 static void stdair::BomDisplay::csvPosChannelDisplay ( std::ostream & , const PosChannel & ) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given point of sale channel.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">PosChannel</a> &	Root of the BOM tree to be displayed.

34.14.2.23 static void stdair::BomDisplay::csvTimeDisplay ( std::ostream & , const TimePeriod & ) [static]

Recursively display (dump in the underlying output log stream) the objects of the BOM tree from the level of the given time range.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">TimePeriod</a> &	Root of the BOM tree to be displayed.

34.14.2.24 template<typename FEATURE\_TYPE > static void stdair::BomDisplay::csvFeatureListDisplay ( std::ostream & *oStream*, const TimePeriod & ) [static]

Recursively display (dump in the underlying output log stream) the list of fare/yield features objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">TimePeriod</a> &	Root of the BOM tree to be displayed.

```
34.14.2.25 template<typename FEATURE_TYPE > static void
stdair::BomDisplay::csvFeaturesDisplay ( std::ostream & oStream, const
FEATURE_TYPE & ) [static]
```

Recursively display (dump in the underlying output log stream) the fare/yield features objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> FEATURE_TYPE&	Root of the BOM tree to be displayed.

```
34.14.2.26 static void stdair::BomDisplay::csvAirlineClassDisplay ( std::ostream & , const
AirlineClassList & ) [static]
```

Recursively display (dump in the underlying output log stream) the airline class objects of the BOM tree.

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">AirlineClassList</a> &	Root of the BOM tree to be displayed.

The documentation for this class was generated from the following file:

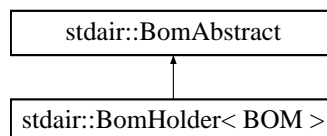
- [stdair/bom/BomDisplay.hpp](#)

## 34.15 stdair::BomHolder< BOM > Class Template Reference

Class representing the holder of BOM object containers (list and map).

```
#include <stdair/bom/BomHolder.hpp>
```

Inheritance diagram for stdair::BomHolder< BOM >:



#### Public Types

- typedef [stdair::BomHolderKey](#) Key\_T
- typedef std::list< BOM \* > [BomList\\_T](#)
- typedef std::map< const [MapKey\\_T](#), BOM \* > [BomMap\\_T](#)

### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const

### Public Attributes

- [Key\\_T \\_key](#)
- [BomList\\_T \\_bomList](#)
- [BomMap\\_T \\_bomMap](#)

### Protected Member Functions

- [BomHolder](#) ()
- [BomHolder](#) (const [BomHolder](#) &)
- [BomHolder](#) (const [Key\\_T](#) &iKey)
- [~BomHolder](#) ()

### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.15.1 Detailed Description

`template<typename BOM>class stdair::BomHolder< BOM >`

Class representing the holder of BOM object containers (list and map).

Definition at line 24 of file [BomHolder.hpp](#).

#### 34.15.2 Member Typedef Documentation

34.15.2.1 `template<typename BOM> typedef stdair::BomHolderKey  
stdair::BomHolder< BOM >::Key_T`

Definition allowing to retrieve the associated BOM key type.

Definition at line 34 of file [BomHolder.hpp](#).

34.15.2.2 `template<typename BOM> typedef std::list<BOM*> stdair::BomHolder< BOM  
>::BomList_T`

(STL) list of children.

Definition at line 39 of file [BomHolder.hpp](#).



34.15.2.3 `template<typename BOM> typedef std::map<const MapKey_T, BOM*>  
stdair::BomHolder< BOM >::BomMap_T`

(STL) map of children.

Definition at line 44 of file [BomHolder.hpp](#).

#### 34.15.3 Constructor & Destructor Documentation

34.15.3.1 `template<typename BOM> stdair::BomHolder< BOM >::BomHolder ( )  
[protected]`

Constructor.

34.15.3.2 `template<typename BOM> stdair::BomHolder< BOM >::BomHolder ( const  
BomHolder< BOM > & ) [protected]`

Copy constructor.

34.15.3.3 `template<typename BOM> stdair::BomHolder< BOM >::BomHolder ( const  
Key_T & iKey ) [inline, protected]`

Main constructor.

Definition at line 94 of file [BomHolder.hpp](#).

34.15.3.4 `template<typename BOM> stdair::BomHolder< BOM >::~BomHolder ( )  
[inline, protected]`

Destructor.

Definition at line 99 of file [BomHolder.hpp](#).

#### 34.15.4 Member Function Documentation

34.15.4.1 `template<typename BOM> void stdair::BomHolder< BOM >::toStream (  
std::ostream & ioOut ) const [inline, virtual]`

Dump a Business Object into an output stream.

##### Parameters

<code>ostream&amp;</code> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 54 of file [BomHolder.hpp](#).

References [stdair::BomHolder< BOM >::toString\(\)](#).

34.15.4.2 `template<typename BOM> void stdair::BomHolder< BOM >::fromStream ( std::istream & ioIn ) [inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream</i> & the input stream.
------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 63 of file [BomHolder.hpp](#).

34.15.4.3 `template<typename BOM> std::string stdair::BomHolder< BOM >::toString ( ) const [inline, virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 69 of file [BomHolder.hpp](#).

Referenced by [stdair::BomHolder< BOM >::toStream\(\)](#).

34.15.4.4 `template<typename BOM> const std::string stdair::BomHolder< BOM >::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 76 of file [BomHolder.hpp](#).

#### 34.15.5 Friends And Related Function Documentation

34.15.5.1 `template<typename BOM> friend class FacBom [friend]`

Friend classes.

Definition at line 26 of file [BomHolder.hpp](#).

34.15.5.2 `template<typename BOM> friend class FacBomManager [friend]`

Definition at line 27 of file [BomHolder.hpp](#).

#### 34.15.6 Member Data Documentation

34.15.6.1 `template<typename BOM> Key_T stdair::BomHolder< BOM >::_key`

Key.

Definition at line 99 of file [BomHolder.hpp](#).

34.15.6.2 `template<typename BOM> BomList_T stdair::BomHolder< BOM >::_bomList`

(STL) list of children.

Definition at line 111 of file [BomHolder.hpp](#).

Referenced by [stdair::FacBomManager::cloneHolder\(\)](#), [stdair::BomManager::getList\(\)](#), [stdair::BomManager::hasList\(\)](#), and [stdair::serialiseHelper\(\)](#).

34.15.6.3 `template<typename BOM> BomMap_T stdair::BomHolder< BOM >::_bomMap`

(STL) map of children.

Definition at line 116 of file [BomHolder.hpp](#).

Referenced by [stdair::FacBomManager::cloneHolder\(\)](#), [stdair::BomManager::getMap\(\)](#), [stdair::BomManager::getObjectPtr\(\)](#), [stdair::BomManager::hasMap\(\)](#), and [stdair::serialiseHelper\(\)](#).

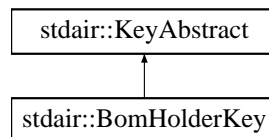
The documentation for this class was generated from the following file:

- [stdair/bom/BomHolder.hpp](#)

## 34.16 stdair::BomHolderKey Struct Reference

```
#include <stdair/bom/BomHolderKey.hpp>
```

Inheritance diagram for `stdair::BomHolderKey`:



### Public Member Functions

- [BomHolderKey](#) ()
- [~BomHolderKey](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- const std::string [describe](#) () const

### 34.16.1 Detailed Description

Key of the BOM structure holder.

Definition at line 12 of file [BomHolderKey.hpp](#).

### 34.16.2 Constructor & Destructor Documentation

#### 34.16.2.1 stdair::BomHolderKey::BomHolderKey ( )

Constructor.

Definition at line 13 of file [BomHolderKey.cpp](#).

#### 34.16.2.2 stdair::BomHolderKey::~~BomHolderKey ( )

Destructor.

Definition at line 17 of file [BomHolderKey.cpp](#).

### 34.16.3 Member Function Documentation

#### 34.16.3.1 void stdair::BomHolderKey::toStream ( std::ostream & *ioOut* ) const [virtual]

Dump a Business Object Key into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 21 of file [BomHolderKey.cpp](#).

References [toString\(\)](#).

#### 34.16.3.2 void stdair::BomHolderKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 26 of file [BomHolderKey.cpp](#).

#### 34.16.3.3 const std::string stdair::BomHolderKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 30 of file [BomHolderKey.cpp](#).

Referenced by [toStream\(\)](#).

34.16.3.4 `const std::string stdair::BomHolderKey::describe ( ) const`

Display of the key.

The documentation for this struct was generated from the following files:

- [stdair/bom/BomHolderKey.hpp](#)
- [stdair/bom/BomHolderKey.cpp](#)

## 34.17 stdair::BomJSONExport Class Reference

Utility class to export StdAir objects in a JSON format.

```
#include <stdair/bom/BomJSONExport.hpp>
```

### Static Public Member Functions

- static void [jsonExport](#) (std::ostream &, const [FlightDate](#) &)

### 34.17.1 Detailed Description

Utility class to export StdAir objects in a JSON format.

Definition at line 34 of file [BomJSONExport.hpp](#).

### 34.17.2 Member Function Documentation

34.17.2.1 `void stdair::BomJSONExport::jsonExport ( std::ostream & oStream, const FlightDate & iFlightDate ) [static]`

Recursively export (dump in the underlying output log stream) the objects of the BOM tree from the level of the given [FlightDate](#).

#### Parameters

<i>std::ostream&amp;</i>	Output stream in which the BOM tree should be logged/dumped.
<i>const</i> <a href="#">FlightDate</a> &	Root of the BOM tree to be exported.

Definition at line 29 of file [BomJSONExport.cpp](#).

References [stdair::FlightDate::getAirlineCode\(\)](#), [stdair::FlightDate::getDepartureDate\(\)](#), and [stdair::FlightDate::getFlightNumber\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/bom/BomJSONExport.hpp](#)
- [stdair/bom/BomJSONExport.cpp](#)

## 34.18 stdair::BomJSONImport Class Reference

Utility class to import StdAir objects in a JSON format.

```
#include <stdair/bom/BomJSONImport.hpp>
```

### Static Public Member Functions

- static bool [jsonImportInventoryKey](#) (const std::string &iBomKey, [AirlineCode\\_T](#) &)
- static bool [jsonImportFlightDateKey](#) (const std::string &iBomKey, [FlightNumber\\_T](#) &, [Date\\_T](#) &ioDepartureDate)

### 34.18.1 Detailed Description

Utility class to import StdAir objects in a JSON format.

Definition at line 18 of file [BomJSONImport.hpp](#).

### 34.18.2 Member Function Documentation

34.18.2.1 bool stdair::BomJSONImport::jsonImportInventoryKey ( const std::string & *iBomKey*, [AirlineCode\\_T](#) & *ioAirlineCode* ) [static]

Extract the airline code from a given JSON-formatted string.

#### Parameters

<i>std::string&amp;</i>	JSON-formatted string.
<i>AirlineCode_T</i> &	Airline code extracted from the given string.

#### Returns

bool State whether the extracting has been successful.

Definition at line 26 of file [BomJSONImport.cpp](#).

34.18.2.2 bool stdair::BomJSONImport::jsonImportFlightDateKey ( const std::string & *iBomKey*, [FlightNumber\\_T](#) & *ioFlightNumber*, [Date\\_T](#) & *ioDepartureDate* ) [static]

Build a [FlightDateKey](#) from a given JSON-formatted string.

#### Parameters

<i>std::string&amp;</i>	JSON-formatted string.
<i>FlightNumber_T</i> &	Flight number extracted from the given string.
<i>Date_T</i> &	Departure date extracted from the given string.

**Returns**

bool State whether the extracting has been successful.

Definition at line 56 of file [BomJSONImport.cpp](#).

The documentation for this class was generated from the following files:

- [stdair/bom/BomJSONImport.hpp](#)
- [stdair/bom/BomJSONImport.cpp](#)

**34.19 stdair::BomKeyManager Class Reference**

Utility class to extract key structures from strings.

```
#include <stdair/bom/BomKeyManager.hpp>
```

**Static Public Member Functions**

- static [ParsedKey](#) [extractKeys](#) (const std::string &iFullKeyStr)
- static [InventoryKey](#) [extractInventoryKey](#) (const std::string &iFullKeyStr)
- static [FlightDateKey](#) [extractFlightDateKey](#) (const std::string &iFullKeyStr)
- static [SegmentDateKey](#) [extractSegmentDateKey](#) (const std::string &iFullKeyStr)

**34.19.1 Detailed Description**

Utility class to extract key structures from strings.

Definition at line 29 of file [BomKeyManager.hpp](#).

**34.19.2 Member Function Documentation****34.19.2.1 [ParsedKey](#) stdair::BomKeyManager::extractKeys ( const std::string & iFullKeyStr )**  
[static]

Build a [ParsedKey](#) structure from a full key string which includes an inventory key, flight-date key elements, segment-date key elements.

Definition at line 30 of file [BomKeyManager.cpp](#).

References [stdair::ParsedKey::\\_airlineCode](#), [stdair::ParsedKey::\\_boardingPoint](#), [stdair::ParsedKey::\\_boardingTime](#), [stdair::ParsedKey::\\_departureDate](#), [stdair::ParsedKey::\\_flightNumber](#), [stdair::ParsedKey::\\_fullKey](#), [stdair::ParsedKey::\\_offPoint](#), and [stdair::DEFAULT\\_KEY\\_TOKEN\\_DELIMITER](#).

Referenced by [stdair::TravelSolutionStruct::describe\(\)](#), [stdair::TravelSolutionStruct::display\(\)](#), [extractFlightDateKey\(\)](#), [extractInventoryKey\(\)](#), [extractSegmentDateKey\(\)](#), and [stdair::BomRetriever::retrieveSegmentData](#).

#### 34.19.2.2 InventoryKey stdair::BomKeyManager::extractInventoryKey ( const std::string & iFullKeyStr ) [static]

Build a [InventoryKey](#) structure from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

##### Parameters

<code>const</code> std::string& The full key string.
--

##### Returns

[InventoryKey](#) The just built [InventoryKey](#) structure.

Definition at line 78 of file [BomKeyManager.cpp](#).

References [extractKeys\(\)](#), and [stdair::ParsedKey::getInventoryKey\(\)](#).

Referenced by [stdair::BomRetriever::retrieveInventoryFromLongKey\(\)](#).

#### 34.19.2.3 FlightDateKey stdair::BomKeyManager::extractFlightDateKey ( const std::string & iFullKeyStr ) [static]

Build a [FlightDateKey](#) structure from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

##### Parameters

<code>const</code> std::string& The full key string.
--

##### Returns

[FlightDateKey](#) The just built [FlightDateKey](#) structure.

Definition at line 86 of file [BomKeyManager.cpp](#).

References [extractKeys\(\)](#), and [stdair::ParsedKey::getFlightDateKey\(\)](#).

Referenced by [stdair::OnDDateKey::getDate\(\)](#), and [stdair::BomRetriever::retrieveFlightDateFromLongKey\(\)](#).

#### 34.19.2.4 SegmentDateKey stdair::BomKeyManager::extractSegmentDateKey ( const std::string & iFullKeyStr ) [static]

Build a [SegmentDateKey](#) structure from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.



**Parameters**

<code>const</code> std::string& The full key string.
--

**Returns**

[SegmentDateKey](#) The just built [SegmentDateKey](#) structure.

Definition at line 94 of file [BomKeyManager.cpp](#).

References [extractKeys\(\)](#), and [stdair::ParsedKey::getSegmentKey\(\)](#).

Referenced by [stdair::OnDDateKey::getDestination\(\)](#), [stdair::OnDDateKey::getOrigin\(\)](#), and [stdair::BomRetriever::retrieveSegmentDateFromLongKey\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/bom/BomKeyManager.hpp](#)
- [stdair/bom/BomKeyManager.cpp](#)

**34.20 stdair::BomManager Class Reference**

Utility class for StdAir-based objects.

```
#include <stdair/bom/BomManager.hpp>
```

**Public Member Functions**

- `template<>`  
bool [hasList](#) (const [SegmentDate](#) &ioSegmentDate)
- `template<>`  
const [BomHolder](#)< [SegmentDate](#) >::BomList\_T & [getList](#) (const [SegmentDate](#) &ioSegmentDate)
- `template<>`  
bool [hasMap](#) (const [SegmentDate](#) &ioSegmentDate)

**Static Public Member Functions**

- `template<typename OBJECT2 , typename OBJECT1 >`  
static const [BomHolder](#)< OBJECT2 >::BomList\_T & [getList](#) (const OBJECT1 &)
- `template<typename OBJECT2 , typename OBJECT1 >`  
static const [BomHolder](#)< OBJECT2 >::BomMap\_T & [getMap](#) (const OBJECT1 &)
- `template<typename OBJECT2 , typename OBJECT1 >`  
static bool [hasList](#) (const OBJECT1 &)
- `template<typename OBJECT2 , typename OBJECT1 >`  
static bool [hasMap](#) (const OBJECT1 &)
- `template<typename PARENT , typename CHILD >`  
static PARENT \* [getParentPtr](#) (const CHILD &)

- `template<typename PARENT , typename CHILD >`  
`static PARENT & getParent (const CHILD &)`
- `template<typename OBJECT2 , typename OBJECT1 >`  
`static OBJECT2 * getObjectPtr (const OBJECT1 &, const MapKey_T &)`
- `template<typename OBJECT2 , typename OBJECT1 >`  
`static OBJECT2 & getObject (const OBJECT1 &, const MapKey_T &)`

#### Friends

- class `FacBomManager`

#### 34.20.1 Detailed Description

Utility class for StdAir-based objects.

Most of those methods work for objects specified and instantiated outside StdAir, as long as those objects inherit from StdAir objects.

Definition at line 32 of file `BomManager.hpp`.

#### 34.20.2 Member Function Documentation

**34.20.2.1** `template<typename OBJECT2 , typename OBJECT1 > const BomHolder<`  
`OBJECT2 >::BomList_T & stdair::BomManager::getList ( const OBJECT1 & iObject1 )`  
`[static]`

Get the container (STL list) of OBJECT2 objects within the OBJECT1 object.

Definition at line 127 of file `BomManager.hpp`.

References `stdair::BomHolder< BOM >::_bomList`.

**34.20.2.2** `template<typename OBJECT2 , typename OBJECT1 > const BomHolder<`  
`OBJECT2 >::BomMap_T & stdair::BomManager::getMap ( const OBJECT1 & iObject1`  
`) [static]`

Get the container (STL map) of OBJECT2 objects within the OBJECT1 object.

Definition at line 138 of file `BomManager.hpp`.

References `stdair::BomHolder< BOM >::_bomMap`.

**34.20.2.3** `template<typename OBJECT2 , typename OBJECT1 > bool`  
`stdair::BomManager::hasList ( const OBJECT1 & iObject1 ) [static]`

Check if the list of object2 has been initialised.

Definition at line 157 of file `BomManager.hpp`.

References `stdair::BomHolder< BOM >::_bomList`.

34.20.2.4 `template<typename OBJECT2 , typename OBJECT1 > bool  
stdair::BomManager::hasMap ( const OBJECT1 & iObject1 ) [static]`

Check if the map of object2 has been initialised.

Definition at line 177 of file [BomManager.hpp](#).

References [stdair::BomHolder< BOM >::\\_bomMap](#).

34.20.2.5 `template<typename PARENT , typename CHILD > PARENT *  
stdair::BomManager::getParentPtr ( const CHILD & iChild ) [static]`

Get the PARENT of the given CHILD.

If the types do not match, NULL is returned.

Definition at line 196 of file [BomManager.hpp](#).

34.20.2.6 `template<typename PARENT , typename CHILD > PARENT &  
stdair::BomManager::getParent ( const CHILD & iChild ) [static]`

Get the PARENT of the given CHILD.

Definition at line 206 of file [BomManager.hpp](#).

34.20.2.7 `template<typename OBJECT2 , typename OBJECT1 > OBJECT2 *  
stdair::BomManager::getObjectPtr ( const OBJECT1 & iObject1, const MapKey_T &  
iKey ) [static]`

Get the OBJECT2 pointer corresponding to the given string key.

If such a OBJECT2 does not exist, return NULL.

Definition at line 217 of file [BomManager.hpp](#).

References [stdair::BomHolder< BOM >::\\_bomMap](#).

34.20.2.8 `template<typename OBJECT2 , typename OBJECT1 > OBJECT2 &  
stdair::BomManager::getObject ( const OBJECT1 & iObject1, const MapKey_T &  
iKey ) [static]`

Get the OBJECT2 corresponding the the given string key.

Definition at line 259 of file [BomManager.hpp](#).

References [STDAIR\\_LOG\\_ERROR](#).

34.20.2.9 `template<> bool stdair::BomManager::hasList ( const SegmentDate &  
ioSegmentDate ) [inline]`

Definition at line 304 of file [BomManager.hpp](#).

34.20.2.10 `template<> const BomHolder<SegmentDate>::BomList_T& stdair::BomManager::getList ( const SegmentDate & ioSegmentDate ) [inline]`

Definition at line 319 of file [BomManager.hpp](#).

34.20.2.11 `template<> bool stdair::BomManager::hasMap ( const SegmentDate & ioSegmentDate ) [inline]`

Definition at line 332 of file [BomManager.hpp](#).

### 34.20.3 Friends And Related Function Documentation

34.20.3.1 `friend class FacBomManager [friend]`

Definition at line 33 of file [BomManager.hpp](#).

The documentation for this class was generated from the following file:

- [stdair/bom/BomManager.hpp](#)

## 34.21 stdair::BomRetriever Class Reference

Utility class to retrieve StdAir objects.

```
#include <stdair/bom/BomRetriever.hpp>
```

### Static Public Member Functions

- static [Inventory](#) \* [retrieveInventoryFromLongKey](#) (const [BomRoot](#) &, const std::string &iFullKeyStr)
- static [Inventory](#) \* [retrieveInventoryFromKey](#) (const [BomRoot](#) &, const [InventoryKey](#) &)
- static [Inventory](#) \* [retrieveInventoryFromKey](#) (const [BomRoot](#) &, const [AirlineCode\\_T](#) &)
- static [FlightDate](#) \* [retrieveFlightDateFromLongKey](#) (const [BomRoot](#) &, const std::string &iFullKeyStr)
- static [FlightDate](#) \* [retrieveFlightDateFromKeySet](#) (const [BomRoot](#) &, const [AirlineCode\\_T](#) &, const [FlightNumber\\_T](#) &, const [Date\\_T](#) &iFlightDateDate)
- static [FlightDate](#) \* [retrieveFlightDateFromLongKey](#) (const [Inventory](#) &, const std::string &iFullKeyStr)
- static [FlightDate](#) \* [retrieveFlightDateFromKey](#) (const [Inventory](#) &, const [FlightDateKey](#) &)
- static [FlightDate](#) \* [retrieveFlightDateFromKey](#) (const [Inventory](#) &, const [FlightNumber\\_T](#) &, const [Date\\_T](#) &iFlightDateDate)
- static [SegmentDate](#) \* [retrieveSegmentDateFromLongKey](#) (const [BomRoot](#) &, const std::string &iFullKeyStr)

- static [SegmentDate](#) \* [retrieveSegmentDateFromLongKey](#) (const [Inventory](#) &, const std::string &iFullKeyStr)
- static [SegmentDate](#) \* [retrieveSegmentDateFromLongKey](#) (const [FlightDate](#) &, const std::string &iFullKeyStr)
- static [SegmentDate](#) \* [retrieveSegmentDateFromKey](#) (const [FlightDate](#) &, const [SegmentDateKey](#) &)
- static [SegmentDate](#) \* [retrieveSegmentDateFromKey](#) (const [FlightDate](#) &, const [AirportCode\\_T](#) &iOrigin, const [AirportCode\\_T](#) &iDestination)
- static [BookingClass](#) \* [retrieveBookingClassFromLongKey](#) (const [Inventory](#) &, const std::string &iFullKeyStr, const [ClassCode\\_T](#) &)
- static [AirportPair](#) \* [retrieveAirportPairFromKeySet](#) (const [BomRoot](#) &, const [stdair::AirportCode\\_T](#) &, const [stdair::AirportCode\\_T](#) &)
- static void [retrieveDatePeriodListFromKey](#) (const [AirportPair](#) &, const [stdair::Date\\_T](#) &, [stdair::DatePeriodList\\_T](#) &)
- static void [retrieveDatePeriodListFromKeySet](#) (const [BomRoot](#) &, const [stdair::AirportCode\\_T](#) &, const [stdair::AirportCode\\_T](#) &, const [stdair::Date\\_T](#) &, [stdair::DatePeriodList\\_T](#) &)
- static [stdair::LegCabin](#) & [retrieveDummyLegCabin](#) ([stdair::BomRoot](#) &)
- static [stdair::SegmentCabin](#) & [retrieveDummySegmentCabin](#) ([stdair::BomRoot](#) &)

#### 34.21.1 Detailed Description

Utility class to retrieve StdAir objects.

Definition at line 35 of file [BomRetriever.hpp](#).

#### 34.21.2 Member Function Documentation

**34.21.2.1** [Inventory](#) \* [stdair::BomRetriever::retrieveInventoryFromLongKey](#) ( const [BomRoot](#) & iBomRoot, const std::string & iFullKeyStr ) [static]

Retrieve an [Inventory](#) object from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

##### Parameters

<i>const</i>	<a href="#">BomRoot</a> &	The root of the BOM tree.
<i>const</i>	std::string&	The full key string.

##### Returns

[Inventory](#)\* The just retrieved [Inventory](#) object.

Definition at line 29 of file [BomRetriever.cpp](#).

References [stdair::BomKeyManager::extractInventoryKey\(\)](#), and [stdair::BomRoot::getInventory\(\)](#).

Referenced by [retrieveFlightDateFromLongKey\(\)](#).

34.21.2.2 **Inventory** \* stdair::BomRetriever::retrieveInventoryFromKey ( const BomRoot & iBomRoot, const InventoryKey & iKey ) [static]

Retrieve an [Inventory](#) object from an [InventoryKey](#) structure.

#### Parameters

const <a href="#">BomRoot</a> &	The root of the BOM tree.
const <a href="#">InventoryKey</a> &	The key.

#### Returns

Inventory\* The just retrieved [Inventory](#) object.

Definition at line 43 of file [BomRetriever.cpp](#).

References [stdair::BomRoot::getInventory\(\)](#).

Referenced by [retrieveDummyLegCabin\(\)](#), [retrieveDummySegmentCabin\(\)](#), and [retrieveFlightDateFromKeySet\(\)](#).

34.21.2.3 **Inventory** \* stdair::BomRetriever::retrieveInventoryFromKey ( const BomRoot & iBomRoot, const AirlineCode\_T & iAirlineCode ) [static]

Retrieve an [Inventory](#) object from an [InventoryKey](#) structure.

#### Parameters

const <a href="#">BomRoot</a> &	The root of the BOM tree.
const AirlineCode_T&	The key.

#### Returns

Inventory\* The just retrieved [Inventory](#) object.

Definition at line 55 of file [BomRetriever.cpp](#).

References [stdair::BomRoot::getInventory\(\)](#).

34.21.2.4 **FlightDate** \* stdair::BomRetriever::retrieveFlightDateFromLongKey ( const BomRoot & iBomRoot, const std::string & iFullKeyStr ) [static]

Retrieve a [FlightDate](#) object from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

#### Parameters

const <a href="#">BomRoot</a> &	The root of the BOM tree.
const std::string&	The full key string.

## Returns

FlightDate\* The just retrieved [FlightDate](#) object.

Definition at line 68 of file [BomRetriever.cpp](#).

References [stdair::BomKeyManager::extractFlightDateKey\(\)](#), [stdair::Inventory::getFlightDate\(\)](#), and [retrieveInventoryFromLongKey\(\)](#).

Referenced by [retrieveSegmentDateFromLongKey\(\)](#).

```
34.21.2.5 FlightDate * stdair::BomRetriever::retrieveFlightDateFromKeySet ( const
    BomRoot & iBomRoot, const AirlineCode_T & iAirlineCode, const
    FlightNumber_T & iFlightNumber, const Date_T & iFlightDateDate )
    [static]
```

Retrieve a [FlightDate](#) object from a set of keys.

## Parameters

<i>const</i>	<a href="#">BomRoot</a> & The root of the BOM tree.
<i>const</i>	<a href="#">AirlineCode_T</a> & The key.
<i>const</i>	<a href="#">FlightNumber_T</a> & Part of the key.
<i>const</i>	<a href="#">Date_T</a> & Part of the key.

## Returns

FlightDate\* The just retrieved [FlightDate](#) object.

Definition at line 91 of file [BomRetriever.cpp](#).

References [retrieveFlightDateFromKey\(\)](#), and [retrieveInventoryFromKey\(\)](#).

Referenced by [stdair::STDAIR\\_Service::check\(\)](#), [stdair::STDAIR\\_Service::csvDisplay\(\)](#), and [stdair::STDAIR\\_Service::jsonExport\(\)](#).

```
34.21.2.6 FlightDate * stdair::BomRetriever::retrieveFlightDateFromLongKey ( const
    Inventory & iInventory, const std::string & iFullKeyStr ) [static]
```

Retrieve a [FlightDate](#) object from a (full) key string.

The full key string gathers airline code, flight number, origin and destination, cabin and booking class. It corresponds to the output generated by the `toString()` methods of the XxxKey structures.

## Parameters

<i>const</i>	<a href="#">Inventory</a> & The root of the BOM tree.
<i>const</i>	<code>std::string</code> & The full key string.

## Returns

FlightDate\* The just retrieved [FlightDate](#) object.

Definition at line 114 of file [BomRetriever.cpp](#).

References [stdair::BomKeyManager::extractFlightDateKey\(\)](#), and [stdair::Inventory::getFlightDate\(\)](#).

**34.21.2.7** `FlightDate * stdair::BomRetriever::retrieveFlightDateFromKey ( const Inventory & inventory, const FlightDateKey & iKey ) [static]`

Retrieve a [FlightDate](#) object from an [FlightDateKey](#) structure.

#### Parameters

<code>const</code>	<a href="#">Inventory</a> & The root of the BOM tree.
<code>const</code>	<a href="#">FlightDateKey</a> & The key.

#### Returns

`FlightDate*` The just retrieved [FlightDate](#) object.

Definition at line 129 of file [BomRetriever.cpp](#).

References [stdair::Inventory::getFlightDate\(\)](#).

Referenced by [retrieveDummyLegCabin\(\)](#), [retrieveDummySegmentCabin\(\)](#), [retrieveFlightDateFromKeySet\(\)](#), and [retrieveSegmentDateFromLongKey\(\)](#).

**34.21.2.8** `FlightDate * stdair::BomRetriever::retrieveFlightDateFromKey ( const Inventory & inventory, const FlightNumber_T & iFlightNumber, const Date_T & iFlightDateDate ) [static]`

Retrieve a [FlightDate](#) object from an [FlightDateKey](#) structure.

#### Parameters

<code>const</code>	<a href="#">Inventory</a> & The root of the BOM tree.
<code>const</code>	<code>FlightNumber_T</code> & Part of the key.
<code>const</code>	<code>Date_T</code> & Part of the key.

#### Returns

`FlightDate*` The just retrieved [FlightDate](#) object.

Definition at line 141 of file [BomRetriever.cpp](#).

References [stdair::Inventory::getFlightDate\(\)](#).

**34.21.2.9** `SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromLongKey ( const BomRoot & iBomRoot, const std::string & iFullKeyStr ) [static]`

Retrieve a [SegmentDate](#) object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the `toString()` methods of the `XxxKey` structures.

#### Parameters

<code>const</code>	<a href="#">BomRoot</a> & The root of the BOM tree.
<code>const</code>	<code>std::string</code> & The full key string.



## Returns

SegmentDate\* The just retrieved [SegmentDate](#) object.

Definition at line 155 of file [BomRetriever.cpp](#).

References [stdair::BomKeyManager::extractSegmentDateKey\(\)](#), [stdair::FlightDate::getSegmentDate\(\)](#), and [retrieveFlightDateFromLongKey\(\)](#).

Referenced by [retrieveBookingClassFromLongKey\(\)](#).

**34.21.2.10** `SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromLongKey ( const Inventory & iInventory, const std::string & iFullKeyStr ) [static]`

Retrieve a [SegmentDate](#) object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

## Parameters

<code>const</code>	<a href="#">Inventory</a> & The root of the BOM tree.
<code>const</code>	<code>std::string</code> & The full key string.

## Returns

SegmentDate\* The just retrieved [SegmentDate](#) object.

Definition at line 178 of file [BomRetriever.cpp](#).

References [stdair::ParsedKey::\\_airlineCode](#), [stdair::BomKeyManager::extractKeys\(\)](#), [stdair::Inventory::getAirlineCode\(\)](#), [stdair::ParsedKey::getFlightDateKey\(\)](#), [stdair::ParsedKey::getSegmentKey\(\)](#), [retrieveFlightDateFromKey\(\)](#), [retrieveSegmentDateFromKey\(\)](#), [STDAIR\\_LOG\\_DEBUG](#), [stdair::SegmentDateKey::toString\(\)](#), and [stdair::FlightDateKey::toString\(\)](#).

**34.21.2.11** `SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromLongKey ( const FlightDate & iFlightDate, const std::string & iFullKeyStr ) [static]`

Retrieve a [SegmentDate](#) object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the toString() methods of the XxxKey structures.

## Parameters

<code>const</code>	<a href="#">FlightDate</a> & The root of the BOM tree.
<code>const</code>	<code>std::string</code> & The full key string.

## Returns

SegmentDate\* The just retrieved [SegmentDate](#) object.

Definition at line 210 of file [BomRetriever.cpp](#).

References [stdair::BomKeyManager::extractSegmentDateKey\(\)](#), and [stdair::FlightDate::getSegmentDate\(\)](#).

**34.21.2.12** `SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromKey ( const FlightDate & iFlightDate, const SegmentDateKey & iKey ) [static]`

Retrieve a [SegmentDate](#) object from an [SegmentDateKey](#) structure.

#### Parameters

<code>const</code>	<a href="#">FlightDate</a> & The root of the BOM tree.
<code>const</code>	<a href="#">SegmentDateKey</a> & The key.

#### Returns

SegmentDate\* The just retrieved [SegmentDate](#) object.

Definition at line 225 of file [BomRetriever.cpp](#).

References [stdair::FlightDate::getSegmentDate\(\)](#).

Referenced by [retrieveSegmentDateFromLongKey\(\)](#).

**34.21.2.13** `SegmentDate * stdair::BomRetriever::retrieveSegmentDateFromKey ( const FlightDate & iFlightDate, const AirportCode_T & iOrigin, const AirportCode_T & iDestination ) [static]`

Retrieve a [SegmentDate](#) object from an [SegmentDateKey](#) structure.

#### Parameters

<code>const</code>	<a href="#">FlightDate</a> & The root of the BOM tree.
<code>const</code>	<code>AirportCode_T</code> & Origin, part of the key.
<code>const</code>	<code>AirportCode_T</code> & Destination, part of the key.

#### Returns

SegmentDate\* The just retrieved [SegmentDate](#) object.

Definition at line 237 of file [BomRetriever.cpp](#).

References [stdair::FlightDate::getSegmentDate\(\)](#).

**34.21.2.14** `BookingClass * stdair::BomRetriever::retrieveBookingClassFromLongKey ( const Inventory & iInventory, const std::string & iFullKeyStr, const ClassCode_T & iClassCode ) [static]`

Retrieve a [BookingClass](#) object from a (full) key string.

The full key string gathers airline code, segment number, origin and destination, cabin and booking class. It corresponds to the output generated by the `toString()` methods of the `XxxKey` structures.

Besides being attached to segment-cabin objects (and fare family objects, when they exist), the booking-class objects must also be attached directly to the segment-date.

Hence, if an assertion fails within that method call, chances are that the booking-class

objects have not been attached to the segment-date objects. Check, for instance, the `CmdBomManager::buildSampleBom()` to see how that should be properly done.

#### Parameters

<i>const</i>	<a href="#">Inventory</a> & The root of the BOM tree.
<i>const</i>	<code>std::string</code> & Part of the full key string.
<i>const</i>	<code>ClassCode_T</code> & Part of the full key string.

#### Returns

`BookingClass*` The just retrieved [BookingClass](#) object.

Definition at line 251 of file [BomRetriever.cpp](#).

References [retrieveSegmentDateFromLongKey\(\)](#).

34.21.2.15 `AirportPair * stdair::BomRetriever::retrieveAirportPairFromKeySet ( const BomRoot & iBomRoot, const stdair::AirportCode_T & iOrigin, const stdair::AirportCode_T & iDestination ) [static]`

Retrieve an [AirportPair](#) object from an [AirportPair](#) structure.

#### Parameters

<i>const</i>	<a href="#">BomRoot</a> & The root of the BOM tree.
<i>const</i>	<code>AirportCode_T</code> & Origin, part of the key.
<i>const</i>	<code>AirportCode_T</code> & Destination, part of the key.

#### Returns

`AirportPair*` The just retrieved [AirportPair](#) object.

Definition at line 273 of file [BomRetriever.cpp](#).

References [stdair::AirportPairKey::toString\(\)](#).

Referenced by [retrieveDatePeriodListFromKeySet\(\)](#).

34.21.2.16 `void stdair::BomRetriever::retrieveDatePeriodListFromKey ( const AirportPair & iAirportPair, const stdair::Date_T & iDepartureDate, stdair::DatePeriodList_T & ioDatePeriodList ) [static]`

Retrieve a list of date-period corresponding to a flight date.

#### Parameters

<i>const</i>	<a href="#">AirportPair</a> & The root of the BOM tree.
<i>const</i>	<code>Date_T</code> & Departure Date of the flight
<i>stdair::DatePeriodList_T</i>	List of <a href="#">DatePeriod</a> to display.

Definition at line 291 of file [BomRetriever.cpp](#).

References [stdair::DatePeriod::isDepartureDateValid\(\)](#).

Referenced by [retrieveDatePeriodListFromKeySet\(\)](#).

```
34.21.2.17 void stdair::BomRetriever::retrieveDatePeriodListFromKeySet ( const
    BomRoot & iBomRoot, const stdair::AirportCode_T & iOrigin, const
    stdair::AirportCode_T & iDestination, const stdair::Date_T & iDepartureDate,
    stdair::DatePeriodList_T & ioDatePeriodList ) [static]
```

Retrieve a list of date-period from a set of keys.

#### Parameters

<i>const</i> <a href="#">BomRoot</a> &	The root of the BOM tree.
<i>const</i> <a href="#">AirportCode_T</a> &	Part of the <a href="#">AirportPair</a> key: the origin airport
<i>const</i> <a href="#">AirportCode_T</a> &	Part of the <a href="#">AirportPair</a> key: the destination airport.
<i>const</i> <a href="#">Date_T</a> &	Departure date of the flight
<i>stdair::DatePeriodList_T</i> &	List of <a href="#">DatePeriod</a> to display.

Definition at line 322 of file [BomRetriever.cpp](#).

References [retrieveAirportPairFromKeySet\(\)](#), and [retrieveDatePeriodListFromKey\(\)](#).

Referenced by [stdair::STDAIR\\_Service::check\(\)](#), and [stdair::STDAIR\\_Service::csvDisplay\(\)](#).

```
34.21.2.18 LegCabin & stdair::BomRetriever::retrieveDummyLegCabin ( stdair::BomRoot
    & iBomRoot ) [static]
```

Retrieve the sample leg-cabin of the dummy inventory of "XX".

#### Parameters

<i>stdair::BomRoot</i> &	The BOM tree.
--------------------------	---------------

Definition at line 345 of file [BomRetriever.cpp](#).

References [stdair::DEFAULT\\_AIRLINE\\_CODE](#), [stdair::DEFAULT\\_CABIN\\_CODE](#), [stdair::DEFAULT\\_DEPARTURE\\_DATE](#), [stdair::DEFAULT\\_FLIGHT\\_NUMBER](#), [stdair::DEFAULT\\_ORIGIN](#), [stdair::LegDate::getLegCabin\(\)](#), [stdair::FlightDate::getLegDate\(\)](#), [retrieveFlightDateFromKey\(\)](#), and [retrieveInventoryFromKey\(\)](#).

```
34.21.2.19 SegmentCabin & stdair::BomRetriever::retrieveDummySegmentCabin (
    stdair::BomRoot & iBomRoot ) [static]
```

Retrieve the sample segment-cabin of the dummy inventory of "XX".

#### Parameters

<i>stdair::BomRoot</i> &	The BOM tree.
--------------------------	---------------

Definition at line 403 of file [BomRetriever.cpp](#).

References [stdair::DEFAULT\\_AIRLINE\\_CODE](#), [stdair::DEFAULT\\_CABIN\\_CODE](#), [stdair::DEFAULT\\_DEPARTURE\\_DATE](#), [stdair::DEFAULT\\_DESTINATION](#), [stdair::DEFAULT\\_FLIGHT\\_NUMBER](#), [stdair::DEFAULT\\_ORIGIN](#), [stdair::FlightDate::getSegmentDate\(\)](#), [retrieveFlightDateFromKey\(\)](#), [retrieveInventoryFromKey\(\)](#), and [stdair::SegmentCabinKey::toString\(\)](#).

The documentation for this class was generated from the following files:

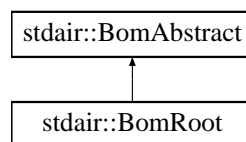
- [stdair/bom/BomRetriever.hpp](#)
- [stdair/bom/BomRetriever.cpp](#)

## 34.22 stdair::BomRoot Class Reference

Class representing the actual attributes for the Bom root.

```
#include <stdair/bom/BomRoot.hpp>
```

Inheritance diagram for stdair::BomRoot:



### Public Types

- typedef [BomRootKey](#) [Key\\_T](#)

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- [Inventory](#) \* [getInventory](#) (const std::string &iInventoryKeyStr) const
- [Inventory](#) \* [getInventory](#) (const [InventoryKey](#) &) const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Protected Member Functions

- [BomRoot](#) ()
- [BomRoot](#) (const [BomRoot](#) &)
- [BomRoot](#) (const [Key\\_T](#) &iKey)
- [~BomRoot](#) ()

**Protected Attributes**

- [Key\\_T \\_key](#)
- [HolderMap\\_T \\_holderMap](#)

**Friends**

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

**34.22.1 Detailed Description**

Class representing the actual attributes for the Bom root.

Definition at line 30 of file [BomRoot.hpp](#).

**34.22.2 Member Typedef Documentation****34.22.2.1 typedef BomRootKey stdair::BomRoot::Key\_T**

Definition allowing to retrieve the associated BOM key type.

Definition at line 39 of file [BomRoot.hpp](#).

**34.22.3 Constructor & Destructor Documentation****34.22.3.1 stdair::BomRoot::BomRoot ( ) [protected]**

Default constructor.

Definition at line 17 of file [BomRoot.cpp](#).

**34.22.3.2 stdair::BomRoot::BomRoot ( const BomRoot & iBomRoot ) [protected]**

Copy constructor.

Definition at line 22 of file [BomRoot.cpp](#).

**34.22.3.3 stdair::BomRoot::BomRoot ( const Key\_T & iKey ) [protected]**

Main constructor.

Definition at line 27 of file [BomRoot.cpp](#).

**34.22.3.4 stdair::BomRoot::~~BomRoot ( ) [protected]**

Destructor.

Definition at line 31 of file [BomRoot.cpp](#).

#### 34.22.4 Member Function Documentation

##### 34.22.4.1 const Key\_T& stdair::BomRoot::getKey ( ) const [inline]

Get the inventory key (airline code).

Definition at line 45 of file [BomRoot.hpp](#).

References [\\_key](#).

##### 34.22.4.2 const HolderMap\_T& stdair::BomRoot::getHolderMap ( ) const [inline]

Get the map of children.

Definition at line 50 of file [BomRoot.hpp](#).

References [\\_holderMap](#).

##### 34.22.4.3 Inventory\* stdair::BomRoot::getInventory ( const std::string & iInventoryKeyStr ) const

Get a pointer on the [Inventory](#) object corresponding to the given key.

#### Note

The [Inventory](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

#### Parameters

<code>const std::string&amp;</code> The flight-date key.
--

#### Returns

`Inventory*` Found [Inventory](#) object. NULL if not found.

Definition at line 42 of file [BomRoot.cpp](#).

Referenced by [getInventory\(\)](#), [stdair::BomRetriever::retrieveInventoryFromKey\(\)](#), and [stdair::BomRetriever::retrieveInventoryFromKey\(\)](#).

##### 34.22.4.4 Inventory\* stdair::BomRoot::getInventory ( const InventoryKey & iInventoryKey ) const

Get a pointer on the [Inventory](#) object corresponding to the given key.

#### Note

The [Inventory](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

#### Parameters

<code>const InventoryKey&amp;</code> The flight-date key
--

### Returns

Inventory\* Found [Inventory](#) object. NULL if not found.

Definition at line 49 of file [BomRoot.cpp](#).

References [getInventory\(\)](#), and [stdair::InventoryKey::toString\(\)](#).

**34.22.4.5** void stdair::BomRoot::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 86 of file [BomRoot.hpp](#).

References [toString\(\)](#).

**34.22.4.6** void stdair::BomRoot::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 95 of file [BomRoot.hpp](#).

**34.22.4.7** std::string stdair::BomRoot::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 35 of file [BomRoot.cpp](#).

References [\\_key](#), and [stdair::BomRootKey::toString\(\)](#).

Referenced by [toStream\(\)](#).

**34.22.4.8** const std::string stdair::BomRoot::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 106 of file [BomRoot.hpp](#).

References [\\_key](#), and [stdair::BomRootKey::toString\(\)](#).



34.22.4.9 `template<class Archive > void stdair::BomRoot::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

That method is used both for serialisation a BOM tree (into a backup file/stream), as well as re-instantiating a BOM tree from a back-up file/stream.

#### Note

The implementation of that method is to be found in the [CmdBomSerialiser](#) command.

Definition at line 133 of file [CmdBomSerialiser.cpp](#).

References [\\_key](#).

#### 34.22.5 Friends And Related Function Documentation

34.22.5.1 `friend class FacBom [friend]`

Definition at line 31 of file [BomRoot.hpp](#).

34.22.5.2 `friend class FacBomManager [friend]`

Definition at line 32 of file [BomRoot.hpp](#).

34.22.5.3 `friend class boost::serialization::access [friend]`

Definition at line 33 of file [BomRoot.hpp](#).

#### 34.22.6 Member Data Documentation

34.22.6.1 `Key_T stdair::BomRoot::_key [protected]`

Primary key.

Definition at line 166 of file [BomRoot.hpp](#).

Referenced by [describeKey\(\)](#), [getKey\(\)](#), [serialize\(\)](#), and [toString\(\)](#).

34.22.6.2 `HolderMap_T stdair::BomRoot::_holderMap [protected]`

Map holding the children ([Inventory](#) objects).

Definition at line 171 of file [BomRoot.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

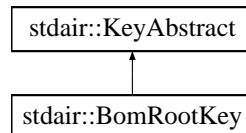
- [stdair/bom/BomRoot.hpp](#)
- [stdair/bom/BomRoot.cpp](#)
- [stdair/command/CmdBomSerialiser.cpp](#)

### 34.23 stdair::BomRootKey Struct Reference

Key of the BOM structure root.

```
#include <stdair/bom/BomRootKey.hpp>
```

Inheritance diagram for stdair::BomRootKey:



#### Public Member Functions

- [BomRootKey](#) ()
- [BomRootKey](#) (const std::string &identification)
- [BomRootKey](#) (const [BomRootKey](#) &)
- [~BomRootKey](#) ()
- const std::string & [getID](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Friends

- class [boost::serialization::access](#)

#### 34.23.1 Detailed Description

Key of the BOM structure root.

Definition at line 25 of file [BomRootKey.hpp](#).

#### 34.23.2 Constructor & Destructor Documentation

##### 34.23.2.1 stdair::BomRootKey::BomRootKey ( )

Default constructor.

Definition at line 18 of file [BomRootKey.cpp](#).

### 34.23.2.2 stdair::BomRootKey::BomRootKey ( const std::string & *identification* )

Constructor.

Definition at line 28 of file [BomRootKey.cpp](#).

### 34.23.2.3 stdair::BomRootKey::BomRootKey ( const BomRootKey & *iBomRootKey* )

Copy constructor.

Definition at line 23 of file [BomRootKey.cpp](#).

### 34.23.2.4 stdair::BomRootKey::~~BomRootKey ( )

Destructor.

Definition at line 33 of file [BomRootKey.cpp](#).

## 34.23.3 Member Function Documentation

### 34.23.3.1 const std::string& stdair::BomRootKey::getID ( ) const [inline]

Get the identification.

Definition at line 56 of file [BomRootKey.hpp](#).

### 34.23.3.2 void stdair::BomRootKey::toStream ( std::ostream & *ioOut* ) const [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 37 of file [BomRootKey.cpp](#).

References [toString\(\)](#).

### 34.23.3.3 void stdair::BomRootKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [BomRootKey.cpp](#).

### 34.23.3.4 const std::string stdair::BomRootKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 46 of file [BomRootKey.cpp](#).

Referenced by [stdair::BomRoot::describeKey\(\)](#), [toStream\(\)](#), and [stdair::BomRoot::toString\(\)](#).

34.23.3.5 `template<class Archive > void stdair::BomRootKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 68 of file [BomRootKey.cpp](#).

#### 34.23.4 Friends And Related Function Documentation

34.23.4.1 `friend class boost::serialization::access [friend]`

Definition at line 26 of file [BomRootKey.hpp](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/BomRootKey.hpp](#)
- [stdair/bom/BomRootKey.cpp](#)

## 34.24 stdair\_test::BookingClass Struct Reference

```
#include <test/stdair/StdairTestLib.hpp>
```

### Public Member Functions

- [BookingClass](#) (const std::string &iClassCode)
- std::string [toString](#) () const

### Public Attributes

- std::string [\\_classCode](#)

#### 34.24.1 Detailed Description

[BookingClass](#)

Definition at line 16 of file [StdairTestLib.hpp](#).

## 34.24.2 Constructor &amp; Destructor Documentation

34.24.2.1 stdair\_test::BookingClass::BookingClass ( const std::string & *iClassCode* )  
[inline]

Constructor.

Definition at line 19 of file [StdairTestLib.hpp](#).

## 34.24.3 Member Function Documentation

34.24.3.1 std::string stdair\_test::BookingClass::toString ( ) const [inline]

Display .

Definition at line 24 of file [StdairTestLib.hpp](#).

References [\\_classCode](#).

## 34.24.4 Member Data Documentation

34.24.4.1 std::string stdair\_test::BookingClass::\_classCode

Definition at line 17 of file [StdairTestLib.hpp](#).

Referenced by [stdair\\_test::Cabin::toString\(\)](#), and [toString\(\)](#).

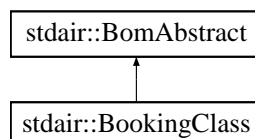
The documentation for this struct was generated from the following file:

- test/stdair/[StdairTestLib.hpp](#)

## 34.25 stdair::BookingClass Class Reference

```
#include <stdair/bom/BookingClass.hpp>
```

Inheritance diagram for stdair::BookingClass:



## Public Types

- typedef [BookingClassKey](#) Key\_T

## Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- const [ClassCode\\_T](#) & [getClassCode](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [SubclassCode\\_T](#) & [getSubclassCode](#) () const
- const [AuthorizationLevel\\_T](#) & [getAuthorizationLevel](#) () const
- const [ProtectionLevel\\_T](#) & [getProtection](#) () const
- const [ProtectionLevel\\_T](#) & [getCumulatedProtection](#) () const
- const [BookingLimit\\_T](#) & [getCumulatedBookingLimit](#) () const
- const [NbOfSeats\\_T](#) & [getNegotiatedSpace](#) () const
- const [OverbookingRate\\_T](#) & [getNoShowPercentage](#) () const
- const [OverbookingRate\\_T](#) & [getCancellationPercentage](#) () const
- const [NbOfBookings\\_T](#) & [getNbOfBookings](#) () const
- const [NbOfBookings\\_T](#) & [getNbOfGroupBookings](#) () const
- const [NbOfBookings\\_T](#) & [getNbOfPendingGroupBookings](#) () const
- const [NbOfBookings\\_T](#) & [getNbOfStaffBookings](#) () const
- const [NbOfBookings\\_T](#) & [getNbOfWLBookings](#) () const
- const [NbOfCancellations\\_T](#) & [getNbOfCancellations](#) () const
- const [NbOfBookings\\_T](#) & [getETB](#) () const
- const [Availability\\_T](#) & [getNetClassAvailability](#) () const
- const [Availability\\_T](#) & [getSegmentAvailability](#) () const
- const [Availability\\_T](#) & [getNetRevenueAvailability](#) () const
- const [Yield\\_T](#) & [getYield](#) () const
- const [MeanValue\\_T](#) & [getMean](#) () const
- const [StdDevValue\\_T](#) & [getStdDev](#) () const
- const [GeneratedDemandVector\\_T](#) & [getGeneratedDemandVector](#) () const
- void [setCumulatedProtection](#) (const [ProtectionLevel\\_T](#) &iPL)
- void [setProtection](#) (const [ProtectionLevel\\_T](#) &iPL)
- void [setCumulatedBookingLimit](#) (const [BookingLimit\\_T](#) &iBL)
- void [setAuthorizationLevel](#) (const [AuthorizationLevel\\_T](#) &iAU)
- void [setSegmentAvailability](#) (const [Availability\\_T](#) &iAvl)
- void [setYield](#) (const [Yield\\_T](#) &iYield)
- void [setMean](#) (const [MeanValue\\_T](#) &iMean)
- void [setStdDev](#) (const [StdDevValue\\_T](#) &iStdDev)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- void [sell](#) (const [NbOfBookings\\_T](#) &)
- void [cancel](#) (const [NbOfBookings\\_T](#) &)
- void [generateDemandSamples](#) (const int &)
- void [generateDemandSamples](#) (const int &, const [RandomSeed\\_T](#) &)

### Protected Member Functions

- [BookingClass](#) (const [Key\\_T](#) &)
- virtual [~BookingClass](#) ()

### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)
- [SubclassCode\\_T\\_subclassCode](#)
- [ProtectionLevel\\_T\\_cumulatedProtection](#)
- [ProtectionLevel\\_T\\_protection](#)
- [BookingLimit\\_T\\_cumulatedBookingLimit](#)
- [AuthorizationLevel\\_T\\_au](#)
- [NbOfSeats\\_T\\_nego](#)
- [OverbookingRate\\_T\\_noShowPercentage](#)
- [OverbookingRate\\_T\\_cancellationPercentage](#)
- [NbOfBookings\\_T\\_nbOfBookings](#)
- [NbOfBookings\\_T\\_groupNbOfBookings](#)
- [NbOfBookings\\_T\\_groupPendingNbOfBookings](#)
- [NbOfBookings\\_T\\_staffNbOfBookings](#)
- [NbOfBookings\\_T\\_wiNbOfBookings](#)
- [NbOfCancellations\\_T\\_nbOfCancellations](#)
- [NbOfBookings\\_T\\_etb](#)
- [Availability\\_T\\_netClassAvailability](#)
- [Availability\\_T\\_segmentAvailability](#)
- [Availability\\_T\\_netRevenueAvailability](#)
- [Yield\\_T\\_yield](#)
- [MeanValue\\_T\\_mean](#)
- [StdDevValue\\_T\\_stdDev](#)
- [GeneratedDemandVector\\_T\\_generatedDemandVector](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.25.1 Detailed Description

Class representing the actual attributes for an airline booking class.

Definition at line 24 of file [BookingClass.hpp](#).

### 34.25.2 Member Typedef Documentation

#### 34.25.2.1 typedef BookingClassKey stdair::BookingClass::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 31 of file [BookingClass.hpp](#).

### 34.25.3 Constructor & Destructor Documentation

#### 34.25.3.1 stdair::BookingClass::BookingClass ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 27 of file [BookingClass.cpp](#).

#### 34.25.3.2 stdair::BookingClass::~~BookingClass ( ) [protected, virtual]

Destructor.

Definition at line 39 of file [BookingClass.cpp](#).

### 34.25.4 Member Function Documentation

#### 34.25.4.1 const Key\_T& stdair::BookingClass::getKey ( ) const [inline]

Get the booking class key.

Definition at line 36 of file [BookingClass.hpp](#).

References [\\_key](#).

#### 34.25.4.2 const ClassCode\_T& stdair::BookingClass::getClassCode ( ) const [inline]

Get the booking code (part of the primary key).

Definition at line 41 of file [BookingClass.hpp](#).

References [\\_key](#), and [stdair::BookingClassKey::getClassCode\(\)](#).

#### 34.25.4.3 BomAbstract\* const stdair::BookingClass::getParent ( ) const [inline]

Get the parent object.

Definition at line 46 of file [BookingClass.hpp](#).

References [\\_parent](#).

#### 34.25.4.4 const HolderMap\_T& stdair::BookingClass::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 51 of file [BookingClass.hpp](#).



References [\\_holderMap](#).

**34.25.4.5** `const SubclassCode_T& stdair::BookingClass::getSubclassCode ( ) const`  
`[inline]`

Get teh sub-class code.

Definition at line 56 of file [BookingClass.hpp](#).

References [\\_subclassCode](#).

**34.25.4.6** `const AuthorizationLevel_T& stdair::BookingClass::getAuthorizationLevel ( )`  
`const [inline]`

Get the authorisation level (AU, i.e., cumulated protection).

Definition at line 61 of file [BookingClass.hpp](#).

References [\\_au](#).

**34.25.4.7** `const ProtectionLevel_T& stdair::BookingClass::getProtection ( ) const`  
`[inline]`

Get the protection.

Definition at line 66 of file [BookingClass.hpp](#).

References [\\_protection](#).

**34.25.4.8** `const ProtectionLevel_T& stdair::BookingClass::getCumulatedProtection ( )`  
`const [inline]`

Get the cumulated protection.

Definition at line 71 of file [BookingClass.hpp](#).

References [\\_cumulatedProtection](#).

**34.25.4.9** `const BookingLimit_T& stdair::BookingClass::getCumulatedBookingLimit ( )`  
`const [inline]`

Get the cumulated booking limit.

Definition at line 76 of file [BookingClass.hpp](#).

References [\\_cumulatedBookingLimit](#).

**34.25.4.10** `const NbOfSeats_T& stdair::BookingClass::getNegotiatedSpace ( ) const`  
`[inline]`

Get the negotiated space.

Definition at line 81 of file [BookingClass.hpp](#).

References [\\_nego](#).

34.25.4.11 **const OverbookingRate\_T**& stdair::BookingClass::getNoShowPercentage ( )  
**const** [inline]

Get the no-show rate.

Definition at line 86 of file [BookingClass.hpp](#).

References [\\_noShowPercentage](#).

34.25.4.12 **const OverbookingRate\_T**& stdair::BookingClass::getCancellationPercentage ( )  
**const** [inline]

Get the cancellation rate.

Definition at line 91 of file [BookingClass.hpp](#).

References [\\_cancellationPercentage](#).

34.25.4.13 **const NbOfBookings\_T**& stdair::BookingClass::getNbOfBookings ( ) **const**  
[inline]

Get the number of bookings.

Definition at line 96 of file [BookingClass.hpp](#).

References [\\_nbOfBookings](#).

34.25.4.14 **const NbOfBookings\_T**& stdair::BookingClass::getNbOfGroupBookings ( )  
**const** [inline]

Get the number of group bookings.

Definition at line 101 of file [BookingClass.hpp](#).

References [\\_groupNbOfBookings](#).

34.25.4.15 **const NbOfBookings\_T**& stdair::BookingClass::getNbOfPendingGroupBookings ( )  
**const** [inline]

Get the number of pending group bookings.

Definition at line 106 of file [BookingClass.hpp](#).

References [\\_groupPendingNbOfBookings](#).

34.25.4.16 **const NbOfBookings\_T**& stdair::BookingClass::getNbOfStaffBookings ( ) **const**  
[inline]

Get the number of staff bookings.

Definition at line 111 of file [BookingClass.hpp](#).

References [\\_staffNbOfBookings](#).

34.25.4.17 **const NbOfBookings\_T**& stdair::BookingClass::getNbOfWLBookings ( ) **const**  
[inline]

Get the number of wait-list bookings.

Definition at line 116 of file [BookingClass.hpp](#).

References [\\_wNbOfBookings](#).

**34.25.4.18** `const NbOfCancellations_T& stdair::BookingClass::getNbOfCancellations ( ) const [inline]`

Get the number of cancellations.

Definition at line 121 of file [BookingClass.hpp](#).

References [\\_nbOfCancellations](#).

**34.25.4.19** `const NbOfBookings_T& stdair::BookingClass::getETB ( ) const [inline]`

Get the expected number of passengers to board (ETB).

Definition at line 126 of file [BookingClass.hpp](#).

References [\\_etb](#).

**34.25.4.20** `const Availability_T& stdair::BookingClass::getNetClassAvailability ( ) const [inline]`

Get the net segment class availability.

Definition at line 131 of file [BookingClass.hpp](#).

References [\\_netClassAvailability](#).

**34.25.4.21** `const Availability_T& stdair::BookingClass::getSegmentAvailability ( ) const [inline]`

Get the segment class availability.

Definition at line 136 of file [BookingClass.hpp](#).

References [\\_segmentAvailability](#).

**34.25.4.22** `const Availability_T& stdair::BookingClass::getNetRevenueAvailability ( ) const [inline]`

Net revenue availability.

Definition at line 141 of file [BookingClass.hpp](#).

References [\\_netRevenueAvailability](#).

**34.25.4.23** `const Yield_T& stdair::BookingClass::getYield ( ) const [inline]`

Yield.

Definition at line 146 of file [BookingClass.hpp](#).

References [\\_yield](#).

34.25.4.24 `const MeanValue_T& stdair::BookingClass::getMean ( ) const` `[inline]`

Demand distribution.

Definition at line 149 of file [BookingClass.hpp](#).

References [\\_mean](#).

34.25.4.25 `const StdDevValue_T& stdair::BookingClass::getStdDev ( ) const`  
`[inline]`

Definition at line 150 of file [BookingClass.hpp](#).

References [\\_stdDev](#).

34.25.4.26 `const GeneratedDemandVector_T&`  
`stdair::BookingClass::getGeneratedDemandVector ( ) const`  
`[inline]`

Generated demand vector.

Definition at line 153 of file [BookingClass.hpp](#).

References [\\_generatedDemandVector](#).

Referenced by [stdair::VirtualClassStruct::getGeneratedDemandVector\(\)](#).

34.25.4.27 `void stdair::BookingClass::setCumulatedProtection ( const ProtectionLevel_T &`  
`iPL )` `[inline]`

Cumulated protection.

Definition at line 160 of file [BookingClass.hpp](#).

References [\\_cumulatedProtection](#).

34.25.4.28 `void stdair::BookingClass::setProtection ( const ProtectionLevel_T & iPL )`  
`[inline]`

Protection.

Definition at line 165 of file [BookingClass.hpp](#).

References [\\_protection](#).

34.25.4.29 `void stdair::BookingClass::setCumulatedBookingLimit ( const BookingLimit_T &`  
`iBL )` `[inline]`

Cumulated booking limit.

Definition at line 170 of file [BookingClass.hpp](#).

References [\\_cumulatedBookingLimit](#).

34.25.4.30 `void stdair::BookingClass::setAuthorizationLevel ( const AuthorizationLevel_T`  
`& iAU )` `[inline]`

Authorization level.

Definition at line 175 of file [BookingClass.hpp](#).

References [\\_au](#).

34.25.4.31 void stdair::BookingClass::setSegmentAvailability ( const Availability\_T & iAvl )  
[inline]

Set availability.

Definition at line 180 of file [BookingClass.hpp](#).

References [\\_segmentAvailability](#).

34.25.4.32 void stdair::BookingClass::setYield ( const Yield\_T & iYield ) [inline]

Yield.

Definition at line 185 of file [BookingClass.hpp](#).

References [\\_yield](#).

34.25.4.33 void stdair::BookingClass::setMean ( const MeanValue\_T & iMean )  
[inline]

Demand distribution.

Definition at line 188 of file [BookingClass.hpp](#).

References [\\_mean](#).

34.25.4.34 void stdair::BookingClass::setStdDev ( const StdDevValue\_T & iStdDev )  
[inline]

Definition at line 189 of file [BookingClass.hpp](#).

References [\\_stdDev](#).

34.25.4.35 void stdair::BookingClass::toStream ( std::ostream & ioOut ) const [inline,  
virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 195 of file [BookingClass.hpp](#).

References [toString\(\)](#).

34.25.4.36 void stdair::BookingClass::fromStream ( std::istream & iIn ) [inline,  
virtual]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 201 of file [BookingClass.hpp](#).

**34.25.4.37** `std::string stdair::BookingClass::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 43 of file [BookingClass.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

**34.25.4.38** `const std::string stdair::BookingClass::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 208 of file [BookingClass.hpp](#).

References [\\_key](#), and [stdair::BookingClassKey::toString\(\)](#).

Referenced by [toString\(\)](#).

**34.25.4.39** `void stdair::BookingClass::sell ( const NbOfBookings_T & iNbOfBookings )`

Register a sale.

Definition at line 50 of file [BookingClass.cpp](#).

References [\\_nbOfBookings](#).

**34.25.4.40** `void stdair::BookingClass::cancel ( const NbOfBookings_T & iNbOfCancellations )`

Register a cancellation.

Definition at line 55 of file [BookingClass.cpp](#).

References [\\_nbOfBookings](#), and [\\_nbOfCancellations](#).

**34.25.4.41** `void stdair::BookingClass::generateDemandSamples ( const int & K )`

Generate demand samples for Monte-Carlo method with the default random seed.

Definition at line 61 of file [BookingClass.cpp](#).

References [\\_generatedDemandVector](#), [\\_mean](#), [\\_stdDev](#), [stdair::DEFAULT\\_RANDOM\\_SEED](#), and [stdair::RandomGeneration::generateNormal\(\)](#).

34.25.4.42 void stdair::BookingClass::generateDemandSamples ( const int & *K*, const RandomSeed\_T & *iSeed* )

Generate demand samples for Monte-Carlo method with the given random seed.

Definition at line 73 of file [BookingClass.cpp](#).

References [\\_generatedDemandVector](#), [\\_mean](#), [\\_stdDev](#), and [stdair::RandomGeneration::generateNormal\(\)](#).

### 34.25.5 Friends And Related Function Documentation

34.25.5.1 friend class FacBom [friend]

Definition at line 25 of file [BookingClass.hpp](#).

34.25.5.2 friend class FacBomManager [friend]

Definition at line 26 of file [BookingClass.hpp](#).

### 34.25.6 Member Data Documentation

34.25.6.1 Key\_T stdair::BookingClass::\_key [protected]

Primary key (booking class code).

Definition at line 245 of file [BookingClass.hpp](#).

Referenced by [describeKey\(\)](#), [getClassCode\(\)](#), and [getKey\(\)](#).

34.25.6.2 BomAbstract\* stdair::BookingClass::\_parent [protected]

Pointer on the parent class ([SegmentCabin](#)).

Definition at line 248 of file [BookingClass.hpp](#).

Referenced by [getParent\(\)](#).

34.25.6.3 HolderMap\_T stdair::BookingClass::\_holderMap [protected]

Map holding the children ([SegmentDate](#) and [LegDate](#) objects).

Definition at line 251 of file [BookingClass.hpp](#).

Referenced by [getHolderMap\(\)](#).

34.25.6.4 SubclassCode\_T stdair::BookingClass::\_subclassCode  
[protected]

Sub-class code.

Definition at line 254 of file [BookingClass.hpp](#).

Referenced by [getSubclassCode\(\)](#).

**34.25.6.5 `ProtectionLevel_T stdair::BookingClass::_cumulatedProtection`**  
[protected]

Cumulated protection.

Definition at line 257 of file [BookingClass.hpp](#).

Referenced by [getCumulatedProtection\(\)](#), and [setCumulatedProtection\(\)](#).

**34.25.6.6 `ProtectionLevel_T stdair::BookingClass::_protection`** [protected]

Protection.

Definition at line 260 of file [BookingClass.hpp](#).

Referenced by [getProtection\(\)](#), and [setProtection\(\)](#).

**34.25.6.7 `BookingLimit_T stdair::BookingClass::_cumulatedBookingLimit`**  
[protected]

Cumulated booking limit.

Definition at line 263 of file [BookingClass.hpp](#).

Referenced by [getCumulatedBookingLimit\(\)](#), and [setCumulatedBookingLimit\(\)](#).

**34.25.6.8 `AuthorizationLevel_T stdair::BookingClass::_au`** [protected]

Authorization level.

Definition at line 266 of file [BookingClass.hpp](#).

Referenced by [getAuthorizationLevel\(\)](#), and [setAuthorizationLevel\(\)](#).

**34.25.6.9 `NbOfSeats_T stdair::BookingClass::_nego`** [protected]

Negotiated space.

Definition at line 269 of file [BookingClass.hpp](#).

Referenced by [getNegotiatedSpace\(\)](#).

**34.25.6.10 `OverbookingRate_T stdair::BookingClass::_noShowPercentage`**  
[protected]

Overbooking rate.

Definition at line 272 of file [BookingClass.hpp](#).

Referenced by [getNoShowPercentage\(\)](#).

**34.25.6.11 `OverbookingRate_T stdair::BookingClass::_cancellationPercentage`**  
[protected]

Cancellation rate.

Definition at line 275 of file [BookingClass.hpp](#).

Referenced by [getCancellationPercentage\(\)](#).



**34.25.6.12 NbOfBookings\_T stdair::BookingClass::\_nbOfBookings**  
[protected]

Number of bookings.

Definition at line 278 of file [BookingClass.hpp](#).

Referenced by [cancel\(\)](#), [getNbOfBookings\(\)](#), and [sell\(\)](#).

**34.25.6.13 NbOfBookings\_T stdair::BookingClass::\_groupNbOfBookings**  
[protected]

Number of group bookings.

Definition at line 281 of file [BookingClass.hpp](#).

Referenced by [getNbOfGroupBookings\(\)](#).

**34.25.6.14 NbOfBookings\_T stdair::BookingClass::\_groupPendingNbOfBookings**  
[protected]

Number of pending group bookings.

Definition at line 284 of file [BookingClass.hpp](#).

Referenced by [getNbOfPendingGroupBookings\(\)](#).

**34.25.6.15 NbOfBookings\_T stdair::BookingClass::\_staffNbOfBookings**  
[protected]

Number of staff bookings.

Definition at line 287 of file [BookingClass.hpp](#).

Referenced by [getNbOfStaffBookings\(\)](#).

**34.25.6.16 NbOfBookings\_T stdair::BookingClass::\_wlNbOfBookings**  
[protected]

Number of wait-list bookings.

Definition at line 290 of file [BookingClass.hpp](#).

Referenced by [getNbOfWLBookings\(\)](#).

**34.25.6.17 NbOfCancellations\_T stdair::BookingClass::\_nbOfCancellations**  
[protected]

Number of cancellations.

Definition at line 293 of file [BookingClass.hpp](#).

Referenced by [cancel\(\)](#), and [getNbOfCancellations\(\)](#).

**34.25.6.18 NbOfBookings\_T stdair::BookingClass::\_etb** [protected]

Expected to board (ETB).

Definition at line 296 of file [BookingClass.hpp](#).

Referenced by [getETB\(\)](#).

#### 34.25.6.19 Availability\_T stdair::BookingClass::\_netClassAvailability [protected]

Net segment class availability.

Definition at line 299 of file [BookingClass.hpp](#).

Referenced by [getNetClassAvailability\(\)](#).

#### 34.25.6.20 Availability\_T stdair::BookingClass::\_segmentAvailability [protected]

Segment class availability.

Definition at line 302 of file [BookingClass.hpp](#).

Referenced by [getSegmentAvailability\(\)](#), and [setSegmentAvailability\(\)](#).

#### 34.25.6.21 Availability\_T stdair::BookingClass::\_netRevenueAvailability [protected]

Net revenue availability.

Definition at line 305 of file [BookingClass.hpp](#).

Referenced by [getNetRevenueAvailability\(\)](#).

#### 34.25.6.22 Yield\_T stdair::BookingClass::\_yield [protected]

Yield.

Definition at line 308 of file [BookingClass.hpp](#).

Referenced by [getYield\(\)](#), and [setYield\(\)](#).

#### 34.25.6.23 MeanValue\_T stdair::BookingClass::\_mean [protected]

Remaining demand distribution forecast.

Definition at line 311 of file [BookingClass.hpp](#).

Referenced by [generateDemandSamples\(\)](#), [getMean\(\)](#), and [setMean\(\)](#).

#### 34.25.6.24 StdDevValue\_T stdair::BookingClass::\_stdDev [protected]

Definition at line 312 of file [BookingClass.hpp](#).

Referenced by [generateDemandSamples\(\)](#), [getStdDev\(\)](#), and [setStdDev\(\)](#).

#### 34.25.6.25 GeneratedDemandVector\_T stdair::BookingClass::\_generatedDemandVector [protected]

Vector of number of demand samples drawn from the demand distribution.

Definition at line 315 of file [BookingClass.hpp](#).

Referenced by [generateDemandSamples\(\)](#), and [getGeneratedDemandVector\(\)](#).

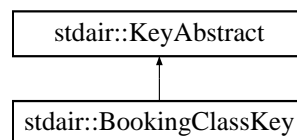
The documentation for this class was generated from the following files:

- [stdair/bom/BookingClass.hpp](#)
- [stdair/bom/BookingClass.cpp](#)

## 34.26 stdair::BookingClassKey Struct Reference

```
#include <stdair/bom/BookingClassKey.hpp>
```

Inheritance diagram for stdair::BookingClassKey:



### Public Member Functions

- [BookingClassKey](#) (const [ClassCode\\_T](#) &iClassCode)
- [BookingClassKey](#) (const [BookingClassKey](#) &)
- [~BookingClassKey](#) ()
- const [ClassCode\\_T](#) & [getClassCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

### 34.26.1 Detailed Description

Key of a given leg-cabin, made of a cabin code.

Definition at line 16 of file [BookingClassKey.hpp](#).

### 34.26.2 Constructor & Destructor Documentation

#### 34.26.2.1 stdair::BookingClassKey::BookingClassKey ( const [ClassCode\\_T](#) & iClassCode )

Constructor.

Definition at line 24 of file [BookingClassKey.cpp](#).

#### 34.26.2.2 stdair::BookingClassKey::BookingClassKey ( const [BookingClassKey](#) & iKey )

Default copy constructor.

Definition at line 19 of file [BookingClassKey.cpp](#).

### 34.26.2.3 stdair::BookingClassKey::~~BookingClassKey ( )

Destructor.

Definition at line 29 of file [BookingClassKey.cpp](#).

## 34.26.3 Member Function Documentation

### 34.26.3.1 const ClassCode\_T& stdair::BookingClassKey::getClassCode ( ) const [inline]

Get the class code.

Definition at line 34 of file [BookingClassKey.hpp](#).

Referenced by [stdair::BookingClass::getClassCode\(\)](#).

### 34.26.3.2 void stdair::BookingClassKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 33 of file [BookingClassKey.cpp](#).

References [toString\(\)](#).

### 34.26.3.3 void stdair::BookingClassKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 38 of file [BookingClassKey.cpp](#).

### 34.26.3.4 const std::string stdair::BookingClassKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-cabin.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [BookingClassKey.cpp](#).

Referenced by [stdair::BookingClass::describeKey\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

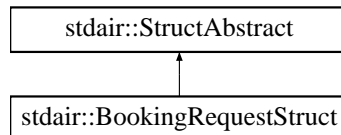
- [stdair/bom/BookingClassKey.hpp](#)
- [stdair/bom/BookingClassKey.cpp](#)

## 34.27 stdair::BookingRequestStruct Struct Reference

Structure holding the elements of a booking request.

```
#include <stdair/bom/BookingRequestStruct.hpp>
```

Inheritance diagram for stdair::BookingRequestStruct:



### Public Member Functions

- const [DemandGeneratorKey\\_T](#) & [getDemandGeneratorKey](#) () const
- const [AirportCode\\_T](#) & [getOrigin](#) () const
- const [AirportCode\\_T](#) & [getDestination](#) () const
- const [CityCode\\_T](#) & [getPOS](#) () const
- const [Date\\_T](#) & [getPreferredDepartureDate](#) () const
- const [Duration\\_T](#) & [getPreferredDepartureTime](#) () const
- const [DateTime\\_T](#) & [getRequestDateTime](#) () const
- const [CabinCode\\_T](#) & [getPreferredCabin](#) () const
- const [NbOfSeats\\_T](#) & [getPartySize](#) () const
- const [Channellabel\\_T](#) & [getBookingChannel](#) () const
- const [TripType\\_T](#) & [getTripType](#) () const
- const [DayDuration\\_T](#) & [getStayDuration](#) () const
- const [FrequentFlyer\\_T](#) & [getFrequentFlyerType](#) () const
- const [WTP\\_T](#) & [getWTP](#) () const
- const [PriceValue\\_T](#) & [getValueOfTime](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [describe](#) () const
- const std::string [display](#) () const
- [BookingRequestStruct](#) (const [DemandGeneratorKey\\_T](#) &iGeneratorKey, const [AirportCode\\_T](#) &iOrigin, const [AirportCode\\_T](#) &iDestination, const [CityCode\\_T](#) &iPOS, const

- [Date\\_T](#) &iDepartureDate, const [DateTime\\_T](#) &iRequestDateTime, const [CabinCode\\_T](#) &iPreferredCabin, const [NbOfSeats\\_T](#) &iPartySize, const [ChannelLabel\\_T](#) &iChannel, const [TripType\\_T](#) &iTripType, const [DayDuration\\_T](#) &iStayDuration, const [FrequentFlyer\\_T](#) &iFrequentFlyerType, const [Duration\\_T](#) &iPreferredDepartureTime, const [WTP\\_T](#) &iWTP, const [PriceValue\\_T](#) &iValueOfTime)
- [BookingRequestStruct](#) (const [AirportCode\\_T](#) &iOrigin, const [AirportCode\\_T](#) &iDestination, const [CityCode\\_T](#) &iPOS, const [Date\\_T](#) &iDepartureDate, const [DateTime\\_T](#) &iRequestDateTime, const [CabinCode\\_T](#) &iPreferredCabin, const [NbOfSeats\\_T](#) &iPartySize, const [ChannelLabel\\_T](#) &iChannel, const [TripType\\_T](#) &iTripType, const [DayDuration\\_T](#) &iStayDuration, const [FrequentFlyer\\_T](#) &iFrequentFlyerType, const [Duration\\_T](#) &iPreferredDepartureTime, const [WTP\\_T](#) &iWTP, const [PriceValue\\_T](#) &iValueOfTime)
- [BookingRequestStruct](#) (const [BookingRequestStruct](#) &)
- [~BookingRequestStruct](#) ()

#### 34.27.1 Detailed Description

Structure holding the elements of a booking request.

Definition at line 21 of file [BookingRequestStruct.hpp](#).

#### 34.27.2 Constructor & Destructor Documentation

34.27.2.1 `stdair::BookingRequestStruct::BookingRequestStruct ( const DemandGeneratorKey_T &iGeneratorKey, const AirportCode_T &iOrigin, const AirportCode_T &iDestination, const CityCode_T &iPOS, const Date_T &iDepartureDate, const DateTime_T &iRequestDateTime, const CabinCode_T &iPreferredCabin, const NbOfSeats_T &iPartySize, const ChannelLabel_T &iChannel, const TripType_T &iTripType, const DayDuration_T &iStayDuration, const FrequentFlyer_T &iFrequentFlyerType, const Duration_T &iPreferredDepartureTime, const WTP_T &iWTP, const PriceValue_T &iValueOfTime )`

Default constructor.

Definition at line 57 of file [BookingRequestStruct.cpp](#).

34.27.2.2 `stdair::BookingRequestStruct::BookingRequestStruct ( const AirportCode_T &iOrigin, const AirportCode_T &iDestination, const CityCode_T &iPOS, const Date_T &iDepartureDate, const DateTime_T &iRequestDateTime, const CabinCode_T &iPreferredCabin, const NbOfSeats_T &iPartySize, const ChannelLabel_T &iChannel, const TripType_T &iTripType, const DayDuration_T &iStayDuration, const FrequentFlyer_T &iFrequentFlyerType, const Duration_T &iPreferredDepartureTime, const WTP_T &iWTP, const PriceValue_T &iValueOfTime )`

Constructor without the demand generator key, used for batches.

Definition at line 85 of file [BookingRequestStruct.cpp](#).

**34.27.2.3** stdair::BookingRequestStruct::BookingRequestStruct ( const  
BookingRequestStruct & *iBookingRequest* )

Copy constructor.

Definition at line 37 of file [BookingRequestStruct.cpp](#).

**34.27.2.4** stdair::BookingRequestStruct::~~BookingRequestStruct ( )

Destructor.

Definition at line 111 of file [BookingRequestStruct.cpp](#).

### 34.27.3 Member Function Documentation

**34.27.3.1** const DemandGeneratorKey\_T&  
stdair::BookingRequestStruct::getDemandGeneratorKey ( )  
const [inline]

Get the demand generator key.

Definition at line 25 of file [BookingRequestStruct.hpp](#).

**34.27.3.2** const AirportCode\_T& stdair::BookingRequestStruct::getOrigin ( ) const  
[inline]

Get the requested origin.

Definition at line 30 of file [BookingRequestStruct.hpp](#).

**34.27.3.3** const AirportCode\_T& stdair::BookingRequestStruct::getDestination ( ) const  
[inline]

Get the requested destination.

Definition at line 35 of file [BookingRequestStruct.hpp](#).

**34.27.3.4** const CityCode\_T& stdair::BookingRequestStruct::getPOS ( ) const  
[inline]

Get the point-of-sale.

Definition at line 40 of file [BookingRequestStruct.hpp](#).

**34.27.3.5** const Date\_T& stdair::BookingRequestStruct::getPreferredDepartureDate ( ) const  
[inline]

Get the requested departure date.

Definition at line 45 of file [BookingRequestStruct.hpp](#).

34.27.3.6 **const Duration\_T& stdair::BookingRequestStruct::getPreferredDepartureTime ( )**  
**const** [inline]

Get the preferred departure time.

Definition at line 50 of file [BookingRequestStruct.hpp](#).

34.27.3.7 **const DateTime\_T& stdair::BookingRequestStruct::getRequestDateTime ( ) const**  
[inline]

Get the request datetime.

Definition at line 55 of file [BookingRequestStruct.hpp](#).

34.27.3.8 **const CabinCode\_T& stdair::BookingRequestStruct::getPreferredCabin ( ) const**  
[inline]

Get the preferred cabin.

Definition at line 60 of file [BookingRequestStruct.hpp](#).

34.27.3.9 **const NbOfSeats\_T& stdair::BookingRequestStruct::getPartySize ( ) const**  
[inline]

Get the party size.

Definition at line 65 of file [BookingRequestStruct.hpp](#).

34.27.3.10 **const ChannelLabel\_T& stdair::BookingRequestStruct::getBookingChannel ( )**  
**const** [inline]

Get the reservation channel.

Definition at line 70 of file [BookingRequestStruct.hpp](#).

34.27.3.11 **const TripType\_T& stdair::BookingRequestStruct::getTripType ( ) const**  
[inline]

Get the trip type.

Definition at line 75 of file [BookingRequestStruct.hpp](#).

34.27.3.12 **const DayDuration\_T& stdair::BookingRequestStruct::getStayDuration ( ) const**  
[inline]

Get the duration of stay.

Definition at line 80 of file [BookingRequestStruct.hpp](#).

34.27.3.13 **const FrequentFlyer\_T& stdair::BookingRequestStruct::getFrequentFlyerType ( )**  
**const** [inline]

Get the frequent flyer type.

Definition at line 85 of file [BookingRequestStruct.hpp](#).



34.27.3.14 `const WTP_T& stdair::BookingRequestStruct::getWTP ( ) const [inline]`

Get the willingness-to-pay.

Definition at line 90 of file [BookingRequestStruct.hpp](#).

34.27.3.15 `const PriceValue_T& stdair::BookingRequestStruct::getValueOfTime ( ) const [inline]`

Get the value of time.

Definition at line 95 of file [BookingRequestStruct.hpp](#).

34.27.3.16 `void stdair::BookingRequestStruct::toStream ( std::ostream & ioOut ) const`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 115 of file [BookingRequestStruct.cpp](#).

References [describe\(\)](#).

34.27.3.17 `void stdair::BookingRequestStruct::fromStream ( std::istream & ioIn ) [virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 120 of file [BookingRequestStruct.cpp](#).

34.27.3.18 `const std::string stdair::BookingRequestStruct::describe ( ) const [virtual]`

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 124 of file [BookingRequestStruct.cpp](#).

Referenced by [toStream\(\)](#).

34.27.3.19 `const std::string stdair::BookingRequestStruct::display ( ) const`

Display of the structure.

- #id,
- request\_date (YYMMDD),

- request\_time (HHMMSS),
- POS (three-letter code),
- Channel (two-letter code):
  - 'D' for direct or 'I' for indirect,
  - 'N' for oNline or 'F' for oFfline,
- Origin (three-letter code),
- Destination (three-letter code),
- Preferred departure date (YYMMDD),
- Preferred departure time (HHMM),
- Min departure time (HHMM),
- Max departure time (HHMM),
- Preferred arrival date (YYMMDD),
- Preferred arrival time (HHMM),
- Preferred cabin:
  - 'F' for first,
  - 'C' for club/business,
  - 'W' for economy plus,
  - 'M' for economy,
- Trip type:
  - 'OW' for a one-way trip,
  - 'RO' for the outbound part of a rount-trip,
  - 'RI' for the inbound part of a rount-trip,
- Duration of stay (expressed as a number of days),
- Frequent flyer tier:
  - 'G' for gold,
  - 'S' for silver,
  - 'K' for basic,
  - 'N' for none,
- Willingness-to-pay (WTP, expressed as a monetary unit, e.g., EUR),
- Disutility per stop (expressed as a monetary unit, e.g., EUR),
- Value of time (EUR per hour),

**Returns**

const std::string The output of the booking request structure.

Definition at line 147 of file [BookingRequestStruct.cpp](#).

References [stdair::TRIP\\_TYPE\\_ONE\\_WAY](#).

The documentation for this struct was generated from the following files:

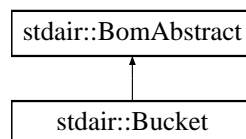
- [stdair/bom/BookingRequestStruct.hpp](#)
- [stdair/bom/BookingRequestStruct.cpp](#)

**34.28 stdair::Bucket Class Reference**

Class representing the actual attributes for an airline booking class.

```
#include <stdair/bom/Bucket.hpp>
```

Inheritance diagram for stdair::Bucket:

**Public Types**

- typedef [BucketKey](#) Key\_T

**Public Member Functions**

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [SeatIndex\\_T](#) & [getSeatIndex](#) () const
- const [Yield\\_T](#) & [getYieldRangeUpperValue](#) () const
- const [CabinCapacity\\_T](#) & [getAvailability](#) () const
- const [NbOfSeats\\_T](#) & [getSoldSeats](#) () const
- void [setYieldRangeUpperValue](#) (const [Yield\\_T](#) &iYield)
- void [setAvailability](#) (const [CabinCapacity\\_T](#) &iAvl)
- void [setSoldSeats](#) (const [NbOfSeats\\_T](#) &iSoldSeats)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Protected Member Functions

- [Bucket](#) (const [Key\\_T](#) &)
- virtual [~Bucket](#) ()

### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)
- [Yield\\_T\\_yieldRangeUpperValue](#)
- [CabinCapacity\\_T\\_availability](#)
- [NbOfSeats\\_T\\_soldSeats](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

#### 34.28.1 Detailed Description

Class representing the actual attributes for an airline booking class.

Definition at line 29 of file [Bucket.hpp](#).

#### 34.28.2 Member Typedef Documentation

##### 34.28.2.1 typedef [BucketKey](#) [stdair::Bucket::Key\\_T](#)

Definition allowing to retrieve the associated BOM key type.

Definition at line 39 of file [Bucket.hpp](#).

#### 34.28.3 Constructor & Destructor Documentation

##### 34.28.3.1 [stdair::Bucket::Bucket](#) ( const [Key\\_T](#) & *iKey* ) [protected]

Default constructor.

Definition at line 24 of file [Bucket.cpp](#).

##### 34.28.3.2 [stdair::Bucket::~Bucket](#) ( ) [protected, virtual]

Destructor.

Definition at line 28 of file [Bucket.cpp](#).

#### 34.28.4 Member Function Documentation

**34.28.4.1** `const Key_T& stdair::Bucket::getKey ( ) const` `[inline]`

Get the primary key of the bucket.

Definition at line 46 of file [Bucket.hpp](#).

References [\\_key](#).

**34.28.4.2** `BomAbstract* const stdair::Bucket::getParent ( ) const` `[inline]`

Get the parent object.

Definition at line 53 of file [Bucket.hpp](#).

References [\\_parent](#).

**34.28.4.3** `const HolderMap_T& stdair::Bucket::getHolderMap ( ) const` `[inline]`

Get the map of children holders.

Definition at line 58 of file [Bucket.hpp](#).

References [\\_holderMap](#).

**34.28.4.4** `const SeatIndex_T& stdair::Bucket::getSeatIndex ( ) const` `[inline]`

Get the seat index (part of the primary key).

Definition at line 63 of file [Bucket.hpp](#).

References [\\_key](#), and [stdair::BucketKey::getSeatIndex\(\)](#).

**34.28.4.5** `const Yield_T& stdair::Bucket::getYieldRangeUpperValue ( ) const` `[inline]`

Get the upper yield range.

Definition at line 68 of file [Bucket.hpp](#).

References [\\_yieldRangeUpperValue](#).

**34.28.4.6** `const CabinCapacity_T& stdair::Bucket::getAvailability ( ) const` `[inline]`

Get the availability.

Definition at line 73 of file [Bucket.hpp](#).

References [\\_availability](#).

**34.28.4.7** `const NbOfSeats_T& stdair::Bucket::getSoldSeats ( ) const` `[inline]`

Get the number of seats already sold.

Definition at line 78 of file [Bucket.hpp](#).

References [\\_soldSeats](#).

34.28.4.8 void stdair::Bucket::setYieldRangeUpperValue ( const Yield\_T & iYield )  
[inline]

Set the upper yield range.

Definition at line 85 of file [Bucket.hpp](#).

References [\\_yieldRangeUpperValue](#).

34.28.4.9 void stdair::Bucket::setAvailability ( const CabinCapacity\_T & iAvl )  
[inline]

Set the availability.

Definition at line 90 of file [Bucket.hpp](#).

References [\\_availability](#).

34.28.4.10 void stdair::Bucket::setSoldSeats ( const NbOfSeats\_T & iSoldSeats )  
[inline]

Set the number of seats already sold.

Definition at line 95 of file [Bucket.hpp](#).

References [\\_soldSeats](#).

34.28.4.11 void stdair::Bucket::toStream ( std::ostream & ioOut ) const [inline,  
virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 107 of file [Bucket.hpp](#).

References [toString\(\)](#).

34.28.4.12 void stdair::Bucket::fromStream ( std::istream & iIn ) [inline,  
virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 116 of file [Bucket.hpp](#).

34.28.4.13 `std::string stdair::Bucket::toString ( ) const` [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 32 of file [Bucket.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.28.4.14 `const std::string stdair::Bucket::describeKey ( ) const` [inline]

Get a string describing the key.

Definition at line 127 of file [Bucket.hpp](#).

References [\\_key](#), and [stdair::BucketKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.28.4.15 `template<class Archive > void stdair::Bucket::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 54 of file [Bucket.cpp](#).

References [\\_key](#).

#### 34.28.5 Friends And Related Function Documentation

34.28.5.1 `friend class FacBom` [friend]

Definition at line 30 of file [Bucket.hpp](#).

34.28.5.2 `friend class FacBomManager` [friend]

Definition at line 31 of file [Bucket.hpp](#).

34.28.5.3 `friend class boost::serialization::access` [friend]

Definition at line 32 of file [Bucket.hpp](#).

#### 34.28.6 Member Data Documentation

34.28.6.1 `Key_T stdair::Bucket::_key` [protected]

Primary key (upper yield range).

Definition at line 178 of file [Bucket.hpp](#).

Referenced by [describeKey\(\)](#), [getKey\(\)](#), [getSeatIndex\(\)](#), and [serialize\(\)](#).

**34.28.6.2 BomAbstract\* stdair::Bucket::\_parent** [protected]

Pointer on the parent class ([LegCabin](#)).

Definition at line 183 of file [Bucket.hpp](#).

Referenced by [getParent\(\)](#).

**34.28.6.3 HolderMap\_T stdair::Bucket::\_holderMap** [protected]

Map holding the children (empty for now).

Definition at line 188 of file [Bucket.hpp](#).

Referenced by [getHolderMap\(\)](#).

**34.28.6.4 Yield\_T stdair::Bucket::\_yieldRangeUpperValue** [protected]

Upper yield range.

Definition at line 196 of file [Bucket.hpp](#).

Referenced by [getYieldRangeUpperValue\(\)](#), and [setYieldRangeUpperValue\(\)](#).

**34.28.6.5 CabinCapacity\_T stdair::Bucket::\_availability** [protected]

Availability.

Definition at line 201 of file [Bucket.hpp](#).

Referenced by [getAvailability\(\)](#), and [setAvailability\(\)](#).

**34.28.6.6 NbOfSeats\_T stdair::Bucket::\_soldSeats** [protected]

Number of seats already sold.

Definition at line 206 of file [Bucket.hpp](#).

Referenced by [getSoldSeats\(\)](#), and [setSoldSeats\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/bom/Bucket.hpp](#)
- [stdair/bom/Bucket.cpp](#)

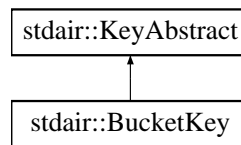
**34.29 stdair::BucketKey Struct Reference**

Key of booking-class.

```
#include <stdair/bom/BucketKey.hpp>
```

Inheritance diagram for stdair::BucketKey:





#### Public Member Functions

- [BucketKey](#) (const [SeatIndex\\_T](#) &)
- [BucketKey](#) (const [BucketKey](#) &)
- [~BucketKey](#) ()
- const [SeatIndex\\_T](#) & [getSeatIndex](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Friends

- class [boost::serialization::access](#)

#### 34.29.1 Detailed Description

Key of booking-class.

Definition at line 26 of file [BucketKey.hpp](#).

#### 34.29.2 Constructor & Destructor Documentation

##### 34.29.2.1 stdair::BucketKey::BucketKey ( const [SeatIndex\\_T](#) & *iSeatIndex* )

Main constructor.

Definition at line 22 of file [BucketKey.cpp](#).

##### 34.29.2.2 stdair::BucketKey::BucketKey ( const [BucketKey](#) & *iBucketKey* )

Copy constructor.

Definition at line 27 of file [BucketKey.cpp](#).

##### 34.29.2.3 stdair::BucketKey::~~BucketKey ( )

Destructor.

Definition at line 32 of file [BucketKey.cpp](#).

## 34.29.3 Member Function Documentation

34.29.3.1 `const SeatIndex_T& stdair::BucketKey::getSeatIndex ( ) const` `[inline]`

Get the seat index.

Definition at line 54 of file [BucketKey.hpp](#).

Referenced by [stdair::Bucket::getSeatIndex\(\)](#).

34.29.3.2 `void stdair::BucketKey::toStream ( std::ostream & ioOut ) const` `[virtual]`

Dump a Business Object Key into an output stream.

**Parameters**

<code>ostream&amp;</code> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 36 of file [BucketKey.cpp](#).

References [toString\(\)](#).

34.29.3.3 `void stdair::BucketKey::fromStream ( std::istream & iIn )` `[virtual]`

Read a Business Object Key from an input stream.

**Parameters**

<code>istream&amp;</code> the input stream.
---

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 41 of file [BucketKey.cpp](#).

34.29.3.4 `const std::string stdair::BucketKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-cabin.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 45 of file [BucketKey.cpp](#).

Referenced by [stdair::Bucket::describeKey\(\)](#), and [toStream\(\)](#).

34.29.3.5 `template<class Archive > void stdair::BucketKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 67 of file [BucketKey.cpp](#).

#### 34.29.4 Friends And Related Function Documentation

##### 34.29.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file [BucketKey.hpp](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/BucketKey.hpp](#)
- [stdair/bom/BucketKey.cpp](#)

#### 34.30 stdair\_test::Cabin Struct Reference

```
#include <test/stdair/StdairTestLib.hpp>
```

##### Public Types

- typedef [BookingClass](#) child

##### Public Member Functions

- [Cabin](#) (const [BookingClass](#) &iBkgClass)
- std::string [toString](#) () const

##### Public Attributes

- [BookingClass \\_bookingClass](#)

#### 34.30.1 Detailed Description

##### [Cabin](#)

Definition at line 32 of file [StdairTestLib.hpp](#).

#### 34.30.2 Member Typedef Documentation

##### 34.30.2.1 typedef [BookingClass](#) stdair\_test::Cabin::child

Child type.

Definition at line 46 of file [StdairTestLib.hpp](#).

## 34.30.3 Constructor &amp; Destructor Documentation

34.30.3.1 stdair\_test::Cabin::Cabin ( const BookingClass &amp; iBkgClass ) [inline]

Definition at line 34 of file [StdairTestLib.hpp](#).

## 34.30.4 Member Function Documentation

34.30.4.1 std::string stdair\_test::Cabin::toString ( ) const [inline]

Display .

Definition at line 39 of file [StdairTestLib.hpp](#).References [\\_bookingClass](#), and [stdair\\_test::BookingClass::\\_classCode](#).

## 34.30.5 Member Data Documentation

34.30.5.1 BookingClass stdair\_test::Cabin::\_bookingClass

Definition at line 33 of file [StdairTestLib.hpp](#).Referenced by [toString\(\)](#).

The documentation for this struct was generated from the following file:

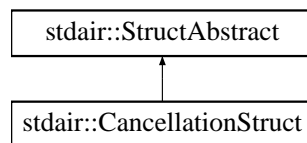
- test/stdair/[StdairTestLib.hpp](#)

## 34.31 stdair::CancellationStruct Struct Reference

Structure holding the elements of a travel solution.

#include &lt;stdair/bom/CancellationStruct.hpp&gt;

Inheritance diagram for stdair::CancellationStruct:



## Public Member Functions

- const [SegmentPath\\_T](#) & [getSegmentPath](#) () const
- const [ClassList\\_String\\_T](#) & [getClassList](#) () const
- const [PartySize\\_T](#) & [getPartySize](#) () const
- const [DateTime\\_T](#) & [getCancellationDateTime](#) () const
- void [toStream](#) (std::ostream &ioOut) const

- void [fromStream](#) (std::istream &ioln)
- const std::string [describe](#) () const
- const std::string [display](#) () const
- [CancellationStruct](#) (const [SegmentPath\\_T](#) &, const [ClassList\\_String\\_T](#) &, const [PartySize\\_T](#) &, const [DateTime\\_T](#) &)
- [~CancellationStruct](#) ()

#### 34.31.1 Detailed Description

Structure holding the elements of a travel solution.

Definition at line 22 of file [CancellationStruct.hpp](#).

#### 34.31.2 Constructor & Destructor Documentation

**34.31.2.1** `stdair::CancellationStruct::CancellationStruct ( const SegmentPath\_T &  
iSegPath, const ClassList\_String\_T & iList, const PartySize\_T & iSize, const  
DateTime\_T & iDateTime )`

Default constructor.

Definition at line 13 of file [CancellationStruct.cpp](#).

**34.31.2.2** `stdair::CancellationStruct::~~CancellationStruct ( )`

Destructor.

Definition at line 22 of file [CancellationStruct.cpp](#).

#### 34.31.3 Member Function Documentation

**34.31.3.1** `const SegmentPath\_T& stdair::CancellationStruct::getSegmentPath ( ) const  
[inline]`

Get the segment path.

Definition at line 26 of file [CancellationStruct.hpp](#).

**34.31.3.2** `const ClassList\_String\_T& stdair::CancellationStruct::getClassList ( ) const  
[inline]`

Get the class list.

Definition at line 31 of file [CancellationStruct.hpp](#).

**34.31.3.3** `const PartySize\_T& stdair::CancellationStruct::getPartySize ( ) const  
[inline]`

Get the party size.

Definition at line 36 of file [CancellationStruct.hpp](#).

34.31.3.4 `const DateTime_T& stdair::CancellationStruct::getCancellationDateTime ( ) const`  
[inline]

Get the datetime.

Definition at line 41 of file [CancellationStruct.hpp](#).

34.31.3.5 `void stdair::CancellationStruct::toStream ( std::ostream & ioOut ) const`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 26 of file [CancellationStruct.cpp](#).

References [describe\(\)](#).

34.31.3.6 `void stdair::CancellationStruct::fromStream ( std::istream & ioin )` [virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 31 of file [CancellationStruct.cpp](#).

34.31.3.7 `const std::string stdair::CancellationStruct::describe ( ) const` [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 35 of file [CancellationStruct.cpp](#).

Referenced by [toStream\(\)](#).

34.31.3.8 `const std::string stdair::CancellationStruct::display ( ) const`

Display of the structure.

Definition at line 54 of file [CancellationStruct.cpp](#).

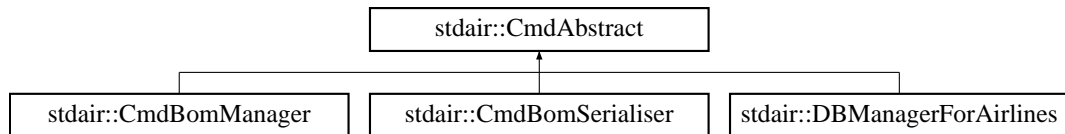
The documentation for this struct was generated from the following files:

- [stdair/bom/CancellationStruct.hpp](#)
- [stdair/bom/CancellationStruct.cpp](#)

### 34.32 stdair::CmdAbstract Class Reference

```
#include <stdair/command/CmdAbstract.hpp>
```

Inheritance diagram for stdair::CmdAbstract:



#### 34.32.1 Detailed Description

Base class for the Command layer.

Definition at line 11 of file [CmdAbstract.hpp](#).

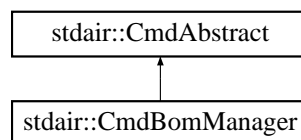
The documentation for this class was generated from the following file:

- [stdair/command/CmdAbstract.hpp](#)

### 34.33 stdair::CmdBomManager Class Reference

```
#include <stdair/command/CmdBomManager.hpp>
```

Inheritance diagram for stdair::CmdBomManager:



#### Friends

- class [STDAIR\\_Service](#)

#### 34.33.1 Detailed Description

Class wrapping utility functions for handling the BOM tree objects.

Definition at line 25 of file [CmdBomManager.hpp](#).

#### 34.33.2 Friends And Related Function Documentation

## 34.33.2.1 friend class STDAIR\_Service [friend]

Definition at line 27 of file [CmdBomManager.hpp](#).

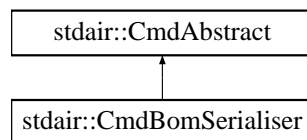
The documentation for this class was generated from the following file:

- [stdair/command/CmdBomManager.hpp](#)

## 34.34 stdair::CmdBomSerialiser Class Reference

```
#include <stdair/command/CmdBomSerialiser.hpp>
```

Inheritance diagram for stdair::CmdBomSerialiser:



## 34.34.1 Detailed Description

Class wrapping utility functions for handling the BOM tree objects.

Definition at line 25 of file [CmdBomSerialiser.hpp](#).

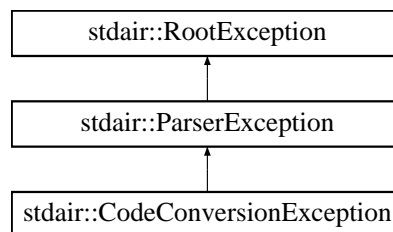
The documentation for this class was generated from the following file:

- [stdair/command/CmdBomSerialiser.hpp](#)

## 34.35 stdair::CodeConversionException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::CodeConversionException:



## Public Member Functions

- [CodeConversionException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()



#### Protected Attributes

- `std::string _what`

#### 34.35.1 Detailed Description

Code conversion.

Definition at line 133 of file [stdair\\_exceptions.hpp](#).

#### 34.35.2 Constructor & Destructor Documentation

34.35.2.1 `stdair::CodeConversionException::CodeConversionException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 136 of file [stdair\\_exceptions.hpp](#).

#### 34.35.3 Member Function Documentation

34.35.3.1 `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.35.4 Member Data Documentation

34.35.4.1 `std::string stdair::RootException::_what [protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

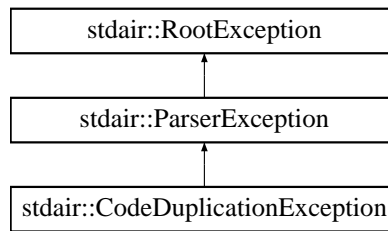
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.36 stdair::CodeDuplicationException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::CodeDuplicationException`:



#### Public Member Functions

- [CodeDuplicationException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

##### 34.36.1 Detailed Description

Code duplication.

Definition at line 141 of file [stdair\\_exceptions.hpp](#).

##### 34.36.2 Constructor & Destructor Documentation

**34.36.2.1** `stdair::CodeDuplicationException::CodeDuplicationException ( const std::string &iWhat ) [inline]`

Constructor.

Definition at line 144 of file [stdair\\_exceptions.hpp](#).

##### 34.36.3 Member Function Documentation

**34.36.3.1** `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

##### 34.36.4 Member Data Documentation

#### 34.36.4.1 `std::string stdair::RootException::_what` [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

### 34.37 COMMAND Struct Reference

```
#include <stdair/ui/cmdline/readline_autocomp.hpp>
```

#### Public Attributes

- `char const * name`
- `pt2Func * func`
- `char * doc`

#### 34.37.1 Detailed Description

A structure which contains information on the commands this program can understand.

Definition at line 41 of file [readline\\_autocomp.hpp](#).

#### 34.37.2 Member Data Documentation

##### 34.37.2.1 `char const* COMMAND::name`

User printable name of the function.

Definition at line 45 of file [readline\\_autocomp.hpp](#).

Referenced by [com\\_help\(\)](#), and [find\\_command\(\)](#).

##### 34.37.2.2 `pt2Func* COMMAND::func`

Function to call to do the job.

Definition at line 50 of file [readline\\_autocomp.hpp](#).

Referenced by [execute\\_line\(\)](#).

##### 34.37.2.3 `char* COMMAND::doc`

Documentation for this function.

Definition at line 55 of file [readline\\_autocomp.hpp](#).

The documentation for this struct was generated from the following file:

- [stdair/ui/cmdline/readline\\_autocomp.hpp](#)

### 34.38 `stdair::ContinuousAttributeLite< T >` Struct Template Reference

Class modeling the distribution of values that can be taken by a continuous attribute.

```
#include <stdair/basic/ContinuousAttributeLite.hpp>
```

#### Public Types

- `typedef std::map< T, stdair::Probability\_T > ContinuousDistribution\_T`

#### Public Member Functions

- `const T getValue (const stdair::Probability\_T &iCumulativeProbability) const`
- `const stdair::Probability\_T getRemainingProportion (const T &iValue) const`
- `const double getDerivativeValue (const T iKey) const`
- `const T getUpperBound (const T iKey) const`
- `const std::string displayCumulativeDistribution () const`
- `ContinuousAttributeLite (const ContinuousDistribution\_T &iValueMap)`
- `ContinuousAttributeLite (const ContinuousAttributeLite &iCAL)`
- `ContinuousAttributeLite & operator= (const ContinuousAttributeLite &iCAL)`
- `virtual ~ContinuousAttributeLite ()`

#### 34.38.1 Detailed Description

```
template<typename T>struct stdair::ContinuousAttributeLite< T >
```

Class modeling the distribution of values that can be taken by a continuous attribute.

Definition at line 26 of file [ContinuousAttributeLite.hpp](#).

#### 34.38.2 Member Typedef Documentation

34.38.2.1 `template<typename T > typedef std::map<T, stdair::Probability\_T>  
stdair::ContinuousAttributeLite< T >::ContinuousDistribution\_T`

Type for the probability mass function.

Definition at line 32 of file [ContinuousAttributeLite.hpp](#).

#### 34.38.3 Constructor & Destructor Documentation

```
34.38.3.1 template<typename T > stdair::ContinuousAttributeLite< T
>::ContinuousAttributeLite ( const ContinuousDistribution_T & iValueMap
) [inline]
```

Constructor.

Definition at line 204 of file [ContinuousAttributeLite.hpp](#).

```
34.38.3.2 template<typename T > stdair::ContinuousAttributeLite< T
>::ContinuousAttributeLite ( const ContinuousAttributeLite< T > & iCAL
) [inline]
```

Copy constructor.

Definition at line 212 of file [ContinuousAttributeLite.hpp](#).

```
34.38.3.3 template<typename T > virtual stdair::ContinuousAttributeLite< T
>::~~ContinuousAttributeLite ( ) [inline, virtual]
```

Destructor.

Definition at line 231 of file [ContinuousAttributeLite.hpp](#).

#### 34.38.4 Member Function Documentation

```
34.38.4.1 template<typename T > const T stdair::ContinuousAttributeLite< T
>::getValue ( const stdair::Probability_T & iCumulativeProbability ) const
[inline]
```

Get value from inverse cumulative distribution.

Definition at line 39 of file [ContinuousAttributeLite.hpp](#).

References [stdair::DictionaryManager::keyToValue\(\)](#), and [stdair::DictionaryManager::valueToKey\(\)](#).

```
34.38.4.2 template<typename T > const stdair::Probability_T
stdair::ContinuousAttributeLite< T >::getRemainingProportion ( const T &
iValue ) const [inline]
```

Get remaining proportion from cumulative distribution.

Definition at line 84 of file [ContinuousAttributeLite.hpp](#).

References [stdair::DictionaryManager::keyToValue\(\)](#).

```
34.38.4.3 template<typename T > const double stdair::ContinuousAttributeLite< T
>::getDerivativeValue ( const T iKey ) const [inline]
```

Get the value of the derivative function in a key point.

Definition at line 131 of file [ContinuousAttributeLite.hpp](#).

References [stdair::DictionaryManager::keyToValue\(\)](#).

### 34.39 stdair::date\_time\_element< MIN, MAX > Struct Template Reference 350

34.38.4.4 `template<typename T> const T stdair::ContinuousAttributeLite< T  
>::getUpperBound ( const T iKey ) const [inline]`

Get the upper bound.

Definition at line 163 of file [ContinuousAttributeLite.hpp](#).

34.38.4.5 `template<typename T> const std::string stdair::ContinuousAttributeLite< T  
>::displayCumulativeDistribution ( ) const [inline]`

Display cumulative distribution.

Definition at line 182 of file [ContinuousAttributeLite.hpp](#).

References [stdair::DictionaryManager::keyToValue\(\)](#).

34.38.4.6 `template<typename T> ContinuousAttributeLite&  
stdair::ContinuousAttributeLite< T >::operator= ( const  
ContinuousAttributeLite< T > & iCAL ) [inline]`

Copy operator.

Definition at line 221 of file [ContinuousAttributeLite.hpp](#).

The documentation for this struct was generated from the following file:

- [stdair/basic/ContinuousAttributeLite.hpp](#)

### 34.39 stdair::date\_time\_element< MIN, MAX > Struct Template Reference

```
#include <stdair/basic/BasParserHelperTypes.hpp>
```

#### Public Member Functions

- [date\\_time\\_element](#) ()
- [date\\_time\\_element](#) (const [date\\_time\\_element](#) &t)
- [date\\_time\\_element](#) (int i)
- void [check](#) () const

#### Public Attributes

- unsigned int [\\_value](#)

#### 34.39.1 Detailed Description

```
template<int MIN = 0, int MAX = 0>struct stdair::date_time_element< MIN, MAX >
```

Date & time element parser.

Definition at line 23 of file [BasParserHelperTypes.hpp](#).

## 34.39.2 Constructor &amp; Destructor Documentation

34.39.2.1 `template<int MIN = 0, int MAX = 0> stdair::date_time_element< MIN, MAX >::date_time_element ( ) [inline]`

Default constructor.

Definition at line 28 of file [BasParserHelperTypes.hpp](#).

34.39.2.2 `template<int MIN = 0, int MAX = 0> stdair::date_time_element< MIN, MAX >::date_time_element ( const date_time_element< MIN, MAX > & t ) [inline]`

Default copy constructor.

Definition at line 30 of file [BasParserHelperTypes.hpp](#).

34.39.2.3 `template<int MIN = 0, int MAX = 0> stdair::date_time_element< MIN, MAX >::date_time_element ( int i ) [inline]`

Constructor.

Definition at line 32 of file [BasParserHelperTypes.hpp](#).

## 34.39.3 Member Function Documentation

34.39.3.1 `template<int MIN = 0, int MAX = 0> void stdair::date_time_element< MIN, MAX >::check ( ) const [inline]`

Checker.

Definition at line 34 of file [BasParserHelperTypes.hpp](#).

References [stdair::date\\_time\\_element< MIN, MAX >::\\_value](#).

## 34.39.4 Member Data Documentation

34.39.4.1 `template<int MIN = 0, int MAX = 0> unsigned int stdair::date_time_element< MIN, MAX >::_value`

Definition at line 24 of file [BasParserHelperTypes.hpp](#).

Referenced by [stdair::date\\_time\\_element< MIN, MAX >::check\(\)](#), [stdair::operator\\*\(\)](#), and [stdair::operator+\(\)](#).

The documentation for this struct was generated from the following file:

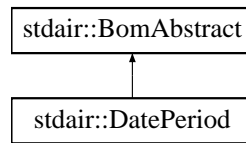
- [stdair/basic/BasParserHelperTypes.hpp](#)

## 34.40 stdair::DatePeriod Class Reference

Class representing the actual attributes for a fare date-period.

```
#include <stdair/bom/DatePeriod.hpp>
```

Inheritance diagram for stdair::DatePeriod:



#### Public Types

- typedef [DatePeriodKey](#) [Key\\_T](#)

#### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [DatePeriod\\_T](#) & [getDatePeriod](#) () const
- bool [isDepartureDateValid](#) (const [Date\\_T](#) &) const

#### Protected Member Functions

- [DatePeriod](#) (const [Key\\_T](#) &)
- virtual [~DatePeriod](#) ()

#### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T \\_holderMap](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)



#### 34.40.1 Detailed Description

Class representing the actual attributes for a fare date-period.

Definition at line 18 of file [DatePeriod.hpp](#).

#### 34.40.2 Member Typedef Documentation

##### 34.40.2.1 typedef DatePeriodKey stdair::DatePeriod::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file [DatePeriod.hpp](#).

#### 34.40.3 Constructor & Destructor Documentation

##### 34.40.3.1 stdair::DatePeriod::DatePeriod ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 28 of file [DatePeriod.cpp](#).

##### 34.40.3.2 stdair::DatePeriod::~~DatePeriod ( ) [protected, virtual]

Destructor.

Definition at line 33 of file [DatePeriod.cpp](#).

#### 34.40.4 Member Function Documentation

##### 34.40.4.1 void stdair::DatePeriod::toStream ( std::ostream & ioOut ) const [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 36 of file [DatePeriod.hpp](#).

References [toString\(\)](#).

##### 34.40.4.2 void stdair::DatePeriod::fromStream ( std::istream & ioIn ) [inline, virtual]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 45 of file [DatePeriod.hpp](#).

**34.40.4.3** `std::string stdair::DatePeriod::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [DatePeriod.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

**34.40.4.4** `const std::string stdair::DatePeriod::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 56 of file [DatePeriod.hpp](#).

References [\\_key](#), and [stdair::DatePeriodKey::toString\(\)](#).

Referenced by [toString\(\)](#).

**34.40.4.5** `const Key_T& stdair::DatePeriod::getKey ( ) const` `[inline]`

Get the primary key (date period).

Definition at line 65 of file [DatePeriod.hpp](#).

References [\\_key](#).

**34.40.4.6** `BomAbstract* const stdair::DatePeriod::getParent ( ) const` `[inline]`

Get a reference on the parent object instance.

Definition at line 72 of file [DatePeriod.hpp](#).

References [\\_parent](#).

**34.40.4.7** `const HolderMap_T& stdair::DatePeriod::getHolderMap ( ) const` `[inline]`

Get a reference on the children holder.

Definition at line 79 of file [DatePeriod.hpp](#).

References [\\_holderMap](#).

**34.40.4.8** `const DatePeriod_T& stdair::DatePeriod::getDatePeriod ( ) const` `[inline]`

Get the date period.

Definition at line 86 of file [DatePeriod.hpp](#).

References [\\_key](#), and [stdair::DatePeriodKey::getDatePeriod\(\)](#).

Referenced by [isDepartureDateValid\(\)](#).

**34.40.4.9** `bool stdair::DatePeriod::isDepartureDateValid ( const Date_T & iFlightDate ) const`

Check if the given departure date is included in the departure period of the segment path.

Definition at line 45 of file [DatePeriod.cpp](#).

References [getDatePeriod\(\)](#).

Referenced by [stdair::BomRetriever::retrieveDatePeriodListFromKey\(\)](#).

#### 34.40.5 Friends And Related Function Documentation

**34.40.5.1** `friend class FacBom [friend]`

Definition at line 19 of file [DatePeriod.hpp](#).

**34.40.5.2** `friend class FacBomManager [friend]`

Definition at line 20 of file [DatePeriod.hpp](#).

#### 34.40.6 Member Data Documentation

**34.40.6.1** `Key_T stdair::DatePeriod::_key [protected]`

Primary key (date period).

Definition at line 125 of file [DatePeriod.hpp](#).

Referenced by [describeKey\(\)](#), [getDatePeriod\(\)](#), and [getKey\(\)](#).

**34.40.6.2** `BomAbstract* stdair::DatePeriod::_parent [protected]`

Pointer on the parent class.

Definition at line 130 of file [DatePeriod.hpp](#).

Referenced by [getParent\(\)](#).

**34.40.6.3** `HolderMap_T stdair::DatePeriod::_holderMap [protected]`

Map holding the children.

Definition at line 135 of file [DatePeriod.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

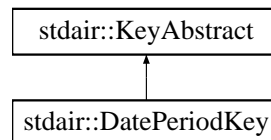
- [stdair/bom/DatePeriod.hpp](#)
- [stdair/bom/DatePeriod.cpp](#)

### 34.41 stdair::DatePeriodKey Struct Reference

Key of date-period.

```
#include <stdair/bom/DatePeriodKey.hpp>
```

Inheritance diagram for stdair::DatePeriodKey:



#### Public Member Functions

- [DatePeriodKey](#) (const [DatePeriod\\_T](#) &)
- [DatePeriodKey](#) (const [DatePeriodKey](#) &)
- [~DatePeriodKey](#) ()
- const [DatePeriod\\_T](#) & [getDatePeriod](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.41.1 Detailed Description

Key of date-period.

Definition at line 14 of file [DatePeriodKey.hpp](#).

#### 34.41.2 Constructor & Destructor Documentation

##### 34.41.2.1 stdair::DatePeriodKey::DatePeriodKey ( const [DatePeriod\\_T](#) & *iDatePeriod* )

Main Constructor.

Definition at line 22 of file [DatePeriodKey.cpp](#).

##### 34.41.2.2 stdair::DatePeriodKey::DatePeriodKey ( const [DatePeriodKey](#) & *iKey* )

Copy constructor.

Definition at line 27 of file [DatePeriodKey.cpp](#).

##### 34.41.2.3 stdair::DatePeriodKey::~~DatePeriodKey ( )

Destructor.

Definition at line 32 of file [DatePeriodKey.cpp](#).

## 34.41.3 Member Function Documentation

34.41.3.1 `const DatePeriod_T& stdair::DatePeriodKey::getDatePeriod ( ) const`  
[inline]

Get the date period.

Definition at line 32 of file [DatePeriodKey.hpp](#).

Referenced by [stdair::DatePeriod::getDatePeriod\(\)](#).

34.41.3.2 `void stdair::DatePeriodKey::toStream ( std::ostream & ioOut ) const` [virtual]

Dump a Business Object Key into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 36 of file [DatePeriodKey.cpp](#).

References [toString\(\)](#).

34.41.3.3 `void stdair::DatePeriodKey::fromStream ( std::istream & ioIn )` [virtual]

Read a Business Object Key from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 41 of file [DatePeriodKey.cpp](#).

34.41.3.4 `const std::string stdair::DatePeriodKey::toString ( ) const` [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 45 of file [DatePeriodKey.cpp](#).

Referenced by [stdair::DatePeriod::describeKey\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/DatePeriodKey.hpp](#)
- [stdair/bom/DatePeriodKey.cpp](#)

## 34.42 stdair::DbAbstract Class Reference

```
#include <stdair/dbadaptor/DbAbstract.hpp>
```

### Public Member Functions

- virtual [~DbAbstract](#) ()
- virtual void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

### Protected Member Functions

- [DbAbstract](#) ()

#### 34.42.1 Detailed Description

Base class for the Database Adaptor (DBA) layer.

Definition at line 13 of file [DbAbstract.hpp](#).

#### 34.42.2 Constructor & Destructor Documentation

34.42.2.1 virtual stdair::DbAbstract::~~DbAbstract ( ) [inline, virtual]

Destructor.

Definition at line 17 of file [DbAbstract.hpp](#).

34.42.2.2 stdair::DbAbstract::DbAbstract ( ) [inline, protected]

Protected Default Constructor to ensure this class is abstract.

Definition at line 29 of file [DbAbstract.hpp](#).

#### 34.42.3 Member Function Documentation

34.42.3.1 virtual void stdair::DbAbstract::toStream ( std::ostream & *ioOut* ) const  
[inline, virtual]

Dump a Business Object into an output stream.

### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Definition at line 21 of file [DbAbstract.hpp](#).

Referenced by [operator<<\(\)](#).

34.42.3.2 virtual void stdair::DbAbstract::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Definition at line 25 of file [DbAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

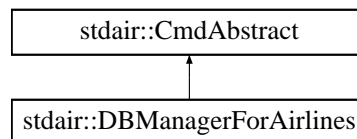
The documentation for this class was generated from the following file:

- [stdair/dbadaptor/DbAbstract.hpp](#)

### 34.43 stdair::DBManagerForAirlines Class Reference

```
#include <stdair/command/DBManagerForAirlines.hpp>
```

Inheritance diagram for stdair::DBManagerForAirlines:



#### Static Public Member Functions

- static void [updateAirlineInDB](#) (DBSession\_T &, const [AirlineStruct](#) &)
- static bool [retrieveAirline](#) (DBSession\_T &, const [AirlineCode\\_T](#) &, [AirlineStruct](#) &)
- static void [prepareSelectStatement](#) (DBSession\_T &, [DBRequestStatement\\_T](#) &, [AirlineStruct](#) &)
- static bool [iterateOnStatement](#) ([DBRequestStatement\\_T](#) &, [AirlineStruct](#) &)

#### 34.43.1 Detailed Description

Class building the Business Object Model (BOM) from data retrieved from the database.

Definition at line 18 of file [DBManagerForAirlines.hpp](#).

#### 34.43.2 Member Function Documentation

34.43.2.1 void stdair::DBManagerForAirlines::updateAirlineInDB ( DBSession\_T & ioSociSession, const AirlineStruct & iAirline ) [static]

Update the fields of the database row corresponding to the given BOM object. DBSession\_T & [AirlineStruct](#) & .

Definition at line 99 of file [DBManagerForAirlines.cpp](#).

References [stdair::AirlineStruct::getAirlineCode\(\)](#), and [stdair::AirlineStruct::getAirlineName\(\)](#).

34.43.2.2 bool stdair::DBManagerForAirlines::retrieveAirline ( DBSession\_T & ioSociSession, const AirlineCode\_T & iAirlineCode, AirlineStruct & ioAirline ) [static]

Retrieve, from the (MySQL) database, the row corresponding to the given BOM code, and fill the given BOM object with that retrieved data. DBSession\_T & const AirlineCode\_T & [AirlineStruct](#) & .

Definition at line 134 of file [DBManagerForAirlines.cpp](#).

References [iterateOnStatement\(\)](#).

34.43.2.3 void stdair::DBManagerForAirlines::prepareSelectStatement ( DBSession\_T & ioSociSession, DBRequestStatement\_T & ioSelectStatement, AirlineStruct & ioAirline ) [static]

Prepare (parse and put in cache) the SQL statement. DBSession\_T & DBRequestStatement\_T & [AirlineStruct](#) & .

Definition at line 26 of file [DBManagerForAirlines.cpp](#).

34.43.2.4 bool stdair::DBManagerForAirlines::iterateOnStatement ( DBRequestStatement\_T & ioStatement, AirlineStruct & ioAirline ) [static]

Iterate on the SQL statement.

The SQL has to be already prepared. DBRequestStatement\_T & [AirlineStruct](#) & .

Definition at line 82 of file [DBManagerForAirlines.cpp](#).

Referenced by [retrieveAirline\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/command/DBManagerForAirlines.hpp](#)
- [stdair/command/DBManagerForAirlines.cpp](#)

## 34.44 stdair::DBSessionManager Class Reference

```
#include <stdair/service/DBSessionManager.hpp>
```

### Public Member Functions

- [DBSession\\_T](#) & [getDBSession](#) () const



#### Static Public Member Functions

- static [DBSessionManager](#) & [instance](#) ()

#### Friends

- class [FacSupervisor](#)
- class [STDAIR\\_Service](#)

#### 34.44.1 Detailed Description

Class holding the database session.

Note that the database access is handled by the SOCI library.

Definition at line 17 of file [DBSessionManager.hpp](#).

#### 34.44.2 Member Function Documentation

##### 34.44.2.1 [DBSessionManager](#) & [stdair::DBSessionManager::instance](#) ( ) [static]

Return the static [DBSessionManager](#) instance.

Definition at line 82 of file [DBSessionManager.cpp](#).

##### 34.44.2.2 [DBSession\\_T](#) & [stdair::DBSessionManager::getDBSession](#) ( ) const

Retrieve the database session handler, held by the static instance of [DBSessionManager](#).

Definition at line 92 of file [DBSessionManager.cpp](#).

#### 34.44.3 Friends And Related Function Documentation

##### 34.44.3.1 friend class [FacSupervisor](#) [friend]

Definition at line 19 of file [DBSessionManager.hpp](#).

##### 34.44.3.2 friend class [STDAIR\\_Service](#) [friend]

Definition at line 20 of file [DBSessionManager.hpp](#).

The documentation for this class was generated from the following files:

- [stdair/service/DBSessionManager.hpp](#)
- [stdair/service/DBSessionManager.cpp](#)

## 34.45 stdair::DefaultDCPList Struct Reference

```
#include <stdair/basic/BasConst_Inventory.hpp>
```

## Static Public Member Functions

- static [DCPList\\_T](#) init ()

## 34.45.1 Detailed Description

Definition at line 94 of file [BasConst\\_Inventory.hpp](#).

## 34.45.2 Member Function Documentation

34.45.2.1 [DCPList\\_T](#) stdair::DefaultDCPList::init ( ) [static]

Definition at line 470 of file [BasConst.cpp](#).

The documentation for this struct was generated from the following files:

- stdair/basic/[BasConst\\_Inventory.hpp](#)
- stdair/basic/[BasConst.cpp](#)

## 34.46 stdair::DefaultDtdFratMap Struct Reference

```
#include <stdair/basic/BasConst_Inventory.hpp>
```

## Static Public Member Functions

- static [DTDFratMap\\_T](#) init ()

## 34.46.1 Detailed Description

Definition at line 98 of file [BasConst\\_Inventory.hpp](#).

## 34.46.2 Member Function Documentation

34.46.2.1 [DTDFratMap\\_T](#) stdair::DefaultDtdFratMap::init ( ) [static]

Definition at line 489 of file [BasConst.cpp](#).

The documentation for this struct was generated from the following files:

- stdair/basic/[BasConst\\_Inventory.hpp](#)
- stdair/basic/[BasConst.cpp](#)

## 34.47 stdair::DefaultDtdProbMap Struct Reference

```
#include <stdair/basic/BasConst_Inventory.hpp>
```

## Static Public Member Functions

- static [DTDProbMap\\_T](#) [init](#) ()

## 34.47.1 Detailed Description

Definition at line 102 of file [BasConst\\_Inventory.hpp](#).

## 34.47.2 Member Function Documentation

34.47.2.1 [DTDProbMap\\_T](#) [stdair::DefaultDtdProbMap::init](#) ( ) [static]

Definition at line 506 of file [BasConst.cpp](#).

The documentation for this struct was generated from the following files:

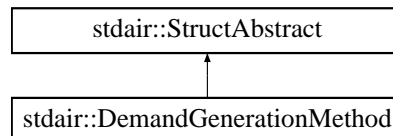
- [stdair/basic/BasConst\\_Inventory.hpp](#)
- [stdair/basic/BasConst.cpp](#)

## 34.48 stdair::DemandGenerationMethod Struct Reference

Enumeration of demand (booking request) generation methods.

```
#include <stdair/basic/DemandGenerationMethod.hpp>
```

Inheritance diagram for [stdair::DemandGenerationMethod](#):



## Public Types

- enum [EN\\_DemandGenerationMethod](#) { [POI\\_PRO](#) = 0, [STA\\_ORD](#), [LAST\\_VALUE](#) }

## Public Member Functions

- [EN\\_DemandGenerationMethod](#) [getMethod](#) () const
- char [getMethodAsChar](#) () const
- std::string [getMethodAsString](#) () const
- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_DemandGenerationMethod](#) &) const
- [DemandGenerationMethod](#) (const [EN\\_DemandGenerationMethod](#) &)

- [DemandGenerationMethod](#) (const char iMethod)
- [DemandGenerationMethod](#) (const std::string &iMethod)
- [DemandGenerationMethod](#) (const [DemandGenerationMethod](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_DemandGenerationMethod](#) &)
- static [EN\\_DemandGenerationMethod](#) [getMethod](#) (const char)
- static char [getMethodLabel](#) (const [EN\\_DemandGenerationMethod](#) &)
- static std::string [getMethodLabelAsString](#) (const [EN\\_DemandGenerationMethod](#) &)
- static std::string [describeLabels](#) ()

#### 34.48.1 Detailed Description

Enumeration of demand (booking request) generation methods.

Definition at line 17 of file [DemandGenerationMethod.hpp](#).

#### 34.48.2 Member Enumeration Documentation

##### 34.48.2.1 enum stdair::DemandGenerationMethod::EN\_DemandGenerationMethod

Enumerator:

***POI\_PRO***  
***STA\_ORD***  
***LAST\_VALUE***

Definition at line 19 of file [DemandGenerationMethod.hpp](#).

#### 34.48.3 Constructor & Destructor Documentation

##### 34.48.3.1 stdair::DemandGenerationMethod::DemandGenerationMethod ( const [EN\\_DemandGenerationMethod](#) & *iDemandGenerationMethod* )

Main constructor.

Definition at line 34 of file [DemandGenerationMethod.cpp](#).

##### 34.48.3.2 stdair::DemandGenerationMethod::DemandGenerationMethod ( const char *iMethod* )

Alternative constructor.

Definition at line 62 of file [DemandGenerationMethod.cpp](#).

34.48.3.3 `stdair::DemandGenerationMethod::DemandGenerationMethod ( const std::string & iMethod )`

Alternative constructor.

Definition at line 68 of file [DemandGenerationMethod.cpp](#).

References [getMethod\(\)](#).

34.48.3.4 `stdair::DemandGenerationMethod::DemandGenerationMethod ( const DemandGenerationMethod & iDemandGenerationMethod )`

Default copy constructor.

Definition at line 28 of file [DemandGenerationMethod.cpp](#).

#### 34.48.4 Member Function Documentation

34.48.4.1 `const std::string & stdair::DemandGenerationMethod::getLabel ( const EN_DemandGenerationMethod & iMethod ) [static]`

Get the label as a string (e.g., "PoissonProcess" or "StatisticsOrder").

Definition at line 78 of file [DemandGenerationMethod.cpp](#).

34.48.4.2 `DemandGenerationMethod::EN_DemandGenerationMethod stdair::DemandGenerationMethod::getMethod ( const char iMethodChar ) [static]`

Get the method value from parsing a single char (e.g., 'P' or 'S').

Definition at line 40 of file [DemandGenerationMethod.cpp](#).

References [describeLabels\(\)](#), [LAST\\_VALUE](#), [POI\\_PRO](#), and [STA\\_ORD](#).

34.48.4.3 `char stdair::DemandGenerationMethod::getMethodLabel ( const EN_DemandGenerationMethod & iMethod ) [static]`

Get the label as a single char (e.g., 'P' or 'S').

Definition at line 84 of file [DemandGenerationMethod.cpp](#).

34.48.4.4 `std::string stdair::DemandGenerationMethod::getMethodLabelAsString ( const EN_DemandGenerationMethod & iMethod ) [static]`

Get the label as a string of a single char (e.g., "P" or "S").

Definition at line 90 of file [DemandGenerationMethod.cpp](#).

34.48.4.5 `std::string stdair::DemandGenerationMethod::describeLabels ( ) [static]`

List the labels.

Definition at line 97 of file [DemandGenerationMethod.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [getMethod\(\)](#).

**34.48.4.6 DemandGenerationMethod::EN\_DemandGenerationMethod**  
 stdair::DemandGenerationMethod::getMethod ( ) const

Get the enumerated value.

Definition at line 110 of file [DemandGenerationMethod.cpp](#).

Referenced by [DemandGenerationMethod\(\)](#).

**34.48.4.7 char stdair::DemandGenerationMethod::getMethodAsChar ( ) const**

Get the enumerated value as a short string (e.g., 'P' or 'S').

Definition at line 115 of file [DemandGenerationMethod.cpp](#).

**34.48.4.8 std::string stdair::DemandGenerationMethod::getMethodAsString ( ) const**

Get the enumerated value as a short string (e.g., "P" or "S").

Definition at line 121 of file [DemandGenerationMethod.cpp](#).

**34.48.4.9 const std::string stdair::DemandGenerationMethod::describe ( ) const**  
 [virtual]

Give a description of the structure (e.g., "PoissonProcess" or "StatisticsOrder").

Implements [stdair::StructAbstract](#).

Definition at line 128 of file [DemandGenerationMethod.cpp](#).

**34.48.4.10 bool stdair::DemandGenerationMethod::operator== ( const**  
 EN\_DemandGenerationMethod & *iMethod* ) const

Comparison operator.

Definition at line 136 of file [DemandGenerationMethod.cpp](#).

**34.48.4.11 void stdair::StructAbstract::toStream ( std::ostream & *ioOut* ) const** [inline,  
 inherited]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.48.4.12 `virtual void stdair::StructAbstract::fromStream ( std::istream & ioln ) [inline, virtual, inherited]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/basic/DemandGenerationMethod.hpp](#)
- [stdair/basic/DemandGenerationMethod.cpp](#)

## 34.49 stdair::DictionaryManager Class Reference

Class wrapper of dictionary business methods.

```
#include <stdair/basic/DictionaryManager.hpp>
```

#### Static Public Member Functions

- static const [stdair::Probability\\_T](#) [keyToValue](#) (const [DictionaryKey\\_T](#))
- static const [DictionaryKey\\_T](#) [valueToKey](#) (const [stdair::Probability\\_T](#))

#### 34.49.1 Detailed Description

Class wrapper of dictionary business methods.

Definition at line 22 of file [DictionaryManager.hpp](#).

#### 34.49.2 Member Function Documentation

34.49.2.1 `const stdair::Probability_T stdair::DictionaryManager::keyToValue ( const DictionaryKey_T iKey ) [static]`

Convert from key to value.

Definition at line 12 of file [DictionaryManager.cpp](#).

References [stdair::DEFAULT\\_NUMBER\\_OF\\_SUBDIVISIONS](#).

Referenced by [stdair::ContinuousAttributeLite< T >::displayCumulativeDistribution\(\)](#), [stdair::ContinuousAttributeLite< T >::getDerivativeValue\(\)](#), [stdair::ContinuousAttributeLite< T >::getRemainingProportion\(\)](#), and [stdair::ContinuousAttributeLite< T >::getValue\(\)](#).

34.49.2.2 `const DictionaryKey_T stdair::DictionaryManager::valueToKey ( const stdair::Probability_T iValue ) [static]`

Convert from value to key.

Definition at line 21 of file [DictionaryManager.cpp](#).

References [stdair::DEFAULT\\_NUMBER\\_OF\\_SUBDIVISIONS](#).

Referenced by [stdair::ContinuousAttributeLite< T >::getValue\(\)](#).

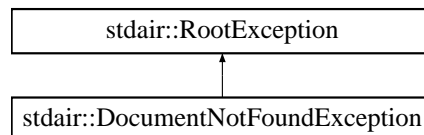
The documentation for this class was generated from the following files:

- [stdair/basic/DictionaryManager.hpp](#)
- [stdair/basic/DictionaryManager.cpp](#)

## 34.50 stdair::DocumentNotFoundException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::DocumentNotFoundException`:



### Public Member Functions

- [DocumentNotFoundException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

#### 34.50.1 Detailed Description

Document not found.

Definition at line 104 of file [stdair\\_exceptions.hpp](#).



### 34.50.2 Constructor & Destructor Documentation

34.50.2.1 `stdair::DocumentNotFoundException::DocumentNotFoundException ( const std::string & iWhat )` `[inline]`

Constructor.

Definition at line 107 of file [stdair\\_exceptions.hpp](#).

### 34.50.3 Member Function Documentation

34.50.3.1 `const char* stdair::RootException::what ( ) const throw ()` `[inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.50.4 Member Data Documentation

34.50.4.1 `std::string stdair::RootException::_what` `[protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

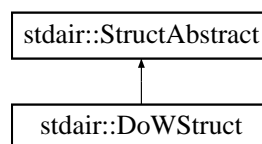
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.51 stdair::DoWStruct Struct Reference

```
#include <stdair/bom/DoWStruct.hpp>
```

Inheritance diagram for `stdair::DoWStruct`:



### Public Types

- `typedef std::vector< bool >` [BooleanList\\_T](#)

**Public Member Functions**

- bool [getDayOfWeek](#) (const unsigned short i) const
- bool [getStandardDayOfWeek](#) (const unsigned short i) const
- void [setDayOfWeek](#) (const unsigned short, const bool)
- const std::string [describe](#) () const
- const std::string [describeShort](#) () const
- [DoWStruct](#) [shift](#) (const long &) const
- [DoWStruct](#) [intersection](#) (const [DoWStruct](#) &) const
- const bool [isValid](#) () const
- [DoWStruct](#) (const std::string &iDowString)
- [DoWStruct](#) ()
- [DoWStruct](#) (const [DoWStruct](#) &)
- [~DoWStruct](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

**34.51.1 Detailed Description**

Define a Day Of the Week (DoW) sequence.

For instance, 1..11.1 means that the period is active on Mon., Thu., Fri. and Sun.

Definition at line 18 of file [DoWStruct.hpp](#).

**34.51.2 Member Typedef Documentation****34.51.2.1 typedef std::vector<bool> stdair::DoWStruct::BooleanList\_T**

Define the bit set representing the DoW.

Definition at line 21 of file [DoWStruct.hpp](#).

**34.51.3 Constructor & Destructor Documentation****34.51.3.1 stdair::DoWStruct::DoWStruct ( const std::string & iDowString )**

Constructor from a given bit set (e.g., "0000011" for the week-ends).

Definition at line 21 of file [DoWStruct.cpp](#).

**34.51.3.2 stdair::DoWStruct::DoWStruct ( )**

Default constructors.

Definition at line 14 of file [DoWStruct.cpp](#).

**34.51.3.3 stdair::DoWStruct::DoWStruct ( const DoWStruct & iDowStruct )**

Definition at line 34 of file [DoWStruct.cpp](#).

**34.51.3.4** `stdair::DoWStruct::~~DoWStruct ( ) [inline]`

Default destructor.

Definition at line 63 of file [DoWStruct.hpp](#).

**34.51.4 Member Function Documentation****34.51.4.1** `bool stdair::DoWStruct::getDayOfWeek ( const unsigned short i ) const`

Get the i-th day of the week (Monday being the first one).

Definition at line 66 of file [DoWStruct.cpp](#).

Referenced by [intersection\(\)](#), and [isValid\(\)](#).

**34.51.4.2** `bool stdair::DoWStruct::getStandardDayOfWeek ( const unsigned short i ) const`

Get the i-th day of the week (Sunday being the first one).

Definition at line 71 of file [DoWStruct.cpp](#).

**34.51.4.3** `void stdair::DoWStruct::setDayOfWeek ( const unsigned short i, const bool iBool )`

Set the new value for the i-th day-of-week.

Definition at line 82 of file [DoWStruct.cpp](#).

Referenced by [intersection\(\)](#), and [shift\(\)](#).

**34.51.4.4** `const std::string stdair::DoWStruct::describe ( ) const [virtual]`

Display explicitly (e.g., "Mon.Tue.Wed.Thu.Fri.").

Implements [stdair::StructAbstract](#).

Definition at line 52 of file [DoWStruct.cpp](#).

References [stdair::DOW\\_STR](#).

Referenced by [stdair::PeriodStruct::describe\(\)](#).

**34.51.4.5** `const std::string stdair::DoWStruct::describeShort ( ) const`

Display as a bit set (e.g., "1111100").

Definition at line 40 of file [DoWStruct.cpp](#).

Referenced by [stdair::PeriodStruct::describeShort\(\)](#).

**34.51.4.6** `DoWStruct stdair::DoWStruct::shift ( const long & iNbOfDays ) const`

Build a new DoW struct by shifting the current DoW by a given number.

Definition at line 88 of file [DoWStruct.cpp](#).

References [stdair::DEFAULT\\_DOW\\_STRING](#), and [setDayOfWeek\(\)](#).

Referenced by [stdair::PeriodStruct::addDateOffset\(\)](#).

**34.51.4.7 DoWStruct** [stdair::DoWStruct::intersection](#) ( [const DoWStruct & iDoW](#) ) [const](#)

Build a new DoW struct by intersecting two DoW structs.

Definition at line 104 of file [DoWStruct.cpp](#).

References [stdair::DEFAULT\\_DOW\\_STRING](#), [getDayOfWeek\(\)](#), and [setDayOfWeek\(\)](#).

Referenced by [stdair::PeriodStruct::intersection\(\)](#).

**34.51.4.8 const bool** [stdair::DoWStruct::isValid](#) ( ) [const](#)

Return if the DoW struct is valid (i.e., has at least one "true").

Definition at line 117 of file [DoWStruct.cpp](#).

References [getDayOfWeek\(\)](#).

Referenced by [stdair::PeriodStruct::isValid\(\)](#).

**34.51.4.9 void** [stdair::StructAbstract::toStream](#) ( [std::ostream & ioOut](#) ) [const](#) [[inline](#),  
[inherited](#)]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

**34.51.4.10 virtual void** [stdair::StructAbstract::fromStream](#) ( [std::istream & iIn](#) ) [[inline](#),  
[virtual](#), [inherited](#)]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

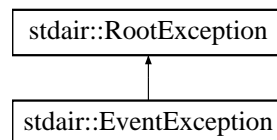
The documentation for this struct was generated from the following files:

- [stdair/bom/DoWStruct.hpp](#)
- [stdair/bom/DoWStruct.cpp](#)

## 34.52 stdair::EventException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::EventException:



### Public Member Functions

- [EventException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

#### 34.52.1 Detailed Description

Event.

Definition at line [196](#) of file [stdair\\_exceptions.hpp](#).

#### 34.52.2 Constructor & Destructor Documentation

**34.52.2.1** `stdair::EventException::EventException ( const std::string &iWhat ) [inline]`

Constructor.

Definition at line [199](#) of file [stdair\\_exceptions.hpp](#).

#### 34.52.3 Member Function Documentation

**34.52.3.1** `const char* stdair::RootException::what ( ) const throw ()` [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.52.4 Member Data Documentation

**34.52.4.1** `std::string stdair::RootException::_what` [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

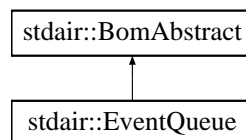
- [stdair/stdair\\_exceptions.hpp](#)

### 34.53 stdair::EventQueue Class Reference

Class holding event structures.

```
#include <stdair/bom/EventQueue.hpp>
```

Inheritance diagram for `stdair::EventQueue`:



#### Public Types

- typedef [EventQueueKey](#) [Key\\_T](#)
- typedef `std::map< EventType::EN\_EventType, ProgressStatus >` [ProgressStatusMap\\_T](#)

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [ProgressStatus](#) & [getStatus](#) () const

- `const Count_T & getCurrentNbOfEvents () const`
- `const Count_T & getExpectedTotalNbOfEvents () const`
- `const Count_T & getActualTotalNbOfEvents () const`
- `ProgressStatus getStatus (const EventType::EN_EventType &) const`
- `const Count_T & getCurrentNbOfEvents (const EventType::EN_EventType &) const`
- `const Count_T & getExpectedTotalNbOfEvents (const EventType::EN_EventType &) const`
- `const Count_T & getActualTotalNbOfEvents (const EventType::EN_EventType &) const`
- `void setStatus (const ProgressStatus &iProgressStatus)`
- `void setStatus (const Count_T &iCurrentNbOfEvents, const Count_T &iExpectedTotalNbOfEvents, const Count_T &iActualTotalNbOfEvents)`
- `void setStatus (const Count_T &iCurrentNbOfEvents, const Count_T &iActualTotalNbOfEvents)`
- `void setCurrentNbOfEvents (const Count_T &iCurrentNbOfEvents)`
- `void setExpectedTotalNbOfEvents (const Count_T &iExpectedTotalNbOfEvents)`
- `void setActualTotalNbOfEvents (const Count_T &iActualTotalNbOfEvents)`
- `void setStatus (const EventType::EN_EventType &iType, const ProgressStatus &iProgressStatus)`
- `void toStream (std::ostream &ioOut) const`
- `void fromStream (std::istream &ioIn)`
- `std::string toString () const`
- `const std::string describeKey () const`
- `std::string display () const`
- `void reset ()`
- `ProgressStatusSet popEvent (EventStruct &)`
- `bool addEvent (EventStruct &)`
- `bool isQueueDone () const`
- `void addStatus (const EventType::EN_EventType &, const NbOfRequests_T &iExpectedTotalNbOfEvents)`
- `void updateStatus (const EventType::EN_EventType &, const ProgressStatus &iProgressStatus)`
- `void updateStatus (const EventType::EN_EventType &, const NbOfEvents_T &iActualTotalNbOfEvents)`
- `ProgressPercentage_T calculateProgress () const`
- `ProgressPercentage_T calculateProgress (const EventType::EN_EventType &) const`
- `Count_T getQueueSize () const`
- `bool isQueueEmpty () const`

#### Protected Member Functions

- `EventQueue (const Key_T &)`
- `EventQueue (const EventQueue &)`
- `~EventQueue ()`

**Protected Attributes**

- [Key\\_T \\_key](#)
- [BomAbstract \\* \\_parent](#)
- [HolderMap\\_T \\_holderMap](#)
- [EventList\\_T \\_eventList](#)
- [ProgressStatus \\_progressStatus](#)
- [ProgressStatusMap\\_T \\_progressStatusMap](#)

**Friends**

- class [FacBom](#)
- class [FacBomManager](#)

**34.53.1 Detailed Description**

Class holding event structures.

Event types may be:

- booking requests,
- optimisation notifications,
- (simulation) break point,
- schedule changes.

The event content would be, respectively:

- a demand stream (generating booking requests),
- a DCP rule (generation optimisation notifications),
- a break point rule (generating simulation break points),
- a schedule update (generating schedule changes).

The [EventQueue](#) object keeps track of the simulation progress, overall and broken down (independently) both by event type and by content key. Following is a full example:

- Break down by event type:
  - Booking request: 9 events out of {expected: 20, actual: 20}
  - Optimisation notification: 7 events out of {expected: 32, actual: 32}
- Break down by content key:
  - "SIN-BKK" demand stream: 5 events out of {expected: 10, actual: 11}
  - "SIN-NRT" demand stream: 4 events out of {expected: 10, actual: 9}



- "SQ 12" DCP rule: 2 events out of {expected: 16, actual: 16}
- "SQ 25" DCP rule: 5 events out of {expected: 16, actual: 16}
- Overall status: 16 events out of {expected: 52, actual: 52}

Definition at line 59 of file [EventQueue.hpp](#).

### 34.53.2 Member Typedef Documentation

#### 34.53.2.1 typedef EventQueueKey stdair::EventQueue::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 68 of file [EventQueue.hpp](#).

#### 34.53.2.2 typedef std::map<EventType::EN\_EventType, ProgressStatus> stdair::EventQueue::ProgressStatusMap\_T

Definition of the (STL) map of [ProgressStatus](#) structures, one for each event type (e.g., booking request, optimisation notification).

Definition at line 76 of file [EventQueue.hpp](#).

### 34.53.3 Constructor & Destructor Documentation

#### 34.53.3.1 stdair::EventQueue::EventQueue ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 23 of file [EventQueue.cpp](#).

#### 34.53.3.2 stdair::EventQueue::EventQueue ( const EventQueue & iEventQueue ) [protected]

Default copy constructor.

Definition at line 30 of file [EventQueue.cpp](#).

#### 34.53.3.3 stdair::EventQueue::~EventQueue ( ) [protected]

Destructor.

Definition at line 38 of file [EventQueue.cpp](#).

References [\\_eventList](#).

### 34.53.4 Member Function Documentation

#### 34.53.4.1 const Key\_T& stdair::EventQueue::getKey ( ) const [inline]

Get the event queue key.

Definition at line 82 of file [EventQueue.hpp](#).

References [\\_key](#).

**34.53.4.2 BomAbstract\* const stdair::EventQueue::getParent ( ) const** [\[inline\]](#)

Get the parent object.

Definition at line 87 of file [EventQueue.hpp](#).

References [\\_parent](#).

**34.53.4.3 const HolderMap\_T& stdair::EventQueue::getHolderMap ( ) const** [\[inline\]](#)

Get the map of children holders.

Definition at line 92 of file [EventQueue.hpp](#).

References [\\_holderMap](#).

**34.53.4.4 const ProgressStatus& stdair::EventQueue::getStatus ( ) const** [\[inline\]](#)

Get the overall progress status (for the whole event queue).

Definition at line 97 of file [EventQueue.hpp](#).

References [\\_progressStatus](#).

Referenced by [popEvent\(\)](#).

**34.53.4.5 const Count\_T& stdair::EventQueue::getCurrentNbOfEvents ( ) const**  
[\[inline\]](#)

Get the current number of events (for the whole event queue).

Definition at line 101 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::getCurrentNb\(\)](#).

**34.53.4.6 const Count\_T& stdair::EventQueue::getExpectedTotalNbOfEvents ( ) const**  
[\[inline\]](#)

Get the expected total number of events (for the whole event queue).

Definition at line 105 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::getExpectedNb\(\)](#).

Referenced by [stdair::STDAIR\\_Service::getExpectedTotalNumberOfEventsToBeGenerated\(\)](#).

**34.53.4.7 const Count\_T& stdair::EventQueue::getActualTotalNbOfEvents ( ) const**  
[\[inline\]](#)

Get the actual total number of events (for the whole event queue).

Definition at line 109 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::getActualNb\(\)](#).

Referenced by [stdair::STDAIR\\_Service::getActualTotalNumberOfEventsToBeGenerated\(\)](#).

#### 34.53.4.8 **ProgressStatus** stdair::EventQueue::getStatus ( const EventType::EN\_EventType & iType ) const

Get the progress status for the given event type (e.g., booking request, optimisation notification, schedule change, break point).

Definition at line 257 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#).

#### 34.53.4.9 const Count\_T & stdair::EventQueue::getCurrentNbOfEvents ( const EventType::EN\_EventType & iType ) const

Get the current number of events for the given event type.

Definition at line 97 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#), [display\(\)](#), [stdair::ProgressStatus::getCurrentNb\(\)](#), and [STDAIR\\_LOG\\_ERROR](#).

#### 34.53.4.10 const Count\_T & stdair::EventQueue::getExpectedTotalNbOfEvents ( const EventType::EN\_EventType & iType ) const

Get the expected total number of events for the given event type.

Definition at line 116 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#), [display\(\)](#), [stdair::ProgressStatus::getExpectedNb\(\)](#), and [STDAIR\\_LOG\\_ERROR](#).

#### 34.53.4.11 const Count\_T & stdair::EventQueue::getActualTotalNbOfEvents ( const EventType::EN\_EventType & iType ) const

Get the actual total number of events for the given event type.

Definition at line 138 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#), [display\(\)](#), [stdair::ProgressStatus::getActualNb\(\)](#), and [STDAIR\\_LOG\\_ERROR](#).

#### 34.53.4.12 void stdair::EventQueue::setStatus ( const ProgressStatus & iProgressStatus ) [inline]

Set/update the progress status.

Definition at line 131 of file [EventQueue.hpp](#).

References [\\_progressStatus](#).

Referenced by [popEvent\(\)](#).

#### 34.53.4.13 void stdair::EventQueue::setStatus ( const Count\_T & iCurrentNbOfEvents, const Count\_T & iExpectedTotalNbOfEvents, const Count\_T & iActualTotalNbOfEvents ) [inline]

Set/update the progress status.

Definition at line 135 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), [stdair::ProgressStatus::setActualNb\(\)](#), [stdair::ProgressStatus::setCurrentNb\(\)](#), and [stdair::ProgressStatus::setExpectedNb\(\)](#).

```
34.53.4.14 void stdair::EventQueue::setStatus ( const Count_T & iCurrentNbOfEvents, const
          Count_T & iActualTotalNbOfEvents ) [inline]
```

Set/update the progress status.

Definition at line 143 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), [stdair::ProgressStatus::setActualNb\(\)](#), and [stdair::ProgressStatus::setCurrentNb\(\)](#).

```
34.53.4.15 void stdair::EventQueue::setCurrentNbOfEvents ( const Count_T &
          iCurrentNbOfEvents ) [inline]
```

Set the current number of events (for the whole event queue).

Definition at line 149 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::setCurrentNb\(\)](#).

```
34.53.4.16 void stdair::EventQueue::setExpectedTotalNbOfEvents ( const Count_T &
          iExpectedTotalNbOfEvents ) [inline]
```

Set the expected total number of events (for the whole event queue).

Definition at line 153 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::setExpectedNb\(\)](#).

```
34.53.4.17 void stdair::EventQueue::setActualTotalNbOfEvents ( const Count_T &
          iActualTotalNbOfEvents ) [inline]
```

Set the actual total number of events (for the whole event queue).

Definition at line 157 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::setActualNb\(\)](#).

```
34.53.4.18 void stdair::EventQueue::setStatus ( const EventType::EN_EventType & iType,
          const ProgressStatus & iProgressStatus )
```

Set the progress status for the given event type (e.g., booking request, optimisation notification, schedule change, break point).

Definition at line 241 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#).

```
34.53.4.19 void stdair::EventQueue::toStream ( std::ostream & ioOut ) const [inline,
          virtual]
```

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 176 of file [EventQueue.hpp](#).

References [toString\(\)](#).

34.53.4.20 `void stdair::EventQueue::fromStream ( std::istream & ioln ) [inline, virtual]`

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 185 of file [EventQueue.hpp](#).

34.53.4.21 `std::string stdair::EventQueue::toString ( ) const [virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 43 of file [EventQueue.cpp](#).

References [\\_eventList](#), [\\_progressStatus](#), [stdair::ProgressStatus::getActualNb\(\)](#), [stdair::ProgressStatus::getCurrentNb\(\)](#), and [stdair::ProgressStatus::getExpectedNb\(\)](#).

Referenced by [display\(\)](#), [toStream\(\)](#), and [updateStatus\(\)](#).

34.53.4.22 `const std::string stdair::EventQueue::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 196 of file [EventQueue.hpp](#).

References [\\_key](#), and [stdair::EventQueueKey::toString\(\)](#).

34.53.4.23 `std::string stdair::EventQueue::display ( ) const`

Definition at line 53 of file [EventQueue.cpp](#).

References [toString\(\)](#).

Referenced by [calculateProgress\(\)](#), [getActualTotalNbOfEvents\(\)](#), [getCurrentNbOfEvents\(\)](#), and [getExpectedTotalNbOfEvents\(\)](#).

34.53.4.24 `void stdair::EventQueue::reset ( )`

Reset the event queue.

The event queue is fully emptied.

Definition at line 78 of file [EventQueue.cpp](#).

References [\\_eventList](#), [\\_progressStatus](#), [\\_progressStatusMap](#), and [stdair::ProgressStatus::reset\(\)](#).

Referenced by [stdair::STDAIR\\_Service::reset\(\)](#).

#### 34.53.4.25 ProgressStatusSet stdair::EventQueue::popEvent ( EventStruct & ioEventStruct )

Pop the next coming (in time) event, and remove it from the event queue.

- The next coming (in time) event corresponds to the event having the earliest date-time stamp. In other words, it is the first/front element of the event queue.
- That (first) event/element is then removed from the event queue
- The progress status is updated for the corresponding event generator.

Definition at line 291 of file [EventQueue.cpp](#).

References [\\_eventList](#), [\\_progressStatus](#), [stdair::EventStruct::getEventType\(\)](#), [getStatus\(\)](#), [stdair::ProgressStatusSet::setOverallStatus\(\)](#), [setStatus\(\)](#), and [stdair::ProgressStatusSet::setTypeSpecificStatus\(\)](#).

Referenced by [stdair::STDAIR\\_Service::popEvent\(\)](#).

#### 34.53.4.26 bool stdair::EventQueue::addEvent ( EventStruct & ioEventStruct )

Add event.

If there already is an event with the same date-time, move the given event one nanosecond forward, and retry the insertion until it succeeds.

That method:

- first adds the event structure in the dedicated list,
- then retrieves the corresponding demand stream,
- and update accordingly the corresponding progress statuses.

#### Parameters

<code>stdair::EventS</code>	The reference on <a href="#">EventStruct</a> is not constant, because the <a href="#">EventStruct</a> object can be altered: its date-time stamp can be changed accordingly to the location where it has been inserted in the event queue.
-----------------------------	--

Definition at line 351 of file [EventQueue.cpp](#).

References [\\_eventList](#).

#### 34.53.4.27 bool stdair::EventQueue::isQueueDone ( ) const

States whether the event queue has reached the end.

For now, that method states whether the event queue is empty.

Definition at line 72 of file [EventQueue.cpp](#).

References [\\_eventList](#), and [isQueueEmpty\(\)](#).

Referenced by [stdair::STDAIR\\_Service::isQueueDone\(\)](#).

34.53.4.28 void stdair::EventQueue::addStatus ( const EventType::EN\_EventType & iType,  
const NbOfRequests\_T & iExpectedTotalNbOfEvents )

Initialise the progress statuses for the given event type (e.g., request, snapshot).

The progress status is actually a pair of counters:

- The current number of (already generated) events, for the given event type. That number is initialised to 0 (no event has been generated yet).
- The total number of events (to be generated), also for the given event type.

Definition at line 197 of file [EventQueue.cpp](#).

References [\\_progressStatus](#), [stdair::ProgressStatus::getActualNb\(\)](#), [stdair::ProgressStatus::getExpectedNb\(\)](#), [stdair::ProgressStatus::setActualNb\(\)](#), [stdair::ProgressStatus::setExpectedNb\(\)](#), and [updateStatus\(\)](#).

34.53.4.29 void stdair::EventQueue::updateStatus ( const EventType::EN\_EventType &  
iType, const ProgressStatus & iProgressStatus )

Set/update the progress status for the corresponding event type (e.g., booking request, optimisation notification, schedule change, break point).

If there is no [ProgressStatus](#) object for that event type yet, one is inserted. Otherwise, the [ProgressStatus](#) object is updated.

Definition at line 156 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#), [stdair::ProgressStatus::getActualNb\(\)](#), [stdair::ProgressStatus::getCurrentNb\(\)](#), [stdair::ProgressStatus::getExpectedNb\(\)](#), [stdair::EventType::getLabel\(\)](#), [stdair::ProgressStatus::setActualNb\(\)](#), [stdair::ProgressStatus::setCurrentNb\(\)](#), [stdair::ProgressStatus::setExpectedNb\(\)](#), [STDAIR\\_LOG\\_ERROR](#), and [toString\(\)](#).

Referenced by [addStatus\(\)](#).

34.53.4.30 void stdair::EventQueue::updateStatus ( const EventType::EN\_EventType &  
iType, const NbOfEvents\_T & iActualTotalNbOfEvents )

Update the progress statuses for the given event type (e.g., booking request, optimisation notification, schedule change, break point).

The progress status is actually a pair of counters:

- The current number of (already generated) events, for the given event type. That number is initialised to 0 (no event has been generated yet).
- The total number of events (to be generated), also for the given event type.

Definition at line 221 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#), [stdair::ProgressStatus::getActualNb\(\)](#), and [stdair::ProgressStatus::setActualNb\(\)](#).

**34.53.4.31 ProgressPercentage\_T** [stdair::EventQueue::calculateProgress \( \)](#) const  
[inline]

Calculate the progress status.

The progress is status is the ratio of:

- the current number of events, summed over all the demand streams,
- over the total number of events, also summed over all the demand streams.

Definition at line 316 of file [EventQueue.hpp](#).

References [\\_progressStatus](#), and [stdair::ProgressStatus::progress\(\)](#).

**34.53.4.32 ProgressPercentage\_T** [stdair::EventQueue::calculateProgress \( const EventType::EN\\_EventType & iType \)](#) const

Calculate the progress status.

The progress is status is the ratio of:

- the current number of events, summed over all the demand streams,
- over the total number of events, also summed over all the demand streams.

Definition at line 273 of file [EventQueue.cpp](#).

References [\\_progressStatusMap](#), [display\(\)](#), [stdair::ProgressStatus::progress\(\)](#), and [STDAIR\\_LOG\\_ERROR](#).

**34.53.4.33 Count\_T** [stdair::EventQueue::getQueueSize \( \)](#) const

Queue size

Definition at line 62 of file [EventQueue.cpp](#).

References [\\_eventList](#).

**34.53.4.34 bool** [stdair::EventQueue::isQueueEmpty \( \)](#) const

Is queue empty

Definition at line 67 of file [EventQueue.cpp](#).

References [\\_eventList](#).

Referenced by [isQueueDone\(\)](#).

## 34.53.5 Friends And Related Function Documentation

**34.53.5.1 friend class FacBom** [friend]

Definition at line 60 of file [EventQueue.hpp](#).



**34.53.5.2 friend class FacBomManager** [friend]

Definition at line 61 of file [EventQueue.hpp](#).

**34.53.6 Member Data Documentation****34.53.6.1 Key\_T stdair::EventQueue::\_key** [protected]

Primary key (ID).

Definition at line 360 of file [EventQueue.hpp](#).

Referenced by [describeKey\(\)](#), and [getKey\(\)](#).

**34.53.6.2 BomAbstract\* stdair::EventQueue::\_parent** [protected]

Pointer on the parent class ([BomRoot](#)).

Definition at line 365 of file [EventQueue.hpp](#).

Referenced by [getParent\(\)](#).

**34.53.6.3 HolderMap\_T stdair::EventQueue::\_holderMap** [protected]

Map holding the children (e.g., DemandStream objects for booking requests, DCPRule objects for optimisation notifications).

Definition at line 372 of file [EventQueue.hpp](#).

Referenced by [getHolderMap\(\)](#).

**34.53.6.4 EventList\_T stdair::EventQueue::\_eventList** [protected]

List of events.

Definition at line 377 of file [EventQueue.hpp](#).

Referenced by [addEvent\(\)](#), [getQueueSize\(\)](#), [isQueueDone\(\)](#), [isQueueEmpty\(\)](#), [popEvent\(\)](#), [reset\(\)](#), [toString\(\)](#), and [~EventQueue\(\)](#).

**34.53.6.5 ProgressStatus stdair::EventQueue::\_progressStatus** [protected]

Counters holding the overall progress status.

Definition at line 382 of file [EventQueue.hpp](#).

Referenced by [addStatus\(\)](#), [calculateProgress\(\)](#), [getActualTotalNbOfEvents\(\)](#), [getCurrentNbOfEvents\(\)](#), [getExpectedTotalNbOfEvents\(\)](#), [getStatus\(\)](#), [popEvent\(\)](#), [reset\(\)](#), [setActualTotalNbOfEvents\(\)](#), [setCurrentNbOfEvents\(\)](#), [setExpectedTotalNbOfEvents\(\)](#), [setStatus\(\)](#), and [toString\(\)](#).

**34.53.6.6 ProgressStatusMap\_T stdair::EventQueue::\_progressStatusMap**  
[protected]

Counters holding the overall progress status, for each event type (e.g., booking request, optimisation notification, schedule change, break point).

Definition at line 389 of file [EventQueue.hpp](#).

Referenced by [calculateProgress\(\)](#), [getActualTotalNbOfEvents\(\)](#), [getCurrentNbOfEvents\(\)](#), [getExpectedTotalNbOfEvents\(\)](#), [getStatus\(\)](#), [reset\(\)](#), [setStatus\(\)](#), and [updateStatus\(\)](#).

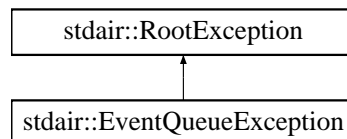
The documentation for this class was generated from the following files:

- [stdair/bom/EventQueue.hpp](#)
- [stdair/bom/EventQueue.cpp](#)

## 34.54 stdair::EventQueueException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::EventQueueException:



### Public Member Functions

- [EventQueueException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

#### 34.54.1 Detailed Description

[EventQueue](#).

Definition at line 203 of file [stdair\\_exceptions.hpp](#).

#### 34.54.2 Constructor & Destructor Documentation

34.54.2.1 [stdair::EventQueueException::EventQueueException](#) ( const std::string & *iWhat* )  
[inline]

Constructor.

Definition at line 206 of file [stdair\\_exceptions.hpp](#).

## 34.54.3 Member Function Documentation

34.54.3.1 `const char* stdair::RootException::what ( ) const throw ()` [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

## 34.54.4 Member Data Documentation

34.54.4.1 `std::string stdair::RootException::_what` [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

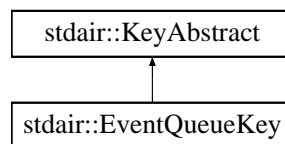
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.55 stdair::EventQueueKey Struct Reference

```
#include <stdair/bom/EventQueueKey.hpp>
```

Inheritance diagram for `stdair::EventQueueKey`:



## Public Member Functions

- [EventQueueKey](#) (const [EventQueueID\\_T](#) &)
- [EventQueueKey](#) (const [EventQueueKey](#) &)
- [~EventQueueKey](#) ()
- const [EventQueueID\\_T](#) & [getEventQueueID](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

### 34.55.1 Detailed Description

Key of eventqueue.

Definition at line 15 of file [EventQueueKey.hpp](#).

### 34.55.2 Constructor & Destructor Documentation

#### 34.55.2.1 stdair::EventQueueKey::EventQueueKey ( const EventQueueID\_T & iEventQueueID )

Constructors.

Definition at line 12 of file [EventQueueKey.cpp](#).

#### 34.55.2.2 stdair::EventQueueKey::EventQueueKey ( const EventQueueKey & iKey )

Definition at line 16 of file [EventQueueKey.cpp](#).

#### 34.55.2.3 stdair::EventQueueKey::~EventQueueKey ( )

Destructor.

Definition at line 21 of file [EventQueueKey.cpp](#).

### 34.55.3 Member Function Documentation

#### 34.55.3.1 const EventQueueID\_T& stdair::EventQueueKey::getEventQueueID ( ) const [inline]

Get the ID of the [EventQueue](#) object.

Definition at line 31 of file [EventQueueKey.hpp](#).

#### 34.55.3.2 void stdair::EventQueueKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 25 of file [EventQueueKey.cpp](#).

References [toString\(\)](#).

#### 34.55.3.3 void stdair::EventQueueKey::fromStream ( std::istream & ioin ) [virtual]

Read a Business Object Key from an input stream.

**Parameters**

<i>istream</i> & the input stream.
------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 30 of file [EventQueueKey.cpp](#).

34.55.3.4 `const std::string stdair::EventQueueKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 34 of file [EventQueueKey.cpp](#).

Referenced by [stdair::EventQueue::describeKey\(\)](#), and [toStream\(\)](#).

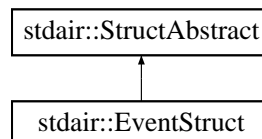
The documentation for this struct was generated from the following files:

- [stdair/bom/EventQueueKey.hpp](#)
- [stdair/bom/EventQueueKey.cpp](#)

**34.56 stdair::EventStruct Struct Reference**

```
#include <stdair/bom/EventStruct.hpp>
```

Inheritance diagram for `stdair::EventStruct`:

**Public Member Functions**

- `const EventType::EN\_EventType & getEventType ( ) const`
- `const BookingRequestStruct & getBookingRequest ( ) const`
- `const CancellationStruct & getCancellation ( ) const`
- `const OptimisationNotificationStruct & getOptimisationNotificationStruct ( ) const`
- `const SnapshotStruct & getSnapshotStruct ( ) const`
- `const RMEventStruct & getRMEvent ( ) const`
- `void fromStream (std::istream &ioln)`
- `const std::string describe ( ) const`
- `EventStruct ( )`

- [EventStruct](#) (const [EventType::EN\\_EventType](#) &, [BookingRequestPtr\\_T](#))
- [EventStruct](#) (const [EventType::EN\\_EventType](#) &, [CancellationPtr\\_T](#))
- [EventStruct](#) (const [EventType::EN\\_EventType](#) &, const [DateTime\\_T](#) & iDCPDate, [OptimisationNotificationPtr\\_T](#))
- [EventStruct](#) (const [EventType::EN\\_EventType](#) &, [SnapshotPtr\\_T](#))
- [EventStruct](#) (const [EventType::EN\\_EventType](#) &, [RMEventPtr\\_T](#))
- [EventStruct](#) (const [EventStruct](#) &)
- [~EventStruct](#) ()
- void [toStream](#) (std::ostream & ioOut) const

**Friends**

- struct [EventQueue](#)

**34.56.1 Detailed Description**

Structure holding the details of an event.

**Note**

No event should be scheduled before the date-time corresponding to the `DEFAULT_EVENT_OLDEST_DATETIME` constant (as of Feb. 2011, that date is set to Jan. 1, 2010). That constant is specified in the [stdair/basic/BasConst.cpp](#) file. In other words, the simulation should not specified to start before that date-time.

Definition at line 35 of file [EventStruct.hpp](#).

**34.56.2 Constructor & Destructor Documentation****34.56.2.1 stdair::EventStruct::EventStruct ( )**

Default constructor.

Definition at line 25 of file [EventStruct.cpp](#).

**34.56.2.2 stdair::EventStruct::EventStruct ( const EventType::EN\_EventType & iEventType, BookingRequestPtr\_T ioRequestPtr )**

Constructor for events corresponding to booking requests.

Definition at line 30 of file [EventStruct.cpp](#).

References [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#).

**34.56.2.3 stdair::EventStruct::EventStruct ( const EventType::EN\_EventType & iEventType, CancellationPtr\_T ioCancellationPtr )**

Constructor for events corresponding to cancellations.

Definition at line 54 of file [EventStruct.cpp](#).

References [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#).

34.56.2.4 `stdair::EventStruct::EventStruct ( const EventType::EN_EventType & iEventType, const DateTime_T & iDCPDate, OptimisationNotificationPtr_T ioOptimisationNotificationPtr )`

Constructor for events corresponding to optimisation requests.

Definition at line 79 of file [EventStruct.cpp](#).

References [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#).

34.56.2.5 `stdair::EventStruct::EventStruct ( const EventType::EN_EventType & iEventType, SnapshotPtr_T ioSnapshotPtr )`

Constructor for events corresponding to snapshot requests.

Definition at line 104 of file [EventStruct.cpp](#).

References [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#).

34.56.2.6 `stdair::EventStruct::EventStruct ( const EventType::EN_EventType & iEventType, RMEventPtr_T ioRMEventPtr )`

Constructor for events corresponding to RM events.

Definition at line 129 of file [EventStruct.cpp](#).

References [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#).

34.56.2.7 `stdair::EventStruct::EventStruct ( const EventStruct & iEventStruct )`

Copy constructor.

Definition at line 154 of file [EventStruct.cpp](#).

34.56.2.8 `stdair::EventStruct::~~EventStruct ( )`

Destructor.

Definition at line 208 of file [EventStruct.cpp](#).

### 34.56.3 Member Function Documentation

34.56.3.1 `const EventType::EN_EventType& stdair::EventStruct::getEventType ( ) const [inline]`

Get the event type

Definition at line 42 of file [EventStruct.hpp](#).

Referenced by [stdair::EventQueue::popEvent\(\)](#).

34.56.3.2 `const BookingRequestStruct& stdair::EventStruct::getBookingRequest ( ) const [inline]`

Get a reference on the booking request referred to by event.

**Note**

When that event is not of type booking request ([EventType::BKG\\_REQ](#)), an assertion fails.

Definition at line 52 of file [EventStruct.hpp](#).

```
34.56.3.3 const CancellationStruct& stdair::EventStruct::getCancellation ( ) const  
[inline]
```

Get a reference on the cancellation referred to by event.

**Note**

When that event is not of type cancellation ([EventType::CX](#)), an assertion fails.

Definition at line 63 of file [EventStruct.hpp](#).

```
34.56.3.4 const OptimisationNotificationStruct&  
stdair::EventStruct::getOptimisationNotificationStruct ( ) const  
[inline]
```

Get a reference on the optimisation notification referred to by event.

**Note**

When that event is not of type optimisation notification for optimisation notification ([EventType::OPT\\_NOT\\_4\\_FD](#)), an assertion fails.

Definition at line 76 of file [EventStruct.hpp](#).

```
34.56.3.5 const SnapshotStruct& stdair::EventStruct::getSnapshotStruct ( ) const  
[inline]
```

Get a reference on the snapshot referred to by event.

**Note**

When that event is not of type snapshot for snapshot ([EventType::OPT\\_NOT\\_4\\_FD](#)), an assertion fails.

Definition at line 88 of file [EventStruct.hpp](#).

```
34.56.3.6 const RMEventStruct& stdair::EventStruct::getRMEvent ( ) const [inline]
```

Get a reference on the RM event referred to by the generic event.

**Note**

When that event is not of type RM event for snapshot ([EventType::OPT\\_NOT\\_4\\_FD](#)), an assertion fails.

Definition at line 100 of file [EventStruct.hpp](#).



34.56.3.7 `void stdair::EventStruct::fromStream ( std::istream & ioln ) [virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 212 of file [EventStruct.cpp](#).

34.56.3.8 `const std::string stdair::EventStruct::describe ( ) const [virtual]`

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 216 of file [EventStruct.cpp](#).

References [stdair::EventType::BKG\\_REQ](#), [stdair::EventType::CX](#), [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#), [stdair::EventType::OPT\\_NOT\\_4\\_FD](#), [stdair::EventType::RM](#), and [stdair::EventType::SNAPSHOT](#).

34.56.3.9 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline, inherited]`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

### 34.56.4 Friends And Related Function Documentation

34.56.4.1 `friend struct EventQueue [friend]`

Definition at line 37 of file [EventStruct.hpp](#).

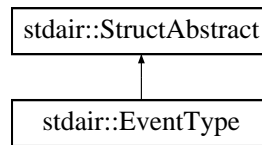
The documentation for this struct was generated from the following files:

- [stdair/bom/EventStruct.hpp](#)
- [stdair/bom/EventStruct.cpp](#)

### 34.57 stdair::EventType Struct Reference

```
#include <stdair/basic/EventType.hpp>
```

Inheritance diagram for stdair::EventType:



#### Public Types

- enum [EN\\_EventType](#) {  
    [BKG\\_REQ](#) = 0, [CX](#), [OPT\\_NOT\\_4\\_FD](#), [OPT\\_NOT\\_4\\_NET](#),  
    [SKD\\_CHG](#), [SNAPSHOT](#), [RM](#), [BRK\\_PT](#),  
    [LAST\\_VALUE](#) }

#### Public Member Functions

- [EN\\_EventType](#) [getType](#) () const
- std::string [getTypeAsString](#) () const
- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_EventType](#) &) const
- [EventType](#) (const [EN\\_EventType](#) &)
- [EventType](#) (const char iType)
- [EventType](#) (const [EventType](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_EventType](#) &)
- static char [getTypeLabel](#) (const [EN\\_EventType](#) &)
- static std::string [getTypeLabelAsString](#) (const [EN\\_EventType](#) &)
- static std::string [describeLabels](#) ()

#### 34.57.1 Detailed Description

Enumeration of event types.

Definition at line 15 of file [EventType.hpp](#).

## 34.57.2 Member Enumeration Documentation

## 34.57.2.1 enum stdair::EventType::EN\_EventType

Enumerator:

**BKG\_REQ**  
**CX**  
**OPT\_NOT\_4\_FD**  
**OPT\_NOT\_4\_NET**  
**SKD\_CHG**  
**SNAPSHOT**  
**RM**  
**BRK\_PT**  
**LAST\_VALUE**

Definition at line 17 of file [EventType.hpp](#).

## 34.57.3 Constructor &amp; Destructor Documentation

## 34.57.3.1 stdair::EventType::EventType ( const EN\_EventType &amp; iEventType )

Constructor.

Definition at line 36 of file [EventType.cpp](#).

## 34.57.3.2 stdair::EventType::EventType ( const char iType )

Constructor.

Definition at line 41 of file [EventType.cpp](#).

References [BKG\\_REQ](#), [BRK\\_PT](#), [CX](#), [describeLabels\(\)](#), [LAST\\_VALUE](#), [OPT\\_NOT\\_4\\_FD](#), [OPT\\_NOT\\_4\\_NET](#), [RM](#), [SKD\\_CHG](#), and [SNAPSHOT](#).

## 34.57.3.3 stdair::EventType::EventType ( const EventType &amp; iEventType )

Default copy constructor.

Definition at line 31 of file [EventType.cpp](#).

## 34.57.4 Member Function Documentation

34.57.4.1 const std::string & stdair::EventType::getLabel ( const EN\_EventType & iType )  
[static]

Get the label as a string (e.g., "BookingRequest" or "ScheduleChange").

Definition at line 64 of file [EventType.cpp](#).

Referenced by [stdair::EventQueue::updateStatus\(\)](#).

34.57.4.2 `char stdair::EventType::getTypeLabel ( const EN_EventType & iType )`  
`[static]`

Get the label as a single char (e.g., 'B' or 'S').

Definition at line 69 of file [EventType.cpp](#).

34.57.4.3 `std::string stdair::EventType::getTypeLabelAsString ( const EN_EventType & iType )`  
`[static]`

Get the label as a string of a single char (e.g., "B" or "S").

Definition at line 74 of file [EventType.cpp](#).

34.57.4.4 `std::string stdair::EventType::describeLabels ( )` `[static]`

List the labels.

Definition at line 81 of file [EventType.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [EventType\(\)](#).

34.57.4.5 `EventType::EN_EventType stdair::EventType::getType ( ) const`

Get the enumerated value.

Definition at line 93 of file [EventType.cpp](#).

34.57.4.6 `std::string stdair::EventType::getTypeAsString ( ) const`

Get the enumerated value as a short string (e.g., "B" or "S").

Definition at line 98 of file [EventType.cpp](#).

34.57.4.7 `const std::string stdair::EventType::describe ( ) const` `[virtual]`

Give a description of the structure (e.g., "BookingRequest" or "ScheduleChange").

Implements [stdair::StructAbstract](#).

Definition at line 105 of file [EventType.cpp](#).

34.57.4.8 `bool stdair::EventType::operator== ( const EN_EventType & iType ) const`

Comparison operator.

Definition at line 112 of file [EventType.cpp](#).

34.57.4.9 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const` `[inline, inherited]`

Dump a Business Object into an output stream.

### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.57.4.10 `virtual void stdair::StructAbstract::fromStream ( std::istream & ioln ) [inline, virtual, inherited]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

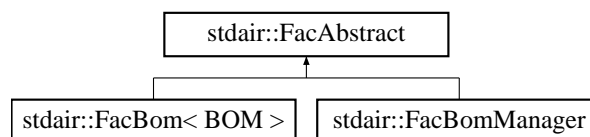
The documentation for this struct was generated from the following files:

- [stdair/basic/EventType.hpp](#)
- [stdair/basic/EventType.cpp](#)

## 34.58 stdair::FacAbstract Class Reference

```
#include <stdair/factory/FacAbstract.hpp>
```

Inheritance diagram for `stdair::FacAbstract`:



#### Public Member Functions

- virtual [~FacAbstract\(\)](#)

#### Protected Member Functions

- [FacAbstract\(\)](#)

## 34.58.1 Detailed Description

Base class for Factory layer.

Definition at line 10 of file [FacAbstract.hpp](#).

## 34.58.2 Constructor &amp; Destructor Documentation

## 34.58.2.1 stdair::FacAbstract::~~FacAbstract ( ) [virtual]

Destructor.

Definition at line 13 of file [FacAbstract.cpp](#).

## 34.58.2.2 stdair::FacAbstract::FacAbstract ( ) [inline, protected]

Default Constructor.

This constructor is protected to ensure the class is abstract.

Definition at line 18 of file [FacAbstract.hpp](#).

The documentation for this class was generated from the following files:

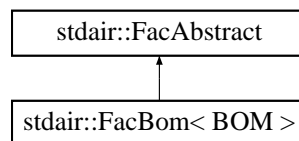
- [stdair/factory/FacAbstract.hpp](#)
- [stdair/factory/FacAbstract.cpp](#)

## 34.59 stdair::FacBom&lt; BOM &gt; Class Template Reference

Base class for Factory layer.

```
#include <stdair/factory/FacBom.hpp>
```

Inheritance diagram for stdair::FacBom< BOM >:



## Public Member Functions

- BOM & [create](#) ()
- BOM & [create](#) (const Key\_T &)
- [~FacBom](#) ()
- void [clean](#) ()

#### Static Public Member Functions

- static [FacBom](#) & [instance](#) ()

#### Protected Member Functions

- [FacBom](#) ()

#### 34.59.1 Detailed Description

`template<typename BOM>class stdair::FacBom< BOM >`

Base class for Factory layer.

Definition at line 22 of file [FacBom.hpp](#).

#### 34.59.2 Constructor & Destructor Documentation

**34.59.2.1** `template<typename BOM> stdair::FacBom< BOM >::FacBom ( )`  
[inline, protected]

Default Constructor.

Definition at line 49 of file [FacBom.hpp](#).

**34.59.2.2** `template<typename BOM> stdair::FacBom< BOM >::~~FacBom ( )`  
[inline]

Destructor.

Definition at line 55 of file [FacBom.hpp](#).

References [stdair::FacBom< BOM >::clean\(\)](#).

#### 34.59.3 Member Function Documentation

**34.59.3.1** `template<typename BOM > FacBom< BOM > & stdair::FacBom< BOM >::instance ( )` [static]

Provide the unique instance.

The singleton is instantiated when first used.

#### Returns

[FacBom](#)&

Definition at line 83 of file [FacBom.hpp](#).

References [stdair::FacSupervisor::instance\(\)](#), and [stdair::FacSupervisor::registerBomFactory\(\)](#).

34.59.3.2 `template<typename BOM > BOM & stdair::FacBom< BOM >::create ( )`

Create a BOM object, given a key or not.

Definition at line 111 of file [FacBom.hpp](#).

34.59.3.3 `template<typename BOM > BOM & stdair::FacBom< BOM >::create ( const Key_T & iKey )`

Definition at line 117 of file [FacBom.hpp](#).

34.59.3.4 `template<typename BOM > void stdair::FacBom< BOM >::clean ( )`

Destroyed all the object instantiated by this factory.

Definition at line 94 of file [FacBom.hpp](#).

Referenced by [stdair::FacBom< BOM >::~~FacBom\(\)](#).

The documentation for this class was generated from the following file:

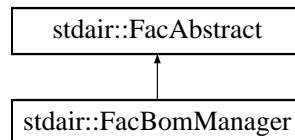
- [stdair/factory/FacBom.hpp](#)

## 34.60 stdair::FacBomManager Class Reference

Utility class for linking StdAir-based objects.

```
#include <stdair/factory/FacBomManager.hpp>
```

Inheritance diagram for `stdair::FacBomManager`:



### Public Member Functions

- [~FacBomManager](#) ( )
- `template<> void addToList (SegmentDate &ioSegmentDate, SegmentDate &ioMarketingSegmentDate)`

### Static Public Member Functions

- `template<typename OBJECT2 , typename OBJECT1 > static BomHolder< OBJECT2 > * getBomHolderPtr (OBJECT1 &)`
- `template<typename OBJECT2 , typename OBJECT1 > static BomHolder< OBJECT2 > & addBomHolder (OBJECT1 &)`



- `template<typename OBJECT1 , typename OBJECT2 >`  
static void [addToList](#) (OBJECT1 &, OBJECT2 &)
- `template<typename OBJECT1 , typename OBJECT2 >`  
static void [addToMap](#) (OBJECT1 &, OBJECT2 &, const [MapKey\\_T](#) &)
- `template<typename OBJECT1 , typename OBJECT2 >`  
static void [addToMap](#) (OBJECT1 &, OBJECT2 &)
- `template<typename OBJECT1 , typename OBJECT2 >`  
static void [addToListAndMap](#) (OBJECT1 &, OBJECT2 &)
- `template<typename OBJECT1 , typename OBJECT2 >`  
static void [addToListAndMap](#) (OBJECT1 &, OBJECT2 &, const [MapKey\\_T](#) &)
- `template<typename PARENT , typename CHILD >`  
static void [linkWithParent](#) (PARENT &, CHILD &)
- `template<typename OBJECT2 , typename OBJECT1 >`  
static void [cloneHolder](#) (OBJECT1 &, const OBJECT1 &)

#### Protected Member Functions

- [FacBomManager](#) ()

#### 34.60.1 Detailed Description

Utility class for linking StdAir-based objects.

Definition at line 28 of file [FacBomManager.hpp](#).

#### 34.60.2 Constructor & Destructor Documentation

##### 34.60.2.1 stdair::FacBomManager::FacBomManager ( ) [inline, protected]

Default Constructor.

This constructor is protected to comply with the singleton pattern.

Definition at line 200 of file [FacBomManager.hpp](#).

##### 34.60.2.2 stdair::FacBomManager::~~FacBomManager ( ) [inline]

Destructor.

Definition at line 206 of file [FacBomManager.hpp](#).

#### 34.60.3 Member Function Documentation

##### 34.60.3.1 `template<typename OBJECT2 , typename OBJECT1 > BomHolder< OBJECT2 > * stdair::FacBomManager::getBomHolderPtr ( OBJECT1 & ioObject1 ) [static]`

Retrieve a pointer on the holder of children (OBJECT2 type) for the parent (OBJECT1 type). If the holder does not exist, return NULL.

**Parameters**

<i>typename</i> OBJECT1& Parent object.
---

**Returns**

typename BomHolder<OBJECT2>\* [BomHolder](#) for the children objects.

Definition at line 239 of file [FacBomManager.hpp](#).

```
34.60.3.2  template<typename OBJECT2 , typename OBJECT1 > BomHolder< OBJECT2 >
          & stdair::FacBomManager::addBomHolder ( OBJECT1 & ioObject1 )  [static]
```

Instantiate a BomHolder<OBJECT2> object, add it to the OBJECT1-typed object, given as parameter, and return a reference on that newly created [BomHolder](#).

**Parameters**

<i>typename</i> OBJECT1& Parent object.
---

**Returns**

typename BomHolder<OBJECT2>& Just created [BomHolder](#) (e.g., for the children objects).

Definition at line 213 of file [FacBomManager.hpp](#).

```
34.60.3.3  template<typename OBJECT1 , typename OBJECT2 > void
          stdair::FacBomManager::addToList ( OBJECT1 & ioObject1, OBJECT2 & ioObject2 )
          [static]
```

Add an OBJECT2-typed object (typically, a child) to the dedicated list held by the OBJECT1-typed object (typically, a parent).

**Note**

The underlying list is actually stored within an object of type BomHolder<OBJECT2>.

**Parameters**

<i>typename</i> OBJECT1& Parent object.
---

<i>typename</i> OBJECT2& Child object.
--

Definition at line 299 of file [FacBomManager.hpp](#).

```
34.60.3.4  template<typename OBJECT1 , typename OBJECT2 > void
          stdair::FacBomManager::addToMap ( OBJECT1 & ioObject1, OBJECT2 & ioObject2,
          const MapKey_T & iKey )  [static]
```

Add an OBJECT2-typed object (typically, a child) to the dedicated map held by the OBJECT1-typed object (typically, a parent).

**Note**

The underlying map is actually stored within an object of type BomHolder<OBJECT2>.

**Parameters**

<i>typename</i>	OBJECT1& Parent object.
<i>typename</i>	OBJECT2& Child object.
<i>const</i>	MapKey_T&

Definition at line 347 of file [FacBomManager.hpp](#).

Referenced by [addToMap\(\)](#).

```
34.60.3.5  template<typename OBJECT1 , typename OBJECT2 > void
           stdair::FacBomManager::addToMap ( OBJECT1 & ioObject1, OBJECT2 & ioObject2 )
           [static]
```

Add an OBJECT2-typed object (typically, a child) to the dedicated map held by the OBJECT1-typed object (typically, a parent).

**Note**

The underlying map is actually stored within an object of type BomHolder<OBJECT2>.

**Parameters**

<i>typename</i>	OBJECT1& Parent object.
<i>typename</i>	OBJECT2& Child object.

Definition at line 366 of file [FacBomManager.hpp](#).

References [addToMap\(\)](#).

```
34.60.3.6  template<typename OBJECT1 , typename OBJECT2 > void
           stdair::FacBomManager::addToListAndMap ( OBJECT1 & ioObject1, OBJECT2 &
           ioObject2 ) [static]
```

Add an OBJECT2-typed object (typically, a child) to the dedicated containers (list and map) held by the OBJECT1-typed object (typically, a parent).

**Note**

The underlying containers are actually stored within an object of type BomHolder<OBJECT2>.

**Parameters**

<i>typename</i>	OBJECT1& Parent object.
<i>typename</i>	OBJECT2& Child object.

Definition at line 404 of file [FacBomManager.hpp](#).

```
34.60.3.7 template<typename OBJECT1 , typename OBJECT2 > void
stdair::FacBomManager::addToListAndMap ( OBJECT1 & ioObject1, OBJECT2 &
ioObject2, const MapKey_T & iKey ) [static]
```

Add an OBJECT2-typed object (typically, a child) to the dedicated containers (list and map) held by the OBJECT1-typed object (typically, a parent).

#### Note

The underlying containers are actually stored within an object of type BomHolder<OBJECT2>.

#### Parameters

<i>typename</i>	OBJECT1& Parent object.
<i>typename</i>	OBJECT2& Child object.
<i>const</i>	MapKey_T&

Definition at line 384 of file [FacBomManager.hpp](#).

```
34.60.3.8 template<typename PARENT , typename CHILD > void
stdair::FacBomManager::linkWithParent ( PARENT & ioParent, CHILD & ioChild )
[static]
```

Allow the CHILD object to store a pointer on its PARENT object.

#### Parameters

<i>typename</i>	PARENT& Parent object.
<i>typename</i>	CHILD& Child object.

Definition at line 422 of file [FacBomManager.hpp](#).

Referenced by [stdair::serialiseHelper\(\)](#).

```
34.60.3.9 template<typename OBJECT2 , typename OBJECT1 > void
stdair::FacBomManager::cloneHolder ( OBJECT1 & ioDest, const OBJECT1 & iOri )
[static]
```

Clone the underlying containers (held by the BomHolder<OBJECT2>-typed holder) of the OBJECT1-typed object.

#### Note

The underlying containers are actually stored within an object of type BomHolder<OBJECT2>.

#### Parameters

<i>typename</i>	OBJECT1& Parent object.
<i>typename</i>	OBJECT2& Child object.

Definition at line 430 of file [FacBomManager.hpp](#).

References [stdair::BomHolder< BOM >::\\_bomList](#), and [stdair::BomHolder< BOM >::\\_bomMap](#).

34.60.3.10 `template<> void stdair::FacBomManager::addToList ( SegmentDate & ioSegmentDate, SegmentDate & ioMarketingSegmentDate ) [inline]`

Definition at line 450 of file [FacBomManager.hpp](#).

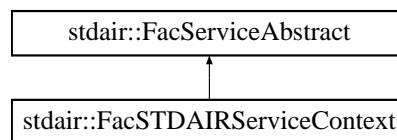
The documentation for this class was generated from the following file:

- [stdair/factory/FacBomManager.hpp](#)

## 34.61 stdair::FacServiceAbstract Class Reference

```
#include <stdair/service/FacServiceAbstract.hpp>
```

Inheritance diagram for `stdair::FacServiceAbstract`:



### Public Types

- `typedef std::vector< ServiceAbstract * > ServicePool\_T`

### Public Member Functions

- virtual `~FacServiceAbstract ()`
- void `clean ()`

### Protected Member Functions

- `FacServiceAbstract ()`

### Protected Attributes

- `ServicePool\_T _pool`

#### 34.61.1 Detailed Description

Base class for the (Service) Factory layer.

Definition at line 16 of file [FacServiceAbstract.hpp](#).

### 34.61.2 Member Typedef Documentation

#### 34.61.2.1 `typedef std::vector<ServiceAbstract*> stdair::FacServiceAbstract::ServicePool_T`

Define the list (pool) of Service objects.

Definition at line 20 of file [FacServiceAbstract.hpp](#).

### 34.61.3 Constructor & Destructor Documentation

#### 34.61.3.1 `stdair::FacServiceAbstract::~~FacServiceAbstract ( ) [virtual]`

Destructor.

Definition at line 13 of file [FacServiceAbstract.cpp](#).

References [clean\(\)](#).

#### 34.61.3.2 `stdair::FacServiceAbstract::FacServiceAbstract ( ) [inline, protected]`

Default Constructor.

This constructor is protected to ensure the class is abstract.

Definition at line 31 of file [FacServiceAbstract.hpp](#).

### 34.61.4 Member Function Documentation

#### 34.61.4.1 `void stdair::FacServiceAbstract::clean ( )`

Destroyed all the object instantiated by this factory.

Definition at line 18 of file [FacServiceAbstract.cpp](#).

References [\\_pool](#).

Referenced by [~FacServiceAbstract\(\)](#).

### 34.61.5 Member Data Documentation

#### 34.61.5.1 `ServicePool_T stdair::FacServiceAbstract::_pool [protected]`

List of instantiated Business Objects

Definition at line 34 of file [FacServiceAbstract.hpp](#).

Referenced by [clean\(\)](#), and [stdair::FacSTDAIRServiceContext::create\(\)](#).

The documentation for this class was generated from the following files:

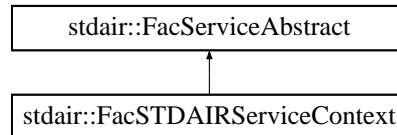
- [stdair/service/FacServiceAbstract.hpp](#)
- [stdair/service/FacServiceAbstract.cpp](#)

## 34.62 stdair::FacSTDAIRServiceContext Class Reference

Factory for [Bucket](#).

```
#include <stdair/service/FacSTDAIRServiceContext.hpp>
```

Inheritance diagram for stdair::FacSTDAIRServiceContext:



### Public Types

- typedef std::vector< [ServiceAbstract](#) \* > [ServicePool\\_T](#)

### Public Member Functions

- [~FacSTDAIRServiceContext](#) ()
- [STDAIR\\_ServiceContext & create](#) ()
- void [clean](#) ()

### Static Public Member Functions

- static [FacSTDAIRServiceContext & instance](#) ()

### Protected Member Functions

- [FacSTDAIRServiceContext](#) ()

### Protected Attributes

- [ServicePool\\_T \\_pool](#)

#### 34.62.1 Detailed Description

Factory for [Bucket](#).

Definition at line 18 of file [FacSTDAIRServiceContext.hpp](#).

### 34.62.2 Member Typedef Documentation

**34.62.2.1** `typedef std::vector<ServiceAbstract*>  
stdair::FacServiceAbstract::ServicePool_T  
[inherited]`

Define the list (pool) of Service objects.

Definition at line 20 of file [FacServiceAbstract.hpp](#).

### 34.62.3 Constructor & Destructor Documentation

**34.62.3.1** `stdair::FacSTDAIRServiceContext::~~FacSTDAIRServiceContext ( )`

Destructor.

The Destruction put the `_instance` to NULL in order to be clean for the next [FacSTDAIRServiceContext::instance\(\)](#).

Definition at line 16 of file [FacSTDAIRServiceContext.cpp](#).

**34.62.3.2** `stdair::FacSTDAIRServiceContext::FacSTDAIRServiceContext ( ) [inline,  
protected]`

Default Constructor.

This constructor is protected in order to ensure the singleton pattern.

Definition at line 54 of file [FacSTDAIRServiceContext.hpp](#).

Referenced by [instance\(\)](#).

### 34.62.4 Member Function Documentation

**34.62.4.1** `FacSTDAIRServiceContext & stdair::FacSTDAIRServiceContext::instance ( )  
[static]`

Provide the unique instance.

The singleton is instantiated when first used.

#### Returns

[FacSTDAIRServiceContext&](#)

Definition at line 21 of file [FacSTDAIRServiceContext.cpp](#).

References [FacSTDAIRServiceContext\(\)](#).

**34.62.4.2** `STDAIR_ServiceContext & stdair::FacSTDAIRServiceContext::create ( )`

Create a new [STDAIR\\_ServiceContext](#) object.

This new object is added to the list of instantiated objects.



**Returns**

[STDAIR\\_ServiceContext](#)& The newly created object.

Definition at line 33 of file [FacSTDAIRServiceContext.cpp](#).

References [stdair::FacServiceAbstract::\\_pool](#).

**34.62.4.3 void stdair::FacServiceAbstract::clean ( ) [inherited]**

Destroyed all the object instantiated by this factory.

Definition at line 18 of file [FacServiceAbstract.cpp](#).

References [stdair::FacServiceAbstract::\\_pool](#).

Referenced by [stdair::FacServiceAbstract::~~FacServiceAbstract\(\)](#).

**34.62.5 Member Data Documentation****34.62.5.1 ServicePool\_T stdair::FacServiceAbstract::\_pool [protected, inherited]**

List of instantiated Business Objects

Definition at line 34 of file [FacServiceAbstract.hpp](#).

Referenced by [stdair::FacServiceAbstract::clean\(\)](#), and [create\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/service/FacSTDAIRServiceContext.hpp](#)
- [stdair/service/FacSTDAIRServiceContext.cpp](#)

**34.63 stdair::FacSupervisor Class Reference**

```
#include <stdair/service/FacSupervisor.hpp>
```

**Public Types**

- typedef std::list< [FacAbstract \\*](#) > [BomFactoryPool\\_T](#)
- typedef std::list< [FacServiceAbstract \\*](#) > [ServiceFactoryPool\\_T](#)

**Public Member Functions**

- void [registerBomFactory](#) ([FacAbstract \\*](#))
- void [registerServiceFactory](#) ([FacServiceAbstract \\*](#))
- void [cleanBomLayer](#) ()
- void [cleanServiceLayer](#) ()
- [~FacSupervisor](#) ()

#### Static Public Member Functions

- static [FacSupervisor](#) & [instance](#) ()
- static void [cleanLoggerService](#) ()
- static void [cleanDBSessionManager](#) ()
- static void [cleanAll](#) ()

#### Protected Member Functions

- [FacSupervisor](#) ()
- [FacSupervisor](#) (const [FacSupervisor](#) &)

#### 34.63.1 Detailed Description

Singleton class to register and clean all Factories.

Definition at line 20 of file [FacSupervisor.hpp](#).

#### 34.63.2 Member Typedef Documentation

34.63.2.1 `typedef std::list<FacAbstract*>  
stdair::FacSupervisor::BomFactoryPool_T`

Define the pool (list) of factories.

Definition at line 25 of file [FacSupervisor.hpp](#).

34.63.2.2 `typedef std::list<FacServiceAbstract*>  
stdair::FacSupervisor::ServiceFactoryPool_T`

Definition at line 26 of file [FacSupervisor.hpp](#).

#### 34.63.3 Constructor & Destructor Documentation

34.63.3.1 `stdair::FacSupervisor::~~FacSupervisor ( )`

Destructor.

That destructors is applied on the static instance. It then deletes in turn all the other registered objects.

Definition at line 27 of file [FacSupervisor.cpp](#).

References [cleanBomLayer\(\)](#), and [cleanServiceLayer\(\)](#).

34.63.3.2 `stdair::FacSupervisor::FacSupervisor ( )` [`inline`, `protected`]

Default Constructor.

This constructor is protected to ensure the singleton pattern.

Definition at line 102 of file [FacSupervisor.hpp](#).

Referenced by [instance\(\)](#).

**34.63.3.3** `stdair::FacSupervisor::FacSupervisor ( const FacSupervisor & ) [inline, protected]`

Definition at line 103 of file [FacSupervisor.hpp](#).

#### 34.63.4 Member Function Documentation

**34.63.4.1** `FacSupervisor & stdair::FacSupervisor::instance ( ) [static]`

Provide the unique (static) instance of the [FacSupervisor](#) object.

The singleton is instantiated when first used.

##### Returns

[FacSupervisor&](#)

Definition at line 18 of file [FacSupervisor.cpp](#).

References [FacSupervisor\(\)](#).

Referenced by [stdair::FacBom< BOM >::instance\(\)](#).

**34.63.4.2** `void stdair::FacSupervisor::registerBomFactory ( FacAbstract * ioFac_ptr )`

Register a newly instantiated concrete factory for the Bom layer.

When a concrete Factory is firstly instantiated this factory have to register itself to the [FacSupervisor](#)

##### Parameters

<i>FacBom*</i>	The concrete Factory to register.
----------------	-----------------------------------

Definition at line 33 of file [FacSupervisor.cpp](#).

Referenced by [stdair::FacBom< BOM >::instance\(\)](#).

**34.63.4.3** `void stdair::FacSupervisor::registerServiceFactory ( FacServiceAbstract * ioFac_ptr )`

Register a newly instantiated concrete factory for the Service layer.

When a concrete Factory is firstly instantiated this factory have to register itself to the [FacSupervisor](#).

##### Parameters

<i>FacService-Abstract*</i>	the concrete Factory to register.
-----------------------------	-----------------------------------

Definition at line 38 of file [FacSupervisor.cpp](#).

34.63.4.4 void stdair::FacSupervisor::cleanBomLayer ( )

Clean all registered object.

Call the clean method of all the instantiated factories for the BomStructure layer.

Definition at line 43 of file [FacSupervisor.cpp](#).

Referenced by [~FacSupervisor\(\)](#).

34.63.4.5 void stdair::FacSupervisor::cleanServiceLayer ( )

Clean all Service created object.

Call the clean method of all the instantiated factories for the Service layer.

Definition at line 57 of file [FacSupervisor.cpp](#).

Referenced by [~FacSupervisor\(\)](#).

34.63.4.6 void stdair::FacSupervisor::cleanLoggerService ( ) [static]

Delete the static instance of the [Logger](#) object.

Definition at line 71 of file [FacSupervisor.cpp](#).

Referenced by [cleanAll\(\)](#).

34.63.4.7 void stdair::FacSupervisor::cleanDBSessionManager ( ) [static]

Delete the static instance of the [DBSessionManager](#) object.

Definition at line 77 of file [FacSupervisor.cpp](#).

Referenced by [cleanAll\(\)](#).

34.63.4.8 void stdair::FacSupervisor::cleanAll ( ) [static]

Clean the static instance. As the static instance (singleton) is deleted, all the other registered objects will be deleted in turn.

Definition at line 83 of file [FacSupervisor.cpp](#).

References [cleanDBSessionManager\(\)](#), and [cleanLoggerService\(\)](#).

The documentation for this class was generated from the following files:

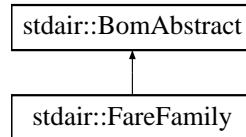
- [stdair/service/FacSupervisor.hpp](#)
- [stdair/service/FacSupervisor.cpp](#)

## 34.64 stdair::FareFamily Class Reference

Class representing the actual attributes for a family fare.

```
#include <stdair/bom/FareFamily.hpp>
```

Inheritance diagram for stdair::FareFamily:



#### Public Types

- typedef [FareFamilyKey](#) [Key\\_T](#)

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [FamilyCode\\_T](#) & [getFamilyCode](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Public Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T](#) [\\_holderMap](#)

#### Protected Member Functions

- [FareFamily](#) (const [Key\\_T](#) &)
- virtual [~FareFamily](#) ()

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

### 34.64.1 Detailed Description

Class representing the actual attributes for a family fare.

Definition at line 27 of file [FareFamily.hpp](#).

### 34.64.2 Member Typedef Documentation

#### 34.64.2.1 typedef FareFamilyKey stdair::FareFamily::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 37 of file [FareFamily.hpp](#).

### 34.64.3 Constructor & Destructor Documentation

#### 34.64.3.1 stdair::FareFamily::FareFamily ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 29 of file [FareFamily.cpp](#).

#### 34.64.3.2 stdair::FareFamily::~~FareFamily ( ) [protected, virtual]

Destructor.

Definition at line 33 of file [FareFamily.cpp](#).

### 34.64.4 Member Function Documentation

#### 34.64.4.1 const Key\_T& stdair::FareFamily::getKey ( ) const [inline]

Get the family fare key.

Definition at line 43 of file [FareFamily.hpp](#).

References [\\_key](#).

#### 34.64.4.2 BomAbstract\* const stdair::FareFamily::getParent ( ) const [inline]

Get the parent object.

Definition at line 48 of file [FareFamily.hpp](#).

References [\\_parent](#).

#### 34.64.4.3 const FamilyCode\_T& stdair::FareFamily::getFamilyCode ( ) const [inline]

Get the family fare code (part of the primary key).

Definition at line 53 of file [FareFamily.hpp](#).

References [\\_key](#), and [stdair::FareFamilyKey::getFamilyCode\(\)](#).

34.64.4.4 `const HolderMap_T& stdair::FareFamily::getHolderMap ( ) const` `[inline]`

Get the map of children holders.

Definition at line 58 of file [FareFamily.hpp](#).

References [\\_holderMap](#).

34.64.4.5 `void stdair::FareFamily::toStream ( std::ostream & ioOut ) const` `[inline, virtual]`

Dump a Business Object into an output stream.

#### Parameters

<code>ostream&amp;</code> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 70 of file [FareFamily.hpp](#).

References [toString\(\)](#).

34.64.4.6 `void stdair::FareFamily::fromStream ( std::istream & ioIn )` `[inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<code>istream&amp;</code> the input stream.
---

Implements [stdair::BomAbstract](#).

Definition at line 79 of file [FareFamily.hpp](#).

34.64.4.7 `std::string stdair::FareFamily::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [FareFamily.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.64.4.8 `const std::string stdair::FareFamily::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 90 of file [FareFamily.hpp](#).

References [\\_key](#), and [stdair::FareFamilyKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.64.4.9 `template<class Archive > void stdair::FareFamily::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 59 of file [FareFamily.cpp](#).

References [\\_key](#).

#### 34.64.5 Friends And Related Function Documentation

34.64.5.1 `friend class FacBom` [[friend](#)]

Definition at line 28 of file [FareFamily.hpp](#).

34.64.5.2 `friend class FacBomManager` [[friend](#)]

Definition at line 29 of file [FareFamily.hpp](#).

34.64.5.3 `friend class boost::serialization::access` [[friend](#)]

Definition at line 30 of file [FareFamily.hpp](#).

#### 34.64.6 Member Data Documentation

34.64.6.1 `Key_T stdair::FareFamily::_key`

Primary key (fare family code).

Definition at line 141 of file [FareFamily.hpp](#).

Referenced by [describeKey\(\)](#), [getFamilyCode\(\)](#), [getKey\(\)](#), and [serialize\(\)](#).

34.64.6.2 `BomAbstract* stdair::FareFamily::_parent`

Pointer on the parent class ([SegmentCabin](#)).

Definition at line 146 of file [FareFamily.hpp](#).

Referenced by [getParent\(\)](#).

34.64.6.3 `HolderMap_T stdair::FareFamily::_holderMap`

Map holding the children ([BookingClass](#) objects).

Definition at line 151 of file [FareFamily.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/bom/FareFamily.hpp](#)
- [stdair/bom/FareFamily.cpp](#)

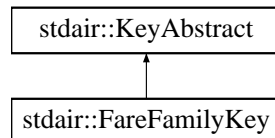


### 34.65 stdair::FareFamilyKey Struct Reference

Key of a given fare family, made of a fare family code.

```
#include <stdair/bom/FareFamilyKey.hpp>
```

Inheritance diagram for stdair::FareFamilyKey:



#### Public Member Functions

- [FareFamilyKey](#) (const [FamilyCode\\_T](#) &iFamilyCode)
- [FareFamilyKey](#) (const [FareFamilyKey](#) &)
- [~FareFamilyKey](#) ()
- const [FamilyCode\\_T](#) & [getFamilyCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Friends

- class [boost::serialization::access](#)

#### 34.65.1 Detailed Description

Key of a given fare family, made of a fare family code.

Definition at line 26 of file [FareFamilyKey.hpp](#).

#### 34.65.2 Constructor & Destructor Documentation

##### 34.65.2.1 stdair::FareFamilyKey::FareFamilyKey ( const FamilyCode\_T &iFamilyCode )

Constructor.

Definition at line 28 of file [FareFamilyKey.cpp](#).

##### 34.65.2.2 stdair::FareFamilyKey::FareFamilyKey ( const FareFamilyKey &iFareFamilyKey )

Copy constructor.

Definition at line 23 of file [FareFamilyKey.cpp](#).

### 34.65.2.3 stdair::FareFamilyKey::~~FareFamilyKey ( )

Destructor.

Definition at line 33 of file [FareFamilyKey.cpp](#).

### 34.65.3 Member Function Documentation

#### 34.65.3.1 const FamilyCode\_T& stdair::FareFamilyKey::getFamilyCode ( ) const [inline]

Get the family code.

Definition at line 56 of file [FareFamilyKey.hpp](#).

Referenced by [stdair::FareFamily::getFamilyCode\(\)](#).

#### 34.65.3.2 void stdair::FareFamilyKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 37 of file [FareFamilyKey.cpp](#).

References [toString\(\)](#).

#### 34.65.3.3 void stdair::FareFamilyKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [FareFamilyKey.cpp](#).

#### 34.65.3.4 const std::string stdair::FareFamilyKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 46 of file [FareFamilyKey.cpp](#).

Referenced by [stdair::FareFamily::describeKey\(\)](#), and [toStream\(\)](#).

34.65.3.5 `template<class Archive > void stdair::FareFamilyKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 68 of file [FareFamilyKey.cpp](#).

#### 34.65.4 Friends And Related Function Documentation

34.65.4.1 `friend class boost::serialization::access [friend]`

Definition at line 27 of file [FareFamilyKey.hpp](#).

The documentation for this struct was generated from the following files:

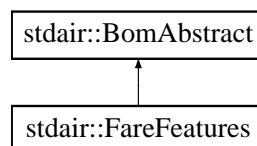
- [stdair/bom/FareFamilyKey.hpp](#)
- [stdair/bom/FareFamilyKey.cpp](#)

## 34.66 stdair::FareFeatures Class Reference

Class representing the actual attributes for a fare date-period.

```
#include <stdair/bom/FareFeatures.hpp>
```

Inheritance diagram for stdair::FareFeatures:



### Public Types

- typedef [FareFeaturesKey](#) [Key\\_T](#)

### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [TripType\\_T](#) & [getTripType](#) () const

- const [DayDuration\\_T](#) & [getAdvancePurchase](#) () const
- const [SaturdayStay\\_T](#) & [getSaturdayStay](#) () const
- const [ChangeFees\\_T](#) & [getChangeFees](#) () const
- const [NonRefundable\\_T](#) & [getRefundableOption](#) () const
- const [DayDuration\\_T](#) & [getMinimumStay](#) () const
- bool [isTripTypeValid](#) (const [TripType\\_T](#) &) const
- bool [isStayDurationValid](#) (const [DayDuration\\_T](#) &) const
- bool [isAdvancePurchaseValid](#) (const [DateTime\\_T](#) & [iBookingRequestDateTime](#), const [DateTime\\_T](#) & [iFlightDateTime](#)) const

#### Protected Member Functions

- [FareFeatures](#) (const [Key\\_T](#) &)
- virtual [~FareFeatures](#) ()

#### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.66.1 Detailed Description

Class representing the actual attributes for a fare date-period.

Definition at line 18 of file [FareFeatures.hpp](#).

#### 34.66.2 Member Typedef Documentation

##### 34.66.2.1 typedef FareFeaturesKey stdair::FareFeatures::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file [FareFeatures.hpp](#).

#### 34.66.3 Constructor & Destructor Documentation

##### 34.66.3.1 stdair::FareFeatures::FareFeatures ( const Key\_T & *iKey* ) [protected]

Main constructor.

Definition at line 34 of file [FareFeatures.cpp](#).

### 34.66.3.2 stdair::FareFeatures::~~FareFeatures ( ) [protected, virtual]

Destructor.

Definition at line 39 of file [FareFeatures.cpp](#).

### 34.66.4 Member Function Documentation

#### 34.66.4.1 void stdair::FareFeatures::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

##### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Implements [stdair::BomAbstract](#).

Definition at line 36 of file [FareFeatures.hpp](#).

References [toString\(\)](#).

#### 34.66.4.2 void stdair::FareFeatures::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

##### Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Implements [stdair::BomAbstract](#).

Definition at line 45 of file [FareFeatures.hpp](#).

#### 34.66.4.3 std::string stdair::FareFeatures::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 43 of file [FareFeatures.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

#### 34.66.4.4 const std::string stdair::FareFeatures::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 56 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::toString\(\)](#).

Referenced by [toString\(\)](#).

**34.66.4.5** `const Key_T& stdair::FareFeatures::getKey ( ) const` `[inline]`

Get the primary key (trip type, advance purchase,... ,cabin code).

Definition at line 66 of file [FareFeatures.hpp](#).

References [\\_key](#).

**34.66.4.6** `BomAbstract* const stdair::FareFeatures::getParent ( ) const` `[inline]`

Get a reference on the parent object instance.

Definition at line 73 of file [FareFeatures.hpp](#).

References [\\_parent](#).

**34.66.4.7** `const HolderMap_T& stdair::FareFeatures::getHolderMap ( ) const` `[inline]`

Get a reference on the children holder.

Definition at line 80 of file [FareFeatures.hpp](#).

References [\\_holderMap](#).

**34.66.4.8** `const TripType_T& stdair::FareFeatures::getTripType ( ) const` `[inline]`

Get the trip type.

Definition at line 87 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::getTripType\(\)](#).

Referenced by [isTripTypeValid\(\)](#).

**34.66.4.9** `const DayDuration_T& stdair::FareFeatures::getAdvancePurchase ( ) const`  
`[inline]`

Get the fare day duration.

Definition at line 94 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::getAdvancePurchase\(\)](#).

Referenced by [isAdvancePurchaseValid\(\)](#).

**34.66.4.10** `const SaturdayStay_T& stdair::FareFeatures::getSaturdayStay ( ) const`  
`[inline]`

Get the fare saturday stay option.

Definition at line 101 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::getSaturdayStay\(\)](#).

34.66.4.11 **const ChangeFees\_T& stdair::FareFeatures::getChangeFees ( ) const**  
[inline]

Get the change fees criterion.

Definition at line 108 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::getChangeFees\(\)](#).

34.66.4.12 **const NonRefundable\_T& stdair::FareFeatures::getRefundableOption ( ) const**  
[inline]

Get the refundable option.

Definition at line 115 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::getRefundableOption\(\)](#).

34.66.4.13 **const DayDuration\_T& stdair::FareFeatures::getMinimumStay ( ) const**  
[inline]

Get the minimum stay.

Definition at line 122 of file [FareFeatures.hpp](#).

References [\\_key](#), and [stdair::FareFeaturesKey::getMinimumStay\(\)](#).

Referenced by [isStayDurationValid\(\)](#).

34.66.4.14 **bool stdair::FareFeatures::isTripTypeValid ( const TripType\_T &  
*iBookingRequestTripType* ) const**

Check whether the fare rule trip type corresponds to the booking request trip type.

Definition at line 51 of file [FareFeatures.cpp](#).

References [getTripType\(\)](#), [stdair::TRIP\\_TYPE\\_INBOUND](#), [stdair::TRIP\\_TYPE\\_OUTBOUND](#), and [stdair::TRIP\\_TYPE\\_ROUND\\_TRIP](#).

34.66.4.15 **bool stdair::FareFeatures::isStayDurationValid ( const DayDuration\_T &  
*iStayDuration* ) const**

Check whether a given stay duration is greater or equal to the minimum stay of the fare rule.

Definition at line 76 of file [FareFeatures.cpp](#).

References [getMinimumStay\(\)](#).

34.66.4.16 **bool stdair::FareFeatures::isAdvancePurchaseValid ( const DateTime\_T &  
*iBookingRequestDateTime*, const DateTime\_T & *iFlightDateTime* ) const**

Check whether a booking request date is valid compared the required advance purchase number of days of the fare rule.

Definition at line 89 of file [FareFeatures.cpp](#).

References [getAdvancePurchase\(\)](#).

### 34.66.5 Friends And Related Function Documentation

#### 34.66.5.1 friend class FacBom [friend]

Definition at line 19 of file [FareFeatures.hpp](#).

#### 34.66.5.2 friend class FacBomManager [friend]

Definition at line 20 of file [FareFeatures.hpp](#).

### 34.66.6 Member Data Documentation

#### 34.66.6.1 Key\_T stdair::FareFeatures::\_key [protected]

Primary key (flight number and departure date).

Definition at line 175 of file [FareFeatures.hpp](#).

Referenced by [describeKey\(\)](#), [getAdvancePurchase\(\)](#), [getChangeFees\(\)](#), [getKey\(\)](#), [getMinimumStay\(\)](#), [getRefundableOption\(\)](#), [getSaturdayStay\(\)](#), and [getTripType\(\)](#).

#### 34.66.6.2 BomAbstract\* stdair::FareFeatures::\_parent [protected]

Pointer on the parent class.

Definition at line 180 of file [FareFeatures.hpp](#).

Referenced by [getParent\(\)](#).

#### 34.66.6.3 HolderMap\_T stdair::FareFeatures::\_holderMap [protected]

Map holding the children.

Definition at line 185 of file [FareFeatures.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

- [stdair/bom/FareFeatures.hpp](#)
- [stdair/bom/FareFeatures.cpp](#)

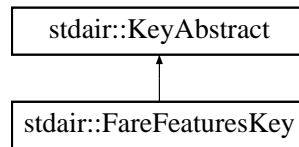
## 34.67 stdair::FareFeaturesKey Struct Reference

Key of date-period.

```
#include <stdair/bom/FareFeaturesKey.hpp>
```

Inheritance diagram for stdair::FareFeaturesKey:





### Public Member Functions

- [FareFeaturesKey](#) (const [TripType\\_T](#) &, const [DayDuration\\_T](#) &, const [SaturdayStay\\_T](#) &, const [ChangeFees\\_T](#) &, const [NonRefundable\\_T](#) &, const [DayDuration\\_T](#) &)
- [FareFeaturesKey](#) (const [FareFeaturesKey](#) &)
- [~FareFeaturesKey](#) ()
- const [TripType\\_T](#) & [getTripType](#) () const
- const [DayDuration\\_T](#) & [getAdvancePurchase](#) () const
- const [SaturdayStay\\_T](#) & [getSaturdayStay](#) () const
- const [ChangeFees\\_T](#) & [getChangeFees](#) () const
- const [NonRefundable\\_T](#) & [getRefundableOption](#) () const
- const [DayDuration\\_T](#) & [getMinimumStay](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.67.1 Detailed Description

Key of date-period.

Definition at line 18 of file [FareFeaturesKey.hpp](#).

#### 34.67.2 Constructor & Destructor Documentation

**34.67.2.1** `stdair::FareFeaturesKey::FareFeaturesKey ( const TripType\_T & iTripType, const DayDuration\_T & iAdvancePurchase, const SaturdayStay\_T & iSaturdayStay, const ChangeFees\_T & iChangeFees, const NonRefundable\_T & iNonRefundable, const DayDuration\_T & iMinimumStay )`

Main constructor.

Definition at line 26 of file [FareFeaturesKey.cpp](#).

**34.67.2.2** `stdair::FareFeaturesKey::FareFeaturesKey ( const FareFeaturesKey & iKey )`

Copy constructor.

Definition at line 38 of file [FareFeaturesKey.cpp](#).

### 34.67.2.3 stdair::FareFeaturesKey::~~FareFeaturesKey ( )

Destructor.

Definition at line 48 of file [FareFeaturesKey.cpp](#).

## 34.67.3 Member Function Documentation

### 34.67.3.1 const TripType\_T& stdair::FareFeaturesKey::getTripType ( ) const [inline]

Get the fare trip type.

Definition at line 39 of file [FareFeaturesKey.hpp](#).

Referenced by [stdair::FareFeatures::getTripType\(\)](#).

### 34.67.3.2 const DayDuration\_T& stdair::FareFeaturesKey::getAdvancePurchase ( ) const [inline]

Get the fare day duration.

Definition at line 46 of file [FareFeaturesKey.hpp](#).

Referenced by [stdair::FareFeatures::getAdvancePurchase\(\)](#).

### 34.67.3.3 const SaturdayStay\_T& stdair::FareFeaturesKey::getSaturdayStay ( ) const [inline]

Get the fare saturday stay option.

Definition at line 53 of file [FareFeaturesKey.hpp](#).

Referenced by [stdair::FareFeatures::getSaturdayStay\(\)](#).

### 34.67.3.4 const ChangeFees\_T& stdair::FareFeaturesKey::getChangeFees ( ) const [inline]

Get the change fees criterion.

Definition at line 60 of file [FareFeaturesKey.hpp](#).

Referenced by [stdair::FareFeatures::getChangeFees\(\)](#).

### 34.67.3.5 const NonRefundable\_T& stdair::FareFeaturesKey::getRefundableOption ( ) const [inline]

Get the refundable option.

Definition at line 67 of file [FareFeaturesKey.hpp](#).

Referenced by [stdair::FareFeatures::getRefundableOption\(\)](#).

### 34.67.3.6 const DayDuration\_T& stdair::FareFeaturesKey::getMinimumStay ( ) const [inline]

Get the minimum stay.

Definition at line 74 of file [FareFeaturesKey.hpp](#).

Referenced by [stdair::FareFeatures::getMinimumStay\(\)](#).

```
34.67.3.7 void stdair::FareFeaturesKey::toStream ( std::ostream & ioOut ) const
          [virtual]
```

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 52 of file [FareFeaturesKey.cpp](#).

References [toString\(\)](#).

```
34.67.3.8 void stdair::FareFeaturesKey::fromStream ( std::istream & ioln ) [virtual]
```

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 57 of file [FareFeaturesKey.cpp](#).

```
34.67.3.9 const std::string stdair::FareFeaturesKey::toString ( ) const [virtual]
```

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 61 of file [FareFeaturesKey.cpp](#).

Referenced by [stdair::FareFeatures::describeKey\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

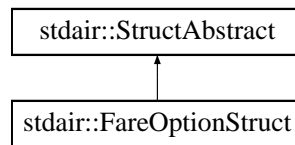
- [stdair/bom/FareFeaturesKey.hpp](#)
- [stdair/bom/FareFeaturesKey.cpp](#)

## 34.68 stdair::FareOptionStruct Struct Reference

Structure holding the elements of a fare option.

```
#include <stdair/bom/FareOptionStruct.hpp>
```

Inheritance diagram for [stdair::FareOptionStruct](#):



### Public Member Functions

- const [ClassList\\_StringList\\_T](#) & [getClassPath](#) () const
- const [Fare\\_T](#) & [getFare](#) () const
- const [Availability\\_T](#) & [getAvailability](#) () const
- const [ChangeFees\\_T](#) [getChangeFees](#) () const
- const [NonRefundable\\_T](#) [getNonRefundable](#) () const
- const [SaturdayStay\\_T](#) [getSaturdayStay](#) () const
- void [addClassList](#) (const std::string)
- void [emptyClassList](#) ()
- void [setFare](#) (const [Fare\\_T](#) &iFare)
- void [setAvailability](#) (const [Availability\\_T](#) &iAvl)
- void [setChangeFees](#) (const [ChangeFees\\_T](#) iRes)
- void [setNonRefundable](#) (const [NonRefundable\\_T](#) iRes)
- void [setSaturdayStay](#) (const [SaturdayStay\\_T](#) iRes)
- void [toStream](#) (std::ostream &iOut) const
- void [fromStream](#) (std::istream &iIn)
- const std::string [describe](#) () const
- const std::string [display](#) () const
- [FareOptionStruct](#) ()
- [FareOptionStruct](#) (const std::string &iClassPath, const [Fare\\_T](#) &, const [ChangeFees\\_T](#) &, const [NonRefundable\\_T](#) &, const [SaturdayStay\\_T](#) &)
- [FareOptionStruct](#) (const [FareOptionStruct](#) &)
- [~FareOptionStruct](#) ()

#### 34.68.1 Detailed Description

Structure holding the elements of a fare option.

Definition at line 20 of file [FareOptionStruct.hpp](#).

#### 34.68.2 Constructor & Destructor Documentation

##### 34.68.2.1 stdair::FareOptionStruct::FareOptionStruct ( )

Default constructor.

Definition at line 14 of file [FareOptionStruct.cpp](#).

34.68.2.2 `stdair::FareOptionStruct::FareOptionStruct ( const std::string & iClassPath, const Fare_T & iFare, const ChangeFees_T & iChangeFee, const NonRefundable_T & iNonRefundable, const SaturdayStay_T & iSaturdayNightStay )`

Main constructor.

Definition at line 26 of file [FareOptionStruct.cpp](#).

34.68.2.3 `stdair::FareOptionStruct::FareOptionStruct ( const FareOptionStruct & iFO )`

Copy constructor.

Definition at line 19 of file [FareOptionStruct.cpp](#).

34.68.2.4 `stdair::FareOptionStruct::~~FareOptionStruct ( )`

Destructor.

Definition at line 38 of file [FareOptionStruct.cpp](#).

### 34.68.3 Member Function Documentation

34.68.3.1 `const ClassList_StringList_T& stdair::FareOptionStruct::getClassPath ( ) const`  
[inline]

Get the class-path.

Definition at line 24 of file [FareOptionStruct.hpp](#).

34.68.3.2 `const Fare_T& stdair::FareOptionStruct::getFare ( ) const` [inline]

Get the fare value.

Definition at line 29 of file [FareOptionStruct.hpp](#).

34.68.3.3 `const Availability_T& stdair::FareOptionStruct::getAvailability ( ) const`  
[inline]

Get the availability.

Definition at line 34 of file [FareOptionStruct.hpp](#).

34.68.3.4 `const ChangeFees_T stdair::FareOptionStruct::getChangeFees ( ) const`  
[inline]

Get the change fees.

Definition at line 39 of file [FareOptionStruct.hpp](#).

34.68.3.5 `const NonRefundable_T stdair::FareOptionStruct::getNonRefundable ( ) const`  
[inline]

State whether the ticket is refundable.

Definition at line 44 of file [FareOptionStruct.hpp](#).

34.68.3.6 `const SaturdayStay_T stdair::FareOptionStruct::getSaturdayStay ( ) const`  
[inline]

State whether there is a condition on the saturday night stay.

Definition at line 49 of file [FareOptionStruct.hpp](#).

34.68.3.7 `void stdair::FareOptionStruct::addClassList ( const std::string iClassCodeList )`

Set the class-path.

Definition at line 93 of file [FareOptionStruct.cpp](#).

34.68.3.8 `void stdair::FareOptionStruct::emptyClassList ( )`

Empty the class-path.

Definition at line 98 of file [FareOptionStruct.cpp](#).

34.68.3.9 `void stdair::FareOptionStruct::setFare ( const Fare_T & iFare )` [inline]

Set the fare value.

Definition at line 63 of file [FareOptionStruct.hpp](#).

34.68.3.10 `void stdair::FareOptionStruct::setAvailability ( const Availability_T & iAvl )`  
[inline]

Set the availability.

Definition at line 68 of file [FareOptionStruct.hpp](#).

34.68.3.11 `void stdair::FareOptionStruct::setChangeFees ( const ChangeFees_T iRes )`  
[inline]

Set the change fees.

Definition at line 73 of file [FareOptionStruct.hpp](#).

34.68.3.12 `void stdair::FareOptionStruct::setNonRefundable ( const NonRefundable_T iRes )`  
[inline]

Set the flag for the ticket refundability.

Definition at line 78 of file [FareOptionStruct.hpp](#).

34.68.3.13 `void stdair::FareOptionStruct::setSaturdayStay ( const SaturdayStay_T iRes )`  
[inline]

Set the flag for the saturday night stay condition.

Definition at line 83 of file [FareOptionStruct.hpp](#).

34.68.3.14 `void stdair::FareOptionStruct::toStream ( std::ostream & ioOut ) const`

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 42 of file [FareOptionStruct.cpp](#).

References [describe\(\)](#).

34.68.3.15 void stdair::FareOptionStruct::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 47 of file [FareOptionStruct.cpp](#).

34.68.3.16 const std::string stdair::FareOptionStruct::describe ( ) const [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 51 of file [FareOptionStruct.cpp](#).

Referenced by [stdair::TravelSolutionStruct::describe\(\)](#), and [toStream\(\)](#).

34.68.3.17 const std::string stdair::FareOptionStruct::display ( ) const

Display of the structure.

Definition at line 73 of file [FareOptionStruct.cpp](#).

Referenced by [stdair::TravelSolutionStruct::display\(\)](#).

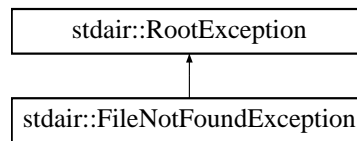
The documentation for this struct was generated from the following files:

- [stdair/bom/FareOptionStruct.hpp](#)
- [stdair/bom/FareOptionStruct.cpp](#)

**34.69 stdair::FileNotFoundException Class Reference**

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::FileNotFoundException:



#### Public Member Functions

- [FileNotFoundException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

#### 34.69.1 Detailed Description

File not found.

Definition at line 50 of file [stdair\\_exceptions.hpp](#).

#### 34.69.2 Constructor & Destructor Documentation

34.69.2.1 `stdair::FileNotFoundException::FileNotFoundException ( const std::string & iWhat )`  
[inline]

Constructor.

Definition at line 53 of file [stdair\\_exceptions.hpp](#).

#### 34.69.3 Member Function Documentation

34.69.3.1 `const char* stdair::RootException::what ( ) const throw ()` [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.69.4 Member Data Documentation

34.69.4.1 `std::string stdair::RootException::_what` [protected, inherited]

Details for the exception.



Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

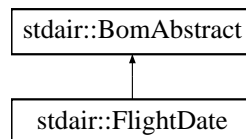
- [stdair/stdair\\_exceptions.hpp](#)

## 34.70 stdair::FlightDate Class Reference

Class representing the actual attributes for an airline flight-date.

```
#include <stdair/bom/FlightDate.hpp>
```

Inheritance diagram for stdair::FlightDate:



### Public Types

- typedef [FlightDateKey](#) [Key\\_T](#)

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [FlightNumber\\_T](#) & [getFlightNumber](#) () const
- const [Date\\_T](#) & [getDepartureDate](#) () const
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- [LegDate](#) \* [getLegDate](#) (const std::string &iLegDateKeyStr) const
- [LegDate](#) \* [getLegDate](#) (const [LegDateKey](#) &) const
- [SegmentDate](#) \* [getSegmentDate](#) (const std::string &iSegmentDateKeyStr) const
- [SegmentDate](#) \* [getSegmentDate](#) (const [SegmentDateKey](#) &) const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

## Protected Member Functions

- `FlightDate` (const `Key_T` &)
- virtual `~FlightDate` ()

## Protected Attributes

- `Key_T_key`
- `BomAbstract` \* `_parent`
- `HolderMap_T_holderMap`

## Friends

- class `FacBom`
- class `FacBomManager`
- class `boost::serialization::access`

## 34.70.1 Detailed Description

Class representing the actual attributes for an airline flight-date.

Definition at line 35 of file `FlightDate.hpp`.

## 34.70.2 Member Typedef Documentation

34.70.2.1 `typedef FlightDateKey stdair::FlightDate::Key_T`

Definition allowing to retrieve the associated BOM key type.

Definition at line 45 of file `FlightDate.hpp`.

## 34.70.3 Constructor &amp; Destructor Documentation

34.70.3.1 `stdair::FlightDate::FlightDate ( const Key_T & iKey )` [protected]

Main constructor.

Definition at line 30 of file `FlightDate.cpp`.

34.70.3.2 `stdair::FlightDate::~FlightDate ( )` [protected, virtual]

Destructor.

Definition at line 34 of file `FlightDate.cpp`.

## 34.70.4 Member Function Documentation

34.70.4.1 `const Key_T& stdair::FlightDate::getKey ( ) const` `[inline]`

Get the flight-date key.

Definition at line 51 of file [FlightDate.hpp](#).

References [\\_key](#).

34.70.4.2 `BomAbstract* const stdair::FlightDate::getParent ( ) const` `[inline]`

Get the parent object.

Definition at line 56 of file [FlightDate.hpp](#).

References [\\_parent](#).

Referenced by [getAirlineCode\(\)](#).

34.70.4.3 `const FlightNumber_T& stdair::FlightDate::getFlightNumber ( ) const`  
`[inline]`

Get the flight number (part of the primary key).

Definition at line 61 of file [FlightDate.hpp](#).

References [\\_key](#), and [stdair::FlightDateKey::getFlightNumber\(\)](#).

Referenced by [stdair::BomJSONExport::jsonExport\(\)](#).

34.70.4.4 `const Date_T& stdair::FlightDate::getDepartureDate ( ) const` `[inline]`

Get the flight date (part of the primary key).

Definition at line 66 of file [FlightDate.hpp](#).

References [\\_key](#), and [stdair::FlightDateKey::getDepartureDate\(\)](#).

Referenced by [stdair::BomJSONExport::jsonExport\(\)](#).

34.70.4.5 `const AirlineCode_T & stdair::FlightDate::getAirlineCode ( ) const`

Get the airline code (key of the parent object).

**Note**

That method assumes that the parent object derives from the [Inventory](#) class, as it needs to have access to the [getAirlineCode\(\)](#) method.

Definition at line 38 of file [FlightDate.cpp](#).

References [stdair::Inventory::getAirlineCode\(\)](#), and [getParent\(\)](#).

Referenced by [stdair::LegDate::getAirlineCode\(\)](#), and [stdair::BomJSONExport::jsonExport\(\)](#).

34.70.4.6 `const HolderMap_T& stdair::FlightDate::getHolderMap ( ) const` `[inline]`

Get the map of children holders.

Definition at line 82 of file [FlightDate.hpp](#).

References [\\_holderMap](#).

**34.70.4.7** `LegDate * stdair::FlightDate::getLegDate ( const std::string & iLegDateKeyStr ) const`

Get a pointer on the [LegDate](#) object corresponding to the given key.

#### Note

The [LegDate](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

#### Parameters

<code>const</code> <a href="#">std::string&amp;</a> The leg-date key.
---

#### Returns

`LegDate*` Found [LegDate](#) object. NULL if not found.

Definition at line 53 of file [FlightDate.cpp](#).

Referenced by [getLegDate\(\)](#), and [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#).

**34.70.4.8** `LegDate * stdair::FlightDate::getLegDate ( const LegDateKey & iLegDateKey ) const`

Get a pointer on the [LegDate](#) object corresponding to the given key.

#### Note

The [LegDate](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

#### Parameters

<code>const</code> <a href="#">LegDateKey&amp;</a> The leg-date key
---

#### Returns

`LegDate*` Found [LegDate](#) object. NULL if not found.

Definition at line 60 of file [FlightDate.cpp](#).

References [getLegDate\(\)](#), and [stdair::LegDateKey::toString\(\)](#).

**34.70.4.9** `SegmentDate * stdair::FlightDate::getSegmentDate ( const std::string & iSegmentDateKeyStr ) const`

Get a pointer on the [SegmentDate](#) object corresponding to the given key.

#### Note

The [SegmentDate](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>`

cast<> may be needed.

#### Parameters

<i>const</i> std::string& The segment-date key.
---

#### Returns

SegmentDate\* Found [SegmentDate](#) object. NULL if not found.

Definition at line 66 of file [FlightDate.cpp](#).

Referenced by [getSegmentDate\(\)](#), [stdair::BomRetriever::retrieveDummySegmentCabin\(\)](#), [stdair::BomRetriever::retrieveSegmentDateFromKey\(\)](#), and [stdair::BomRetriever::retrieveSegmentDateFromLongKey\(\)](#).

34.70.4.10 **SegmentDate** \* [stdair::FlightDate::getSegmentDate](#) ( *const* **SegmentDateKey** & *iSegmentDateKey* ) *const*

Get a pointer on the [SegmentDate](#) object corresponding to the given key.

#### Note

The [SegmentDate](#) object can be inherited from, if needed. In that case, a dynamic\_cast<> may be needed.

#### Parameters

<i>const</i> <a href="#">SegmentDateKey</a> & The segment-date key
--

#### Returns

SegmentDate\* Found [SegmentDate](#) object. NULL if not found.

Definition at line 74 of file [FlightDate.cpp](#).

References [getSegmentDate\(\)](#), and [stdair::SegmentDateKey::toString\(\)](#).

34.70.4.11 **void** [stdair::FlightDate::toStream](#) ( *std::ostream* & *ioOut* ) *const* [*inline*, *virtual*]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream</i> & the output stream.
-------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 141 of file [FlightDate.hpp](#).

References [toString\(\)](#).

34.70.4.12 `void stdair::FlightDate::fromStream ( std::istream & ioIn ) [inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 150 of file [FlightDate.hpp](#).

34.70.4.13 `std::string stdair::FlightDate::toString ( ) const [virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 46 of file [FlightDate.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.70.4.14 `const std::string stdair::FlightDate::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 161 of file [FlightDate.hpp](#).

References [\\_key](#), and [stdair::FlightDateKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.70.4.15 `template<class Archive > void stdair::FlightDate::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 187 of file [CmdBomSerialiser.cpp](#).

References [\\_key](#).

#### 34.70.5 Friends And Related Function Documentation

34.70.5.1 `friend class FacBom [friend]`

Definition at line 36 of file [FlightDate.hpp](#).

34.70.5.2 `friend class FacBomManager [friend]`

Definition at line 37 of file [FlightDate.hpp](#).

34.70.5.3 friend class boost::serialization::access [friend]

Definition at line 38 of file [FlightDate.hpp](#).

#### 34.70.6 Member Data Documentation

34.70.6.1 Key\_T stdair::FlightDate::\_key [protected]

Primary key (flight number and departure date).

Definition at line 215 of file [FlightDate.hpp](#).

Referenced by [describeKey\(\)](#), [getDepartureDate\(\)](#), [getFlightNumber\(\)](#), [getKey\(\)](#), and [serialize\(\)](#).

34.70.6.2 BomAbstract\* stdair::FlightDate::\_parent [protected]

Pointer on the parent class ([Inventory](#)).

Definition at line 220 of file [FlightDate.hpp](#).

Referenced by [getParent\(\)](#).

34.70.6.3 HolderMap\_T stdair::FlightDate::\_holderMap [protected]

Map holding the children ([SegmentDate](#) and [LegDate](#) objects).

Definition at line 225 of file [FlightDate.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

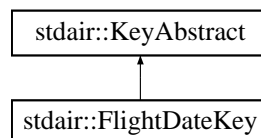
- [stdair/bom/FlightDate.hpp](#)
- [stdair/bom/FlightDate.cpp](#)
- [stdair/command/CmdBomSerialiser.cpp](#)

## 34.71 stdair::FlightDateKey Struct Reference

Key of a given flight-date, made of a flight number and a departure date.

```
#include <stdair/bom/FlightDateKey.hpp>
```

Inheritance diagram for stdair::FlightDateKey:



## Public Member Functions

- `FlightDateKey` (const `FlightNumber_T` &, const `Date_T` &)
- `FlightDateKey` (const `FlightDateKey` &)
- `~FlightDateKey` ()
- const `FlightNumber_T` & `getFlightNumber` () const
- const `Date_T` & `getDepartureDate` () const
- void `toStream` (std::ostream &ioOut) const
- void `fromStream` (std::istream &ioIn)
- const std::string `toString` () const
- template<class Archive >  
void `serialize` (Archive &ar, const unsigned int iFileVersion)

## Friends

- class `boost::serialization::access`

## 34.71.1 Detailed Description

Key of a given flight-date, made of a flight number and a departure date.

Definition at line 28 of file `FlightDateKey.hpp`.

## 34.71.2 Constructor &amp; Destructor Documentation

34.71.2.1 `stdair::FlightDateKey::FlightDateKey ( const FlightNumber_T & iFlightNumber, const Date_T & iFlightDate )`

Constructor.

Definition at line 28 of file `FlightDateKey.cpp`.

34.71.2.2 `stdair::FlightDateKey::FlightDateKey ( const FlightDateKey & iKey )`

Copy constructor.

Definition at line 34 of file `FlightDateKey.cpp`.

34.71.2.3 `stdair::FlightDateKey::~~FlightDateKey ( )`

Destructor.

Definition at line 39 of file `FlightDateKey.cpp`.

## 34.71.3 Member Function Documentation

34.71.3.1 `const FlightNumber_T & stdair::FlightDateKey::getFlightNumber ( ) const`  
[inline]

Get the flight number.



Definition at line 58 of file [FlightDateKey.hpp](#).

Referenced by [stdair::FlightDate::getFlightNumber\(\)](#).

34.71.3.2 `const Date_T& stdair::FlightDateKey::getDepartureDate ( ) const [inline]`

Get the departure date of the (first leg of the) flight.

Definition at line 63 of file [FlightDateKey.hpp](#).

Referenced by [stdair::OnDDateKey::getDate\(\)](#), and [stdair::FlightDate::getDepartureDate\(\)](#).

34.71.3.3 `void stdair::FlightDateKey::toStream ( std::ostream & ioOut ) const [virtual]`

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 43 of file [FlightDateKey.cpp](#).

References [toString\(\)](#).

34.71.3.4 `void stdair::FlightDateKey::fromStream ( std::istream & iIn ) [virtual]`

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 48 of file [FlightDateKey.cpp](#).

34.71.3.5 `const std::string stdair::FlightDateKey::toString ( ) const [virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 52 of file [FlightDateKey.cpp](#).

References [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#).

Referenced by [stdair::FlightDate::describeKey\(\)](#), [stdair::Inventory::getFlightDate\(\)](#), [stdair::BomRetriever::retrieveSegment\(\)](#) and [toStream\(\)](#).

34.71.3.6 `template<class Archive > void stdair::FlightDateKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 77 of file [FlightDateKey.cpp](#).

#### 34.71.4 Friends And Related Function Documentation

34.71.4.1 `friend class boost::serialization::access [friend]`

Definition at line 29 of file [FlightDateKey.hpp](#).

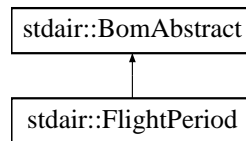
The documentation for this struct was generated from the following files:

- [stdair/bom/FlightDateKey.hpp](#)
- [stdair/bom/FlightDateKey.cpp](#)

## 34.72 stdair::FlightPeriod Class Reference

```
#include <stdair/bom/FlightPeriod.hpp>
```

Inheritance diagram for stdair::FlightPeriod:



### Public Types

- typedef [FlightPeriodKey](#) Key\_T

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [FlightNumber\\_T](#) & [getFlightNumber](#) () const
- const [PeriodStruct](#) & [getPeriod](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const

### Protected Member Functions

- [FlightPeriod](#) (const [Key\\_T](#) &)
- [FlightPeriod](#) (const [FlightPeriod](#) &)
- [~FlightPeriod](#) ()

### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T \\_holderMap](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.72.1 Detailed Description

Class representing the actual attributes for an airline flight-period.

Definition at line 15 of file [FlightPeriod.hpp](#).

#### 34.72.2 Member Typedef Documentation

##### 34.72.2.1 `typedef FlightPeriodKey stdair::FlightPeriod::Key_T`

Definition allowing to retrieve the associated BOM key type.

Definition at line 22 of file [FlightPeriod.hpp](#).

#### 34.72.3 Constructor & Destructor Documentation

##### 34.72.3.1 `stdair::FlightPeriod::FlightPeriod ( const Key_T & iKey )` [protected]

Default constructors.

Definition at line 12 of file [FlightPeriod.cpp](#).

##### 34.72.3.2 `stdair::FlightPeriod::FlightPeriod ( const FlightPeriod & )` [protected]

##### 34.72.3.3 `stdair::FlightPeriod::~~FlightPeriod ( )` [protected]

Destructor.

Definition at line 17 of file [FlightPeriod.cpp](#).

## 34.72.4 Member Function Documentation

34.72.4.1 `const Key_T& stdair::FlightPeriod::getKey ( ) const` `[inline]`

Get the flight-period key.

Definition at line 27 of file [FlightPeriod.hpp](#).

References [\\_key](#).

34.72.4.2 `BomAbstract* const stdair::FlightPeriod::getParent ( ) const` `[inline]`

Get the parent object.

Definition at line 30 of file [FlightPeriod.hpp](#).

References [\\_parent](#).

34.72.4.3 `const FlightNumber_T& stdair::FlightPeriod::getFlightNumber ( ) const`  
`[inline]`

Get the flight number (part of the primary key).

Definition at line 33 of file [FlightPeriod.hpp](#).

References [\\_key](#), and [stdair::FlightPeriodKey::getFlightNumber\(\)](#).

34.72.4.4 `const PeriodStruct& stdair::FlightPeriod::getPeriod ( ) const` `[inline]`

Get the departure period (part of the key).

Definition at line 38 of file [FlightPeriod.hpp](#).

References [\\_key](#), and [stdair::FlightPeriodKey::getPeriod\(\)](#).

34.72.4.5 `const HolderMap_T& stdair::FlightPeriod::getHolderMap ( ) const` `[inline]`

Get the map of children holders.

Definition at line 41 of file [FlightPeriod.hpp](#).

References [\\_holderMap](#).

34.72.4.6 `void stdair::FlightPeriod::toStream ( std::ostream & ioOut ) const` `[inline, virtual]`

Dump a Business Object into an output stream.

**Parameters**

<code>ostream&amp;</code> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 48 of file [FlightPeriod.hpp](#).

References [toString\(\)](#).

34.72.4.7 `void stdair::FlightPeriod::fromStream ( std::istream & ioIn ) [inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 52 of file [FlightPeriod.hpp](#).

34.72.4.8 `std::string stdair::FlightPeriod::toString ( ) const [virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 21 of file [FlightPeriod.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.72.4.9 `const std::string stdair::FlightPeriod::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 58 of file [FlightPeriod.hpp](#).

References [\\_key](#), and [stdair::FlightPeriodKey::toString\(\)](#).

Referenced by [toString\(\)](#).

#### 34.72.5 Friends And Related Function Documentation

34.72.5.1 `friend class FacBom [friend]`

Definition at line 16 of file [FlightPeriod.hpp](#).

34.72.5.2 `friend class FacBomManager [friend]`

Definition at line 17 of file [FlightPeriod.hpp](#).

#### 34.72.6 Member Data Documentation

34.72.6.1 `Key_T stdair::FlightPeriod::_key [protected]`

Definition at line 69 of file [FlightPeriod.hpp](#).

Referenced by [describeKey\(\)](#), [getFlightNumber\(\)](#), [getKey\(\)](#), and [getPeriod\(\)](#).

#### 34.72.6.2 BomAbstract\* stdair::FlightPeriod::\_parent [protected]

Definition at line 70 of file [FlightPeriod.hpp](#).

Referenced by [getParent\(\)](#).

#### 34.72.6.3 HolderMap\_T stdair::FlightPeriod::\_holderMap [protected]

Definition at line 71 of file [FlightPeriod.hpp](#).

Referenced by [getHolderMap\(\)](#).

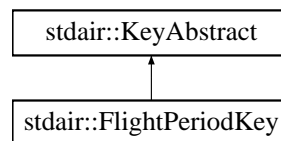
The documentation for this class was generated from the following files:

- [stdair/bom/FlightPeriod.hpp](#)
- [stdair/bom/FlightPeriod.cpp](#)

### 34.73 stdair::FlightPeriodKey Struct Reference

```
#include <stdair/bom/FlightPeriodKey.hpp>
```

Inheritance diagram for stdair::FlightPeriodKey:



#### Public Member Functions

- [FlightPeriodKey](#) (const [FlightNumber\\_T](#) &, const [PeriodStruct](#) &)
- [FlightPeriodKey](#) (const [FlightPeriodKey](#) &)
- [~FlightPeriodKey](#) ()
- const [FlightNumber\\_T](#) & [getFlightNumber](#) () const
- const [PeriodStruct](#) & [getPeriod](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.73.1 Detailed Description

Key of flight-period.

Definition at line 13 of file [FlightPeriodKey.hpp](#).

## 34.73.2 Constructor &amp; Destructor Documentation

34.73.2.1 `stdair::FlightPeriodKey::FlightPeriodKey ( const FlightNumber_T & iFlightNumber, const PeriodStruct & iPeriod )`

Constructors.

Definition at line 10 of file [FlightPeriodKey.cpp](#).

34.73.2.2 `stdair::FlightPeriodKey::FlightPeriodKey ( const FlightPeriodKey & iKey )`

Definition at line 16 of file [FlightPeriodKey.cpp](#).

34.73.2.3 `stdair::FlightPeriodKey::~~FlightPeriodKey ( )`

Destructor.

Definition at line 21 of file [FlightPeriodKey.cpp](#).

## 34.73.3 Member Function Documentation

34.73.3.1 `const FlightNumber_T& stdair::FlightPeriodKey::getFlightNumber ( ) const`  
[inline]

Get the flight number.

Definition at line 28 of file [FlightPeriodKey.hpp](#).

Referenced by [stdair::FlightPeriod::getFlightNumber\(\)](#).

34.73.3.2 `const PeriodStruct& stdair::FlightPeriodKey::getPeriod ( ) const` [inline]

Get the active days-of-week.

Definition at line 33 of file [FlightPeriodKey.hpp](#).

Referenced by [stdair::FlightPeriod::getPeriod\(\)](#).

34.73.3.3 `void stdair::FlightPeriodKey::toStream ( std::ostream & ioOut ) const`  
[virtual]

Dump a Business Object Key into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 25 of file [FlightPeriodKey.cpp](#).

References [toString\(\)](#).

34.73.3.4 `void stdair::FlightPeriodKey::fromStream ( std::istream & ioln ) [virtual]`

Read a Business Object Key from an input stream.

#### Parameters

<code>istream&amp;</code> the input stream.
---

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 30 of file [FlightPeriodKey.cpp](#).

34.73.3.5 `const std::string stdair::FlightPeriodKey::toString ( ) const [virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-period.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 34 of file [FlightPeriodKey.cpp](#).

References [stdair::PeriodStruct::describeShort\(\)](#).

Referenced by [stdair::FlightPeriod::describeKey\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/FlightPeriodKey.hpp](#)
- [stdair/bom/FlightPeriodKey.cpp](#)

## 34.74 `FloatingPoint< RawType >` Class Template Reference

```
#include <stdair/basic/float_utils_google.hpp>
```

### Public Types

- typedef [TypeWithSize< sizeof\(RawType\)>::UInt](#) [Bits](#)

### Public Member Functions

- [FloatingPoint](#) (const RawType &x)
- const [Bits](#) & [bits](#) () const
- [Bits](#) [exponent\\_bits](#) () const
- [Bits](#) [fraction\\_bits](#) () const
- [Bits](#) [sign\\_bit](#) () const
- bool [is\\_nan](#) () const
- bool [AlmostEquals](#) (const [FloatingPoint](#) &rhs) const



## Static Public Member Functions

- static RawType [ReinterpretBits](#) (const [Bits](#) bits)
- static RawType [Infinity](#) ()

## Static Public Attributes

- static const size\_t [kBitCount](#) = 8\*sizeof(RawType)
- static const size\_t [kFractionBitCount](#)
- static const size\_t [kExponentBitCount](#) = [kBitCount](#) - 1 - [kFractionBitCount](#)
- static const [Bits](#) [kSignBitMask](#) = static\_cast<[Bits](#)>(1) << ([kBitCount](#) - 1)
- static const [Bits](#) [kFractionBitMask](#)
- static const [Bits](#) [kExponentBitMask](#) = ~([kSignBitMask](#) | [kFractionBitMask](#))
- static const size\_t [kMaxUlp](#) = 4

## 34.74.1 Detailed Description

template<typename RawType>class FloatingPoint< RawType >

Definition at line 117 of file [float\\_utils\\_google.hpp](#).

## 34.74.2 Member Typedef Documentation

34.74.2.1 template<typename RawType> typedef TypeWithSize<sizeof(RawType)>::UInt  
FloatingPoint< RawType >::Bits

Definition at line 121 of file [float\\_utils\\_google.hpp](#).

## 34.74.3 Constructor &amp; Destructor Documentation

34.74.3.1 template<typename RawType> FloatingPoint< RawType >::FloatingPoint (  
const RawType & x ) [inline, explicit]

Definition at line 165 of file [float\\_utils\\_google.hpp](#).

## 34.74.4 Member Function Documentation

34.74.4.1 template<typename RawType> static RawType FloatingPoint< RawType  
>::ReinterpretBits ( const [Bits](#) bits ) [inline, static]

Definition at line 172 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::bits\(\)](#).

Referenced by [FloatingPoint< RawType >::Infinity\(\)](#).

34.74.4.2 `template<typename RawType> static RawType FloatingPoint< RawType >::Infinity ( ) [inline, static]`

Definition at line 179 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::kExponentBitMask](#), and [FloatingPoint< RawType >::ReinterpretBits\(\)](#).

34.74.4.3 `template<typename RawType> const Bits& FloatingPoint< RawType >::bits ( ) const [inline]`

Definition at line 186 of file [float\\_utils\\_google.hpp](#).

Referenced by [FloatingPoint< RawType >::ReinterpretBits\(\)](#).

34.74.4.4 `template<typename RawType> Bits FloatingPoint< RawType >::exponent_bits ( ) const [inline]`

Definition at line 189 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::kExponentBitMask](#).

Referenced by [FloatingPoint< RawType >::is\\_nan\(\)](#).

34.74.4.5 `template<typename RawType> Bits FloatingPoint< RawType >::fraction_bits ( ) const [inline]`

Definition at line 192 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::kFractionBitMask](#).

Referenced by [FloatingPoint< RawType >::is\\_nan\(\)](#).

34.74.4.6 `template<typename RawType> Bits FloatingPoint< RawType >::sign_bit ( ) const [inline]`

Definition at line 195 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::kSignBitMask](#).

34.74.4.7 `template<typename RawType> bool FloatingPoint< RawType >::is_nan ( ) const [inline]`

Definition at line 198 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::exponent\\_bits\(\)](#), [FloatingPoint< RawType >::fraction\\_bits\(\)](#), and [FloatingPoint< RawType >::kExponentBitMask](#).

Referenced by [FloatingPoint< RawType >::AlmostEquals\(\)](#).

34.74.4.8 `template<typename RawType> bool FloatingPoint< RawType >::AlmostEquals ( const FloatingPoint< RawType > & rhs ) const [inline]`

Definition at line 210 of file [float\\_utils\\_google.hpp](#).

References [FloatingPoint< RawType >::is\\_nan\(\)](#), and [FloatingPoint< RawType >::kMaxUlp](#).

## 34.74.5 Member Data Documentation

34.74.5.1 `template<typename RawType> const size_t FloatingPoint< RawType >::kBitCount = 8*sizeof(RawType) [static]`

Definition at line 126 of file [float\\_utils\\_google.hpp](#).

34.74.5.2 `template<typename RawType> const size_t FloatingPoint< RawType >::kFractionBitCount [static]`

**Initial value:**

```
std::numeric_limits<RawType>::digits - 1
```

Definition at line 129 of file [float\\_utils\\_google.hpp](#).

34.74.5.3 `template<typename RawType> const size_t FloatingPoint< RawType >::kExponentBitCount = kBitCount - 1 - kFractionBitCount [static]`

Definition at line 133 of file [float\\_utils\\_google.hpp](#).

34.74.5.4 `template<typename RawType> const Bits FloatingPoint< RawType >::kSignBitMask = static_cast<Bits>(1) << (kBitCount - 1) [static]`

Definition at line 136 of file [float\\_utils\\_google.hpp](#).

Referenced by [FloatingPoint< RawType >::sign\\_bit\(\)](#).

34.74.5.5 `template<typename RawType> const Bits FloatingPoint< RawType >::kFractionBitMask [static]`

**Initial value:**

```
~static_cast<Bits>(0) >> (kExponentBitCount + 1)
```

Definition at line 139 of file [float\\_utils\\_google.hpp](#).

Referenced by [FloatingPoint< RawType >::fraction\\_bits\(\)](#).

34.74.5.6 `template<typename RawType> const Bits FloatingPoint< RawType >::kExponentBitMask = ~(kSignBitMask | kFractionBitMask) [static]`

Definition at line 143 of file [float\\_utils\\_google.hpp](#).

Referenced by [FloatingPoint< RawType >::exponent\\_bits\(\)](#), [FloatingPoint< RawType >::Infinity\(\)](#), and [FloatingPoint< RawType >::is\\_nan\(\)](#).

34.74.5.7 `template<typename RawType> const size_t FloatingPoint< RawType >::kMaxUips = 4 [static]`

Definition at line 157 of file [float\\_utils\\_google.hpp](#).

Referenced by [FloatingPoint< RawType >::AlmostEquals\(\)](#).

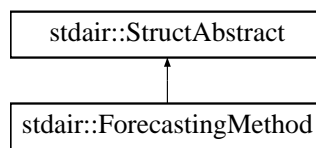
The documentation for this class was generated from the following file:

- [stdair/basic/float\\_utils\\_google.hpp](#)

### 34.75 stdair::ForecastingMethod Struct Reference

```
#include <stdair/basic/ForecastingMethod.hpp>
```

Inheritance diagram for stdair::ForecastingMethod:



#### Public Types

- enum [EN\\_ForecastingMethod](#) { [ADD\\_PK](#) = 0, [MUL\\_PK](#), [LAST\\_VALUE](#) }

#### Public Member Functions

- [EN\\_ForecastingMethod](#) [getMethod](#) () const
- std::string [getMethodAsString](#) () const
- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_ForecastingMethod](#) &) const
- [ForecastingMethod](#) (const [EN\\_ForecastingMethod](#) &)
- [ForecastingMethod](#) (const char iMethod)
- [ForecastingMethod](#) (const [ForecastingMethod](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_ForecastingMethod](#) &)
- static char [getMethodLabel](#) (const [EN\\_ForecastingMethod](#) &)
- static std::string [getMethodLabelAsString](#) (const [EN\\_ForecastingMethod](#) &)
- static std::string [describeLabels](#) ()

#### 34.75.1 Detailed Description

Enumeration of forecasting methods.

Definition at line 15 of file [ForecastingMethod.hpp](#).

## 34.75.2 Member Enumeration Documentation

## 34.75.2.1 enum stdair::ForecastingMethod::EN\_ForecastingMethod

Enumerator:

***ADD\_PK***  
***MUL\_PK***  
***LAST\_VALUE***

Definition at line 17 of file [ForecastingMethod.hpp](#).

## 34.75.3 Constructor &amp; Destructor Documentation

34.75.3.1 stdair::ForecastingMethod::ForecastingMethod ( const EN\_ForecastingMethod & *iForecastingMethod* )

Constructor.

Definition at line 36 of file [ForecastingMethod.cpp](#).

34.75.3.2 stdair::ForecastingMethod::ForecastingMethod ( const char *iMethod* )

Constructor.

Definition at line 41 of file [ForecastingMethod.cpp](#).

References [ADD\\_PK](#), [describeLabels\(\)](#), [LAST\\_VALUE](#), and [MUL\\_PK](#).

34.75.3.3 stdair::ForecastingMethod::ForecastingMethod ( const ForecastingMethod & *iForecastingMethod* )

Default copy constructor.

Definition at line 30 of file [ForecastingMethod.cpp](#).

## 34.75.4 Member Function Documentation

34.75.4.1 const std::string & stdair::ForecastingMethod::getLabel ( const EN\_ForecastingMethod & *iMethod* ) [static]

Get the label as a string (e.g., "BookingRequest" or "ScheduleChange").

Definition at line 59 of file [ForecastingMethod.cpp](#).

34.75.4.2 char stdair::ForecastingMethod::getMethodLabel ( const EN\_ForecastingMethod & *iMethod* ) [static]

Get the label as a single char (e.g., 'B' or 'S').

Definition at line 64 of file [ForecastingMethod.cpp](#).

34.75.4.3 `std::string stdair::ForecastingMethod::getMethodLabelAsString ( const EN_ForecastingMethod & iMethod ) [static]`

Get the label as a string of a single char (e.g., "B" or "S").

Definition at line 70 of file [ForecastingMethod.cpp](#).

34.75.4.4 `std::string stdair::ForecastingMethod::describeLabels ( ) [static]`

List the labels.

Definition at line 77 of file [ForecastingMethod.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [ForecastingMethod\(\)](#).

34.75.4.5 `ForecastingMethod::EN_ForecastingMethod stdair::ForecastingMethod::getMethod ( ) const`

Get the enumerated value.

Definition at line 89 of file [ForecastingMethod.cpp](#).

34.75.4.6 `std::string stdair::ForecastingMethod::getMethodAsString ( ) const`

Get the enumerated value as a short string (e.g., "B" or "S").

Definition at line 94 of file [ForecastingMethod.cpp](#).

34.75.4.7 `const std::string stdair::ForecastingMethod::describe ( ) const [virtual]`

Give a description of the structure (e.g., "BookingRequest" or "ScheduleChange").

Implements [stdair::StructAbstract](#).

Definition at line 101 of file [ForecastingMethod.cpp](#).

34.75.4.8 `bool stdair::ForecastingMethod::operator== ( const EN_ForecastingMethod & iMethod ) const`

Comparison operator.

Definition at line 109 of file [ForecastingMethod.cpp](#).

34.75.4.9 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline, inherited]`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

```
34.75.4.10 virtual void stdair::StructAbstract::fromStream ( std::istream & ioln ) [inline,
virtual, inherited]
```

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this struct was generated from the following files:

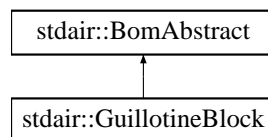
- [stdair/basic/ForecastingMethod.hpp](#)
- [stdair/basic/ForecastingMethod.cpp](#)

## 34.76 stdair::GuillotineBlock Class Reference

Class representing the actual attributes for an airline guillotine-block.

```
#include <stdair/bom/GuillotineBlock.hpp>
```

Inheritance diagram for stdair::GuillotineBlock:



#### Public Types

- typedef [GuillotineBlockKey](#) Key\_T

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const

- const [GuillotineNumber\\_T](#) & [getGuillotineNumber](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [SegmentCabinIndexMap\\_T](#) & [getSegmentCabinIndexMap](#) () const
- const [ValueTypeIndexMap\\_T](#) & [getValueTypeIndexMap](#) () const
- const [BlockIndex\\_T](#) & [getBlockIndex](#) (const [MapKey\\_T](#) &) const
- const [BlockNumber\\_T](#) & [getBlockNumber](#) (const [SegmentCabin](#) &) const
- [ConstSegmentCabinDTDSnapshotView\\_T](#) [getConstSegmentCabinDTDSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#)) const
- [ConstSegmentCabinDTDRangeSnapshotView\\_T](#) [getConstSegmentCabinDTDRangeBookingSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#)) const
- [SegmentCabinDTDSnapshotView\\_T](#) [getSegmentCabinDTDSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#))
- [SegmentCabinDTDRangeSnapshotView\\_T](#) [getSegmentCabinDTDRangeBookingSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#))
- [ConstSegmentCabinDTDSnapshotView\\_T](#) [getConstSegmentCabinDTDCancellationSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#)) const
- [ConstSegmentCabinDTDRangeSnapshotView\\_T](#) [getConstSegmentCabinDTDRangeCancellationSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#)) const
- [SegmentCabinDTDSnapshotView\\_T](#) [getSegmentCabinDTDCancellationSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#))
- [SegmentCabinDTDRangeSnapshotView\\_T](#) [getSegmentCabinDTDRangeCancellationSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#))
- [ConstSegmentCabinDTDSnapshotView\\_T](#) [getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#)) const
- [ConstSegmentCabinDTDRangeSnapshotView\\_T](#) [getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#)) const
- [SegmentCabinDTDSnapshotView\\_T](#) [getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#))
- [SegmentCabinDTDRangeSnapshotView\\_T](#) [getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#))
- [ConstSegmentCabinDTDSnapshotView\\_T](#) [getConstSegmentCabinDTDAvailabilitySnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#)) const
- [ConstSegmentCabinDTDRangeSnapshotView\\_T](#) [getConstSegmentCabinDTDRangeAvailabilitySnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#)) const
- [SegmentCabinDTDSnapshotView\\_T](#) [getSegmentCabinDTDAvailabilitySnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#))



- [SegmentCabinDTRangeSnapshotView\\_T](#) [getSegmentCabinDTRangeAvailabilitySnapshotView](#) (const [BlockNumber\\_T](#), const [BlockNumber\\_T](#), const [DTD\\_T](#), const [DTD\\_T](#))
- void [initSnapshotBlocks](#) (const [SegmentCabinIndexMap\\_T](#) &, const [ValueTypeIndexMap\\_T](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Protected Member Functions

- [GuillotineBlock](#) (const [Key\\_T](#) &)
- virtual [~GuillotineBlock](#) ()

#### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T](#) [\\_holderMap](#)
- [SegmentCabinIndexMap\\_T](#) [\\_segmentCabinIndexMap](#)
- [ValueTypeIndexMap\\_T](#) [\\_valueTypesIndexMap](#)
- [SnapshotBlock\\_T](#) [\\_bookingSnapshotBlock](#)
- [SnapshotBlock\\_T](#) [\\_cancellationSnapshotBlock](#)
- [SnapshotBlock\\_T](#) [\\_productAndPriceOrientedBookingSnapshotBlock](#)
- [SnapshotBlock\\_T](#) [\\_availabilitySnapshotBlock](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

#### 34.76.1 Detailed Description

Class representing the actual attributes for an airline guillotine-block.

Definition at line 31 of file [GuillotineBlock.hpp](#).

#### 34.76.2 Member Typedef Documentation

##### 34.76.2.1 typedef [GuillotineBlockKey](#) [stdair::GuillotineBlock::Key\\_T](#)

Definition allowing to retrieve the associated BOM key type.

Definition at line 41 of file [GuillotineBlock.hpp](#).

### 34.76.3 Constructor & Destructor Documentation

#### 34.76.3.1 **stdair::GuillotineBlock::GuillotineBlock** ( **const Key\_T & iKey** ) [protected]

Main constructor.

Definition at line 34 of file [GuillotineBlock.cpp](#).

#### 34.76.3.2 **stdair::GuillotineBlock::~~GuillotineBlock** ( ) [protected, virtual]

Destructor.

Definition at line 38 of file [GuillotineBlock.cpp](#).

### 34.76.4 Member Function Documentation

#### 34.76.4.1 **const Key\_T& stdair::GuillotineBlock::getKey** ( ) **const** [inline]

Get the guillotine-block key.

Definition at line 47 of file [GuillotineBlock.hpp](#).

References [\\_key](#).

#### 34.76.4.2 **BomAbstract\* const stdair::GuillotineBlock::getParent** ( ) **const** [inline]

Get the parent object.

Definition at line 52 of file [GuillotineBlock.hpp](#).

References [\\_parent](#).

#### 34.76.4.3 **const GuillotineNumber\_T& stdair::GuillotineBlock::getGuillotineNumber** ( ) **const** [inline]

Get the guillotine number (part of the primary key).

Definition at line 57 of file [GuillotineBlock.hpp](#).

References [\\_key](#), and [stdair::GuillotineBlockKey::getGuillotineNumber\(\)](#).

#### 34.76.4.4 **const HolderMap\_T& stdair::GuillotineBlock::getHolderMap** ( ) **const** [inline]

Get the map of children holders.

Definition at line 64 of file [GuillotineBlock.hpp](#).

References [\\_holderMap](#).

#### 34.76.4.5 **const SegmentCabinIndexMap\_T& stdair::GuillotineBlock::getSegmentCabinIndexMap** ( ) **const** [inline]

Get the segment-cabin index map.

Definition at line 69 of file [GuillotineBlock.hpp](#).

References [\\_segmentCabinIndexMap](#).

```
34.76.4.6 const ValueTypeIndexMap_T& stdair::GuillotineBlock::getValueTypeIndexMap ( )  
const [inline]
```

Get the value type index map.

Definition at line 74 of file [GuillotineBlock.hpp](#).

References [\\_valueTypesIndexMap](#).

```
34.76.4.7 const BlockIndex_T & stdair::GuillotineBlock::getBlockIndex ( const MapKey_T  
& iKey ) const
```

Get the block index corresponding to the given value type.

Definition at line 79 of file [GuillotineBlock.cpp](#).

References [\\_valueTypesIndexMap](#).

```
34.76.4.8 const BlockNumber_T & stdair::GuillotineBlock::getBlockNumber ( const  
SegmentCabin & iSegmentCabin ) const
```

Get the block number corresponding to the givent segment-cabin.

Definition at line 88 of file [GuillotineBlock.cpp](#).

References [\\_segmentCabinIndexMap](#).

```
34.76.4.9 ConstSegmentCabinDTDSnapshotView_T  
stdair::GuillotineBlock::getConstSegmentCabinDTDBookingSnapshotView ( const  
BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd, const  
DTD_T iDTD ) const
```

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 97 of file [GuillotineBlock.cpp](#).

References [\\_bookingSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

```
34.76.4.10 ConstSegmentCabinDTDRangeSnapshotView_T  
stdair::GuillotineBlock::getConstSegmentCabinDTDRangeBookingSnapshotView ( const  
BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd, const  
DTD_T iDTDBegin, const DTD_T iDTDEnd ) const
```

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 110 of file [GuillotineBlock.cpp](#).

**34.76.4.11 SegmentCabinDTDSnapshotView\_T**  
stdair::GuillotineBlock::getSegmentCabinDTDBookingSnapshotView ( const  
BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
DTD\_T iDTD )

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 121 of file [GuillotineBlock.cpp](#).

References [\\_bookingSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.12 SegmentCabinDTDRangeSnapshotView\_T**  
stdair::GuillotineBlock::getSegmentCabinDTDRangeBookingSnapshotView ( const  
BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
DTD\_T iDTDBegin, const DTD\_T iDTDEnd )

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 133 of file [GuillotineBlock.cpp](#).

References [\\_bookingSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.13 ConstSegmentCabinDTDSnapshotView\_T**  
stdair::GuillotineBlock::getConstSegmentCabinDTDCancellationSnapshotView ( const  
BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
DTD\_T iDTD ) const

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 146 of file [GuillotineBlock.cpp](#).

References [\\_cancellationSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.14 ConstSegmentCabinDTDRangeSnapshotView\_T**  
stdair::GuillotineBlock::getConstSegmentCabinDTDRangeCancellationSnapshotView  
( const BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd,  
const DTD\_T iDTDBegin, const DTD\_T iDTDEnd ) const

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 159 of file [GuillotineBlock.cpp](#).

**34.76.4.15 SegmentCabinDTDSnapshotView\_T**  
stdair::GuillotineBlock::getSegmentCabinDTDCancellationSnapshotView ( const  
BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
DTD\_T iDTD )

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 170 of file [GuillotineBlock.cpp](#).

References [\\_cancellationSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.16 SegmentCabinDTDRangeSnapshotView\_T**  
stdair::GuillotineBlock::getSegmentCabinDTDRangeCancellationSnapshotView (  
const BlockNumber\_T iSCIdxBegin, const BlockNumber\_T iSCIdxEnd, const  
DTD\_T iDTDBegin, const DTD\_T iDTDEnd )

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 182 of file [GuillotineBlock.cpp](#).

References [\\_cancellationSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.17 ConstSegmentCabinDTDSnapshotView\_T**  
stdair::GuillotineBlock::getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView  
( const BlockNumber\_T iSCIdxBegin, const BlockNumber\_T iSCIdxEnd,  
const DTD\_T iDTD ) const

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 195 of file [GuillotineBlock.cpp](#).

References [\\_productAndPriceOrientedBookingSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.18 ConstSegmentCabinDTDRangeSnapshotView\_T**  
stdair::GuillotineBlock::getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView  
( const BlockNumber\_T iSCIdxBegin, const BlockNumber\_T iSCIdxEnd,  
const DTD\_T iDTDBegin, const DTD\_T iDTDEnd ) const

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 208 of file [GuillotineBlock.cpp](#).

**34.76.4.19 SegmentCabinDTDSnapshotView\_T**  
stdair::GuillotineBlock::getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView  
( const BlockNumber\_T iSCIdxBegin, const BlockNumber\_T iSCIdxEnd,  
const DTD\_T iDTD )

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 219 of file [GuillotineBlock.cpp](#).

References [\\_productAndPriceOrientedBookingSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.20 SegmentCabinDTDRangeSnapshotView\_T**  
stdair::GuillotineBlock::getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView  
( const BlockNumber\_T iSCIdxBegin, const BlockNumber\_T iSCIdxEnd,  
const DTD\_T iDTDBegin, const DTD\_T iDTDEnd )

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 231 of file [GuillotineBlock.cpp](#).

References [\\_productAndPriceOrientedBookingSnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.21 ConstSegmentCabinDTDSnapshotView\_T**  
 stdair::GuillotineBlock::getConstSegmentCabinDTDAvailabilitySnapshotView ( const  
 BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
 DTD\_T iDTD ) const

Get the const view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 244 of file [GuillotineBlock.cpp](#).

References [\\_availabilitySnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.22 ConstSegmentCabinDTDRangeSnapshotView\_T**  
 stdair::GuillotineBlock::getConstSegmentCabinDTDRangeAvailabilitySnapshotView (   
 const BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
 DTD\_T iDTDBegin, const DTD\_T iDTDEnd ) const

Get the const view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 257 of file [GuillotineBlock.cpp](#).

**34.76.4.23 SegmentCabinDTDSnapshotView\_T**  
 stdair::GuillotineBlock::getSegmentCabinDTDAvailabilitySnapshotView ( const  
 BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
 DTD\_T iDTD )

Get the view of snapshots for a given DTD and a range of segment-cabins.

Definition at line 268 of file [GuillotineBlock.cpp](#).

References [\\_availabilitySnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.24 SegmentCabinDTDRangeSnapshotView\_T**  
 stdair::GuillotineBlock::getSegmentCabinDTDRangeAvailabilitySnapshotView (   
 const BlockNumber\_T iSCldxBegin, const BlockNumber\_T iSCldxEnd, const  
 DTD\_T iDTDBegin, const DTD\_T iDTDEnd )

Get the view of snapshots for a given range of DTD and a range of segment-cabins.

Definition at line 280 of file [GuillotineBlock.cpp](#).

References [\\_availabilitySnapshotBlock](#), and [\\_valueTypesIndexMap](#).

**34.76.4.25 void stdair::GuillotineBlock::initSnapshotBlocks ( const  
 SegmentCabinIndexMap\_T & iSegmentCabinIndexMap, const  
 ValueTypeIndexMap\_T & iValueTypeIndexMap )**

Set the segment-cabin and value type index maps and initialise the snapshot blocks.

Definition at line 50 of file [GuillotineBlock.cpp](#).

References [\\_availabilitySnapshotBlock](#), [\\_bookingSnapshotBlock](#), [\\_cancellationSnapshotBlock](#),  
[\\_productAndPriceOrientedBookingSnapshotBlock](#), [\\_segmentCabinIndexMap](#), [\\_valueTypesIndexMap](#),  
 and [stdair::DEFAULT\\_MAX\\_DTD](#).

**34.76.4.26** void stdair::GuillotineBlock::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 209 of file [GuillotineBlock.hpp](#).

References [toString\(\)](#).

**34.76.4.27** void stdair::GuillotineBlock::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 218 of file [GuillotineBlock.hpp](#).

**34.76.4.28** std::string stdair::GuillotineBlock::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 42 of file [GuillotineBlock.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

**34.76.4.29** const std::string stdair::GuillotineBlock::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 229 of file [GuillotineBlock.hpp](#).

References [\\_key](#), and [stdair::GuillotineBlockKey::toString\(\)](#).

Referenced by [toString\(\)](#).

**34.76.4.30** template<class Archive > void stdair::GuillotineBlock::serialize ( Archive & *ar*, const unsigned int *iFileVersion* )

Serialisation.

Definition at line 307 of file [GuillotineBlock.cpp](#).

References [\\_key](#).

### 34.76.5 Friends And Related Function Documentation

#### 34.76.5.1 friend class **FacBom** [friend]

Definition at line 32 of file [GuillotineBlock.hpp](#).

#### 34.76.5.2 friend class **FacBomManager** [friend]

Definition at line 33 of file [GuillotineBlock.hpp](#).

#### 34.76.5.3 friend class **boost::serialization::access** [friend]

Definition at line 34 of file [GuillotineBlock.hpp](#).

### 34.76.6 Member Data Documentation

#### 34.76.6.1 **Key\_T stdair::GuillotineBlock::\_key** [protected]

Primary key (guillotine number and departure block).

Definition at line 278 of file [GuillotineBlock.hpp](#).

Referenced by [describeKey\(\)](#), [getGuillotineNumber\(\)](#), [getKey\(\)](#), and [serialize\(\)](#).

#### 34.76.6.2 **BomAbstract\* stdair::GuillotineBlock::\_parent** [protected]

Pointer on the parent class ([Inventory](#)).

Definition at line 281 of file [GuillotineBlock.hpp](#).

Referenced by [getParent\(\)](#).

#### 34.76.6.3 **HolderMap\_T stdair::GuillotineBlock::\_holderMap** [protected]

Map holding the children.

Definition at line 284 of file [GuillotineBlock.hpp](#).

Referenced by [getHolderMap\(\)](#).

#### 34.76.6.4 **SegmentCabinIndexMap\_T stdair::GuillotineBlock::\_segmentCabinIndexMap** [protected]

Map holding the segment-cabin position within the snapshot blocks.

Definition at line 287 of file [GuillotineBlock.hpp](#).

Referenced by [getBlockNumber\(\)](#), [getSegmentCabinIndexMap\(\)](#), and [initSnapshotBlocks\(\)](#).

#### 34.76.6.5 **ValueTypeIndexMap\_T stdair::GuillotineBlock::\_valueTypesIndexMap** [protected]

Map holding the value type (class, Q-equivalent, etc) within a segment-cabin inside the snapshot blocks.



Definition at line 291 of file [GuillotineBlock.hpp](#).

Referenced by [getBlockIndex\(\)](#), [getConstSegmentCabinDTDAvailabilitySnapshotView\(\)](#), [getConstSegmentCabinDTDBookingSnapshotView\(\)](#), [getConstSegmentCabinDTDCancellationSnapshotView\(\)](#), [getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView\(\)](#), [getSegmentCabinDTDAvailabilitySnapshotView\(\)](#), [getSegmentCabinDTDBookingSnapshotView\(\)](#), [getSegmentCabinDTDCancellationSnapshotView\(\)](#), [getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView\(\)](#), [getSegmentCabinDTDRangeAvailabilitySnapshotView\(\)](#), [getSegmentCabinDTDRangeBookingSnapshotView\(\)](#), [getSegmentCabinDTDRangeCancellationSnapshotView\(\)](#), [getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView\(\)](#), [getValueTypeIndexMap\(\)](#), and [initSnapshotBlocks\(\)](#).

#### 34.76.6.6 **SnapshotBlock\_T stdair::GuillotineBlock::\_bookingSnapshotBlock** [protected]

Booking snapshot block.

Definition at line 294 of file [GuillotineBlock.hpp](#).

Referenced by [getConstSegmentCabinDTDBookingSnapshotView\(\)](#), [getSegmentCabinDTDBookingSnapshotView\(\)](#), [getSegmentCabinDTDRangeBookingSnapshotView\(\)](#), and [initSnapshotBlocks\(\)](#).

#### 34.76.6.7 **SnapshotBlock\_T stdair::GuillotineBlock::\_cancellationSnapshotBlock** [protected]

Cancellation snapshot block.

Definition at line 297 of file [GuillotineBlock.hpp](#).

Referenced by [getConstSegmentCabinDTDCancellationSnapshotView\(\)](#), [getSegmentCabinDTDCancellationSnapshotView\(\)](#), [getSegmentCabinDTDRangeCancellationSnapshotView\(\)](#), and [initSnapshotBlocks\(\)](#).

#### 34.76.6.8 **SnapshotBlock\_T stdair::GuillotineBlock::\_productAndPriceOrientedBookingSnapshotBlock** [protected]

Price & product oriented booking block.

Definition at line 300 of file [GuillotineBlock.hpp](#).

Referenced by [getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView\(\)](#), [getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView\(\)](#), [getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView\(\)](#), and [initSnapshotBlocks\(\)](#).

#### 34.76.6.9 **SnapshotBlock\_T stdair::GuillotineBlock::\_availabilitySnapshotBlock** [protected]

Availability block.

Definition at line 303 of file [GuillotineBlock.hpp](#).

Referenced by [getConstSegmentCabinDTDAvailabilitySnapshotView\(\)](#), [getSegmentCabinDTDAvailabilitySnapshotView\(\)](#), [getSegmentCabinDTDRangeAvailabilitySnapshotView\(\)](#), and [initSnapshotBlocks\(\)](#).

The documentation for this class was generated from the following files:

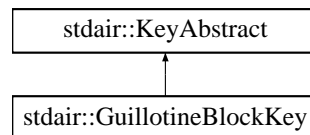
- [stdair/bom/GuillotineBlock.hpp](#)
- [stdair/bom/GuillotineBlock.cpp](#)

### 34.77 stdair::GuillotineBlockKey Struct Reference

Key of a given guillotine block, made of a guillotine number.

```
#include <stdair/bom/GuillotineBlockKey.hpp>
```

Inheritance diagram for stdair::GuillotineBlockKey:



#### Public Member Functions

- [GuillotineBlockKey](#) (const [GuillotineNumber\\_T](#) &)
- [GuillotineBlockKey](#) (const [GuillotineBlockKey](#) &)
- [~GuillotineBlockKey](#) ()
- const [GuillotineNumber\\_T](#) & [getGuillotineNumber](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Friends

- class [boost::serialization::access](#)

#### 34.77.1 Detailed Description

Key of a given guillotine block, made of a guillotine number.

Definition at line 26 of file [GuillotineBlockKey.hpp](#).

## 34.77.2 Constructor &amp; Destructor Documentation

34.77.2.1 `stdair::GuillotineBlockKey::GuillotineBlockKey ( const GuillotineNumber_T & iGuillotineNumber )`

Constructor.

Definition at line 26 of file [GuillotineBlockKey.cpp](#).

34.77.2.2 `stdair::GuillotineBlockKey::GuillotineBlockKey ( const GuillotineBlockKey & iKey )`

Copy constructor.

Definition at line 31 of file [GuillotineBlockKey.cpp](#).

34.77.2.3 `stdair::GuillotineBlockKey::~GuillotineBlockKey ( )`

Destructor.

Definition at line 36 of file [GuillotineBlockKey.cpp](#).

## 34.77.3 Member Function Documentation

34.77.3.1 `const GuillotineNumber_T& stdair::GuillotineBlockKey::getGuillotineNumber ( ) const [inline]`

Get the guillotine number.

Definition at line 56 of file [GuillotineBlockKey.hpp](#).

Referenced by [stdair::GuillotineBlock::getGuillotineNumber\(\)](#).

34.77.3.2 `void stdair::GuillotineBlockKey::toStream ( std::ostream & ioOut ) const [virtual]`

Dump a Business Object Key into an output stream.

**Parameters**

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 40 of file [GuillotineBlockKey.cpp](#).

References [toString\(\)](#).

34.77.3.3 `void stdair::GuillotineBlockKey::fromStream ( std::istream & iIn ) [virtual]`

Read a Business Object Key from an input stream.

**Parameters**

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 45 of file [GuillotineBlockKey.cpp](#).

**34.77.3.4** `const std::string stdair::GuillotineBlockKey::toString ( ) const [virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-block.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 49 of file [GuillotineBlockKey.cpp](#).

Referenced by [stdair::GuillotineBlock::describeKey\(\)](#), and [toStream\(\)](#).

**34.77.3.5** `template<class Archive > void stdair::GuillotineBlockKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 71 of file [GuillotineBlockKey.cpp](#).

#### 34.77.4 Friends And Related Function Documentation

**34.77.4.1** `friend class boost::serialization::access [friend]`

Definition at line 27 of file [GuillotineBlockKey.hpp](#).

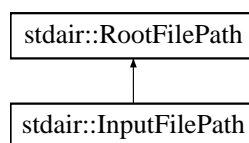
The documentation for this struct was generated from the following files:

- [stdair/bom/GuillotineBlockKey.hpp](#)
- [stdair/bom/GuillotineBlockKey.cpp](#)

## 34.78 stdair::InputFilePath Class Reference

```
#include <stdair/stdair_file.hpp>
```

Inheritance diagram for `stdair::InputFilePath`:



### Public Member Functions

- [InputFilePath](#) (const [Filename\\_T](#) &iFilename)
- const char \* [name](#) () const

### Protected Attributes

- const [Filename\\_T](#) [\\_filename](#)

#### 34.78.1 Detailed Description

Input File.

Definition at line 54 of file [stdair\\_file.hpp](#).

#### 34.78.2 Constructor & Destructor Documentation

34.78.2.1 `stdair::InputFilePath::InputFilePath ( const Filename\_T & iFilename )`  
`[inline]`

Constructor.

Definition at line 57 of file [stdair\\_file.hpp](#).

#### 34.78.3 Member Function Documentation

34.78.3.1 `const char* stdair::RootFilePath::name ( ) const` `[inline, inherited]`

Give the details of the exception.

Definition at line 42 of file [stdair\\_file.hpp](#).

References [stdair::RootFilePath::\\_filename](#).

#### 34.78.4 Member Data Documentation

34.78.4.1 `const Filename\_T stdair::RootFilePath::_filename` `[protected, inherited]`

Name of the file.

Definition at line 50 of file [stdair\\_file.hpp](#).

Referenced by [stdair::RootFilePath::name\(\)](#).

The documentation for this class was generated from the following file:

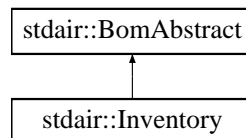
- [stdair/stdair\\_file.hpp](#)

### 34.79 stdair::Inventory Class Reference

Class representing the actual attributes for an airline inventory.

```
#include <stdair/bom/Inventory.hpp>
```

Inheritance diagram for stdair::Inventory:



#### Public Types

- typedef [InventoryKey](#) [Key\\_T](#)

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- [FlightDate](#) \* [getFlightDate](#) (const std::string &iFlightDateKeyStr) const
- [FlightDate](#) \* [getFlightDate](#) (const [FlightDateKey](#) &) const
- void [setAirlineFeature](#) (const [AirlineFeature](#) \*ioAirlineFeaturePtr)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Protected Member Functions

- [Inventory](#) (const [Key\\_T](#) &)
- [~Inventory](#) ()

#### Protected Attributes

- [Key\\_T](#) [\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- const [AirlineFeature](#) \* [\\_airlineFeature](#)
- [HolderMap\\_T](#) [\\_holderMap](#)

## Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

### 34.79.1 Detailed Description

Class representing the actual attributes for an airline inventory.

Definition at line 33 of file [Inventory.hpp](#).

### 34.79.2 Member Typedef Documentation

#### 34.79.2.1 typedef InventoryKey stdair::Inventory::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 43 of file [Inventory.hpp](#).

### 34.79.3 Constructor & Destructor Documentation

#### 34.79.3.1 stdair::Inventory::Inventory ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 27 of file [Inventory.cpp](#).

#### 34.79.3.2 stdair::Inventory::~Inventory ( ) [protected]

Destructor.

Definition at line 31 of file [Inventory.cpp](#).

### 34.79.4 Member Function Documentation

#### 34.79.4.1 const Key\_T& stdair::Inventory::getKey ( ) const [inline]

Get the inventory key (airline code).

Definition at line 49 of file [Inventory.hpp](#).

References [\\_key](#).

#### 34.79.4.2 const AirlineCode\_T& stdair::Inventory::getAirlineCode ( ) const [inline]

Get the airline code (inventory/primary key).

Definition at line 54 of file [Inventory.hpp](#).

References [\\_key](#), and [stdair::InventoryKey::getAirlineCode\(\)](#).

Referenced by [stdair::OnDDate::getAirlineCode\(\)](#), [stdair::FlightDate::getAirlineCode\(\)](#), and [stdair::BomRetriever::retrieveSegmentDateFromLongKey\(\)](#).

**34.79.4.3 BomAbstract\*** `const stdair::Inventory::getParent ( ) const` [inline]

Get the parent object.

Definition at line 59 of file [Inventory.hpp](#).

References [\\_parent](#).

**34.79.4.4 const HolderMap\_T&** `stdair::Inventory::getHolderMap ( ) const` [inline]

Get the map of children.

Definition at line 64 of file [Inventory.hpp](#).

References [\\_holderMap](#).

**34.79.4.5 FlightDate \*** `stdair::Inventory::getFlightDate ( const std::string & iFlightDateKeyStr ) const`

Get a pointer on the [FlightDate](#) object corresponding to the given key.

#### Note

The [FlightDate](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

#### Parameters

<code>const</code> <a href="#">std::string&amp;</a> The flight-date key.
--

#### Returns

[FlightDate\\*](#) Found [FlightDate](#) object. NULL if not found.

Definition at line 43 of file [Inventory.cpp](#).

Referenced by [getFlightDate\(\)](#), [stdair::BomRetriever::retrieveFlightDateFromKey\(\)](#), and [stdair::BomRetriever::retrieveFlightDateFromLongKey\(\)](#).

**34.79.4.6 FlightDate \*** `stdair::Inventory::getFlightDate ( const FlightDateKey & iFlightDateKey ) const`

Get a pointer on the [FlightDate](#) object corresponding to the given key.

#### Note

The [FlightDate](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

#### Parameters

<code>const</code> <a href="#">FlightDateKey&amp;</a> The flight-date key
---



## Returns

FlightDate\* Found [FlightDate](#) object. NULL if not found.

Definition at line 51 of file [Inventory.cpp](#).

References [getFlightDate\(\)](#), and [stdair::FlightDateKey::toString\(\)](#).

**34.79.4.7** void stdair::Inventory::setAirlineFeature ( const AirlineFeature \* ioAirlineFeaturePtr ) [inline]

Set the airline feature.

Definition at line 96 of file [Inventory.hpp](#).

References [\\_airlineFeature](#).

**34.79.4.8** void stdair::Inventory::toStream ( std::ostream & ioOut ) const [inline, virtual]

Dump a Business Object into an output stream.

## Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 108 of file [Inventory.hpp](#).

References [toString\(\)](#).

**34.79.4.9** void stdair::Inventory::fromStream ( std::istream & ioIn ) [inline, virtual]

Read a Business Object from an input stream.

## Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 117 of file [Inventory.hpp](#).

**34.79.4.10** std::string stdair::Inventory::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 35 of file [Inventory.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.79.4.11 `const std::string stdair::Inventory::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 128 of file [Inventory.hpp](#).

References [\\_key](#), and [stdair::InventoryKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.79.4.12 `template<class Archive > void stdair::Inventory::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 160 of file [CmdBomSerialiser.cpp](#).

References [\\_key](#).

#### 34.79.5 Friends And Related Function Documentation

34.79.5.1 `friend class FacBom [friend]`

Definition at line 34 of file [Inventory.hpp](#).

34.79.5.2 `friend class FacBomManager [friend]`

Definition at line 35 of file [Inventory.hpp](#).

34.79.5.3 `friend class boost::serialization::access [friend]`

Definition at line 36 of file [Inventory.hpp](#).

#### 34.79.6 Member Data Documentation

34.79.6.1 `Key_T stdair::Inventory::_key [protected]`

Primary key (airline code).

Definition at line 180 of file [Inventory.hpp](#).

Referenced by [describeKey\(\)](#), [getAirlineCode\(\)](#), [getKey\(\)](#), and [serialize\(\)](#).

34.79.6.2 `BomAbstract* stdair::Inventory::_parent [protected]`

Pointer on the parent class ([BomRoot](#)).

Definition at line 185 of file [Inventory.hpp](#).

Referenced by [getParent\(\)](#).

34.79.6.3 `const AirlineFeature* stdair::Inventory::_airlineFeature [protected]`

Features specific to the airline.

Definition at line 190 of file [Inventory.hpp](#).

Referenced by [setAirlineFeature\(\)](#).

#### 34.79.6.4 HolderMap\_T stdair::Inventory::\_holderMap [protected]

Map holding the children ([FlightDate](#) objects).

Definition at line 195 of file [Inventory.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

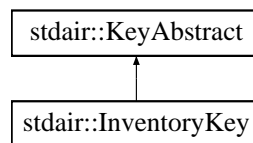
- [stdair/bom/Inventory.hpp](#)
- [stdair/bom/Inventory.cpp](#)
- [stdair/command/CmdBomSerialiser.cpp](#)

## 34.80 stdair::InventoryKey Struct Reference

Key of a given inventory, made of the airline code.

```
#include <stdair/bom/InventoryKey.hpp>
```

Inheritance diagram for stdair::InventoryKey:



### Public Member Functions

- [InventoryKey](#) (const [AirlineCode\\_T](#) &iAirlineCode)
- [InventoryKey](#) (const [InventoryKey](#) &)
- [~InventoryKey](#) ()
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Friends

- class [boost::serialization::access](#)

### 34.80.1 Detailed Description

Key of a given inventory, made of the airline code.

Definition at line 26 of file [InventoryKey.hpp](#).

### 34.80.2 Constructor & Destructor Documentation

#### 34.80.2.1 `stdair::InventoryKey::InventoryKey ( const AirlineCode_T & iAirlineCode )`

Constructor.

Definition at line 23 of file [InventoryKey.cpp](#).

#### 34.80.2.2 `stdair::InventoryKey::InventoryKey ( const InventoryKey & iKey )`

Copy constructor.

Definition at line 28 of file [InventoryKey.cpp](#).

#### 34.80.2.3 `stdair::InventoryKey::~~InventoryKey ( )`

Destructor.

Definition at line 33 of file [InventoryKey.cpp](#).

### 34.80.3 Member Function Documentation

#### 34.80.3.1 `const AirlineCode_T& stdair::InventoryKey::getAirlineCode ( ) const` [inline]

Get the airline code.

Definition at line 58 of file [InventoryKey.hpp](#).

Referenced by [stdair::Inventory::getAirlineCode\(\)](#).

#### 34.80.3.2 `void stdair::InventoryKey::toStream ( std::ostream & ioOut ) const` [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 37 of file [InventoryKey.cpp](#).

References [toString\(\)](#).

#### 34.80.3.3 `void stdair::InventoryKey::fromStream ( std::istream & ioIn )` [virtual]

Read a Business Object Key from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [InventoryKey.cpp](#).

**34.80.3.4** `const std::string stdair::InventoryKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 46 of file [InventoryKey.cpp](#).

Referenced by [stdair::Inventory::describeKey\(\)](#), [stdair::BomRoot::getInventory\(\)](#), and [toStream\(\)](#).

**34.80.3.5** `template<class Archive > void stdair::InventoryKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 68 of file [InventoryKey.cpp](#).

**34.80.4 Friends And Related Function Documentation**

**34.80.4.1** `friend class boost::serialization::access` `[friend]`

Definition at line 27 of file [InventoryKey.hpp](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/InventoryKey.hpp](#)
- [stdair/bom/InventoryKey.cpp](#)

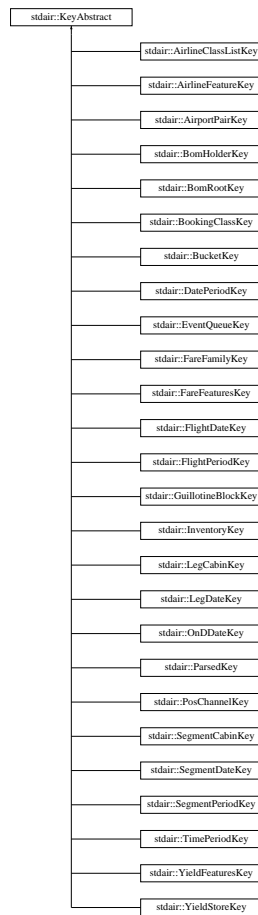
**34.81 stdair::KeyAbstract Struct Reference**

Base class for the keys of Business Object Model (BOM) layer.

Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segment-dates in general.

```
#include <stdair/bom/KeyAbstract.hpp>
```

Inheritance diagram for `stdair::KeyAbstract`:



### Public Member Functions

- virtual void [toStream](#) (std::ostream &ioOut) const  
*Dump a Business Object Key into an output stream.*
- virtual void [fromStream](#) (std::istream &ioIn)  
*Read a Business Object Key from an input stream.*
- virtual const std::string [toString](#) () const  
*Get the serialised version of the Business Object Key.  
That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.  
For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.*
- virtual [~KeyAbstract](#) ()  
*Default destructor.*

## 34.81.1 Detailed Description

Base class for the keys of Business Object Model (BOM) layer.

Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segment-dates in general.

Definition at line 26 of file [KeyAbstract.hpp](#).

## 34.81.2 Constructor &amp; Destructor Documentation

34.81.2.1 `virtual stdair::KeyAbstract::~~KeyAbstract ( ) [inline, virtual]`

Default destructor.

Definition at line 56 of file [KeyAbstract.hpp](#).

## 34.81.3 Member Function Documentation

34.81.3.1 `virtual void stdair::KeyAbstract::toStream ( std::ostream & ioOut ) const [inline, virtual]`

Dump a Business Object Key into an output stream.

## Parameters

<i>ioOut</i>	ostream& the output stream.
--------------	-----------------------------

Reimplemented in [stdair::AirlineClassListKey](#), [stdair::AirlineFeatureKey](#), [stdair::AirportPairKey](#), [stdair::BomHolderKey](#), [stdair::BomRootKey](#), [stdair::BookingClassKey](#), [stdair::BucketKey](#), [stdair::DatePeriodKey](#), [stdair::EventQueueKey](#), [stdair::FareFamilyKey](#), [stdair::FareFeaturesKey](#), [stdair::FlightDateKey](#), [stdair::FlightPeriodKey](#), [stdair::GuillotineBlockKey](#), [stdair::InventoryKey](#), [stdair::LegCabinKey](#), [stdair::LegDateKey](#), [stdair::OnDDateKey](#), [stdair::ParsedKey](#), [stdair::PosChannelKey](#), [stdair::SegmentCabinKey](#), [stdair::SegmentDateKey](#), [stdair::SegmentPeriodKey](#), [stdair::TimePeriodKey](#), [stdair::YieldFeaturesKey](#), and [stdair::YieldStoreKey](#).

Definition at line 34 of file [KeyAbstract.hpp](#).

Referenced by [operator<<\(\)](#).

34.81.3.2 `virtual void stdair::KeyAbstract::fromStream ( std::istream & ioIn ) [inline, virtual]`

Read a Business Object Key from an input stream.

## Parameters

<i>ioIn</i>	istream& the input stream.
-------------	----------------------------

Reimplemented in [stdair::AirlineClassListKey](#), [stdair::AirlineFeatureKey](#), [stdair::AirportPairKey](#), [stdair::BomHolderKey](#), [stdair::BomRootKey](#), [stdair::BookingClassKey](#), [stdair::BucketKey](#),

[stdair::DatePeriodKey](#), [stdair::EventQueueKey](#), [stdair::FareFamilyKey](#), [stdair::FareFeaturesKey](#), [stdair::FlightDateKey](#), [stdair::FlightPeriodKey](#), [stdair::GuillotineBlockKey](#), [stdair::InventoryKey](#), [stdair::LegCabinKey](#), [stdair::LegDateKey](#), [stdair::OnDDateKey](#), [stdair::ParsedKey](#), [stdair::PosChannelKey](#), [stdair::SegmentCabinKey](#), [stdair::SegmentDateKey](#), [stdair::SegmentPeriodKey](#), [stdair::TimePeriodKey](#), [stdair::YieldFeaturesKey](#), and [stdair::YieldStoreKey](#).

Definition at line 40 of file [KeyAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

```
34.81.3.3 virtual const std::string stdair::KeyAbstract::toString ( ) const [inline,
virtual]
```

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

#### Parameters

out	const	std::string The serialised version of the Business Object Key.
-----	-------	--

Reimplemented in [stdair::AirlineClassListKey](#), [stdair::AirlineFeatureKey](#), [stdair::AirportPairKey](#), [stdair::BomHolderKey](#), [stdair::BomRootKey](#), [stdair::BookingClassKey](#), [stdair::BucketKey](#), [stdair::DatePeriodKey](#), [stdair::EventQueueKey](#), [stdair::FareFamilyKey](#), [stdair::FareFeaturesKey](#), [stdair::FlightDateKey](#), [stdair::FlightPeriodKey](#), [stdair::GuillotineBlockKey](#), [stdair::InventoryKey](#), [stdair::LegCabinKey](#), [stdair::LegDateKey](#), [stdair::OnDDateKey](#), [stdair::ParsedKey](#), [stdair::PosChannelKey](#), [stdair::SegmentCabinKey](#), [stdair::SegmentDateKey](#), [stdair::SegmentPeriodKey](#), [stdair::TimePeriodKey](#), [stdair::YieldFeaturesKey](#), and [stdair::YieldStoreKey](#).

Definition at line 51 of file [KeyAbstract.hpp](#).

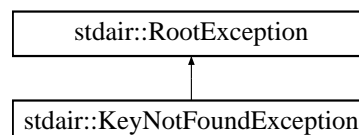
The documentation for this struct was generated from the following file:

- [stdair/bom/KeyAbstract.hpp](#)

## 34.82 stdair::KeyNotFoundException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::KeyNotFoundException`:





### Public Member Functions

- [KeyNotFoundException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

#### 34.82.1 Detailed Description

Not found key.

Definition at line 126 of file [stdair\\_exceptions.hpp](#).

#### 34.82.2 Constructor & Destructor Documentation

34.82.2.1 `stdair::KeyNotFoundException::KeyNotFoundException ( const std::string & iWhat )`  
[inline]

Constructor.

Definition at line 129 of file [stdair\\_exceptions.hpp](#).

#### 34.82.3 Member Function Documentation

34.82.3.1 `const char* stdair::RootException::what ( ) const throw ()` [inline,  
inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.82.4 Member Data Documentation

34.82.4.1 `std::string stdair::RootException::_what` [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

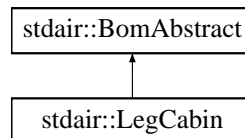
- [stdair/stdair\\_exceptions.hpp](#)

### 34.83 stdair::LegCabin Class Reference

Class representing the actual attributes for an airline leg-cabin.

```
#include <stdair/bom/LegCabin.hpp>
```

Inheritance diagram for stdair::LegCabin:



#### Public Types

- typedef [LegCabinKey](#) [Key\\_T](#)

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [CabinCode\\_T](#) & [getCabinCode](#) () const
- const [MapKey\\_T](#) [getFullerKey](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [CabinCapacity\\_T](#) & [getOfferedCapacity](#) () const
- const [CabinCapacity\\_T](#) & [getPhysicalCapacity](#) () const
- const [NbOfSeats\\_T](#) & [getSoldSeat](#) () const
- const [CommittedSpace\\_T](#) & [getCommittedSpace](#) () const
- const [Availability\\_T](#) & [getAvailabilityPool](#) () const
- const [Availability\\_T](#) & [getAvailability](#) () const
- const [BidPrice\\_T](#) & [getCurrentBidPrice](#) () const
- const [BidPrice\\_T](#) & [getPreviousBidPrice](#) () const
- const [BidPriceVector\\_T](#) & [getBidPriceVector](#) () const
- const [CapacityAdjustment\\_T](#) & [getRegradeAdjustment](#) () const
- const [AuthorizationLevel\\_T](#) & [getAuthorizationLevel](#) () const
- const [UPR\\_T](#) & [getUPR](#) () const
- const [Availability\\_T](#) & [getNetAvailability](#) () const
- const [Availability\\_T](#) & [getGrossAvailability](#) () const
- const [OverbookingRate\\_T](#) & [getAvgCancellationPercentage](#) () const
- const [NbOfSeats\\_T](#) & [getETB](#) () const
- const [NbOfSeats\\_T](#) & [getStaffNbOfSeats](#) () const
- const [NbOfSeats\\_T](#) & [getWLNbOfSeats](#) () const
- const [NbOfSeats\\_T](#) & [getGroupNbOfSeats](#) () const
- [VirtualClassList\\_T](#) & [getVirtualClassList](#) ()
- [BidPriceVector\\_T](#) & [getBidPriceVector](#) ()
- const [YieldLevelDemandMap\\_T](#) [getYieldLevelDemandMap](#) ()

- void [setCapacities](#) (const [CabinCapacity\\_T](#) &iCapacity)
- void [setSoldSeat](#) (const [NbOfSeats\\_T](#) &iSoldSeat)
- void [setCommittedSpace](#) (const [CommittedSpace\\_T](#) &iCommittedSpace)
- void [setAvailabilityPool](#) (const [Availability\\_T](#) &iAvailabilityPool)
- void [setAvailability](#) (const [Availability\\_T](#) &iAvailability)
- void [setCurrentBidPrice](#) (const [BidPrice\\_T](#) &iBidPrice)
- void [setPreviousBidPrice](#) (const [BidPrice\\_T](#) &iBidPrice)
- void [updatePreviousBidPrice](#) ()
- void [setRegradeAdjustment](#) (const [CapacityAdjustment\\_T](#) &iRegradeAdjustment)
- void [setAuthorizationLevel](#) (const [AuthorizationLevel\\_T](#) &iAU)
- void [setUPR](#) (const [UPR\\_T](#) &iUPR)
- void [setNetAvailability](#) (const [Availability\\_T](#) &iNAV)
- void [setGrossAvailability](#) (const [Availability\\_T](#) &iGAV)
- void [setAvgCancellationPercentage](#) (const [OverbookingRate\\_T](#) &iACP)
- void [setETB](#) (const [NbOfSeats\\_T](#) &iETB)
- void [setStaffNbOfSeats](#) (const [NbOfSeats\\_T](#) &iStaffSeats)
- void [setWLNbOfSeats](#) (const [NbOfSeats\\_T](#) &iWLSeats)
- void [setGroupNbOfSeats](#) (const [NbOfSeats\\_T](#) &iGroupSeats)
- void [updateCurrentBidPrice](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const std::string [displayVirtualClassList](#) () const
- void [updateFromReservation](#) (const [NbOfBookings\\_T](#) &)
- void [addVirtualClass](#) (const [VirtualClassStruct](#) &iVC)
- void [emptyVirtualClassList](#) ()
- void [emptyBidPriceVector](#) ()
- void [addDemandInformation](#) (const [YieldValue\\_T](#) &, const [MeanValue\\_T](#) &, const [StdDevValue\\_T](#) &)
- void [emptyYieldLevelDemandMap](#) ()

#### Public Attributes

- [CapacityAdjustment\\_T\\_dcsRegrade](#)
- [AuthorizationLevel\\_T\\_au](#)
- [UPR\\_T\\_upr](#)
- [Availability\\_T\\_nav](#)
- [Availability\\_T\\_gav](#)
- [OverbookingRate\\_T\\_acp](#)
- [NbOfSeats\\_T\\_etb](#)
- [NbOfSeats\\_T\\_staffNbOfBookings](#)
- [NbOfSeats\\_T\\_wlNbOfBookings](#)
- [NbOfSeats\\_T\\_groupNbOfBookings](#)

### Protected Member Functions

- [LegCabin](#) (const [Key\\_T](#) &)
- [~LegCabin](#) ()

### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T \\_holderMap](#)
- [CabinCapacity\\_T \\_offeredCapacity](#)
- [CabinCapacity\\_T \\_physicalCapacity](#)
- [NbOfSeats\\_T \\_soldSeat](#)
- [CommittedSpace\\_T \\_committedSpace](#)
- [Availability\\_T \\_availabilityPool](#)
- [Availability\\_T \\_availability](#)
- [BidPrice\\_T \\_currentBidPrice](#)
- [BidPrice\\_T \\_previousBidPrice](#)
- [BidPriceVector\\_T \\_bidPriceVector](#)
- [VirtualClassList\\_T \\_virtualClassList](#)
- [YieldLevelDemandMap\\_T \\_yieldLevelDemandMap](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.83.1 Detailed Description

Class representing the actual attributes for an airline leg-cabin.

Definition at line 24 of file [LegCabin.hpp](#).

#### 34.83.2 Member Typedef Documentation

##### 34.83.2.1 typedef [LegCabinKey](#) [stdair::LegCabin::Key\\_T](#)

Definition allowing to retrieve the associated BOM key type.

Definition at line 33 of file [LegCabin.hpp](#).

#### 34.83.3 Constructor & Destructor Documentation

##### 34.83.3.1 [stdair::LegCabin::LegCabin](#) ( const [Key\\_T](#) & *iKey* ) [protected]

Constructor.

Definition at line 30 of file [LegCabin.cpp](#).

### 34.83.3.2 stdair::LegCabin::~~LegCabin ( ) [protected]

Destructor.

Definition at line 43 of file [LegCabin.cpp](#).

## 34.83.4 Member Function Documentation

### 34.83.4.1 const Key\_T& stdair::LegCabin::getKey ( ) const [inline]

Get the leg-cabin key (cabin code).

Definition at line 40 of file [LegCabin.hpp](#).

References [\\_key](#).

### 34.83.4.2 BomAbstract\* const stdair::LegCabin::getParent ( ) const [inline]

Get the parent object.

Definition at line 47 of file [LegCabin.hpp](#).

References [\\_parent](#).

### 34.83.4.3 const CabinCode\_T& stdair::LegCabin::getCabinCode ( ) const [inline]

Get the cabin code (from key).

Definition at line 54 of file [LegCabin.hpp](#).

References [\\_key](#), and [stdair::LegCabinKey::getCabinCode\(\)](#).

Referenced by [getFullerKey\(\)](#).

### 34.83.4.4 const MapKey\_T stdair::LegCabin::getFullerKey ( ) const

Get the (leg-date, leg-cabin) key (board point and cabin code).

## Note

That method assumes that the parent object derives from the [SegmentDate](#) class, as it needs to have access to the [describeKey\(\)](#) method.

Definition at line 54 of file [LegCabin.cpp](#).

References [stdair::DEFAULT\\_KEY\\_FLD\\_DELIMITER](#), [stdair::LegDate::describeKey\(\)](#), and [getCabinCode\(\)](#).

### 34.83.4.5 const HolderMap\_T& stdair::LegCabin::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 70 of file [LegCabin.hpp](#).

References [\\_holderMap](#).

34.83.4.6 **const CabinCapacity\_T& stdair::LegCabin::getOfferedCapacity ( ) const**  
[inline]

Get the cabin offered capacity.

Definition at line 75 of file [LegCabin.hpp](#).

References [\\_offeredCapacity](#).

34.83.4.7 **const CabinCapacity\_T& stdair::LegCabin::getPhysicalCapacity ( ) const**  
[inline]

Get the cabin physical capacity.

Definition at line 80 of file [LegCabin.hpp](#).

References [\\_physicalCapacity](#).

34.83.4.8 **const NbOfSeats\_T& stdair::LegCabin::getSoldSeat ( ) const** [inline]

Get the number of sold seat.

Definition at line 85 of file [LegCabin.hpp](#).

References [\\_soldSeat](#).

34.83.4.9 **const CommittedSpace\_T& stdair::LegCabin::getCommittedSpace ( ) const**  
[inline]

Get the value of committed space.

Definition at line 90 of file [LegCabin.hpp](#).

References [\\_committedSpace](#).

34.83.4.10 **const Availability\_T& stdair::LegCabin::getAvailabilityPool ( ) const**  
[inline]

Get the value of the availability pool.

Definition at line 95 of file [LegCabin.hpp](#).

References [\\_availabilityPool](#).

34.83.4.11 **const Availability\_T& stdair::LegCabin::getAvailability ( ) const** [inline]

Get the value of the availability.

Definition at line 100 of file [LegCabin.hpp](#).

References [\\_availability](#).

34.83.4.12 **const BidPrice\_T& stdair::LegCabin::getCurrentBidPrice ( ) const** [inline]

Get the current Bid-Price.

Definition at line 105 of file [LegCabin.hpp](#).

References [\\_currentBidPrice](#).

34.83.4.13 `const BidPrice_T& stdair::LegCabin::getPreviousBidPrice ( ) const`  
`[inline]`

Get the previous Bid-Price.

Definition at line 110 of file [LegCabin.hpp](#).

References [\\_previousBidPrice](#).

34.83.4.14 `const BidPriceVector_T& stdair::LegCabin::getBidPriceVector ( ) const`  
`[inline]`

Get the Bid-Price Vector.

Definition at line 115 of file [LegCabin.hpp](#).

References [\\_bidPriceVector](#).

34.83.4.15 `const CapacityAdjustment_T& stdair::LegCabin::getRegradeAdjustment ( ) const`  
`[inline]`

Get the capacity adjustment due to check-in (DCS) regrade.

Definition at line 120 of file [LegCabin.hpp](#).

References [\\_dcsRegrade](#).

34.83.4.16 `const AuthorizationLevel_T& stdair::LegCabin::getAuthorizationLevel ( ) const`  
`[inline]`

Authorisation Level (AU).

Definition at line 125 of file [LegCabin.hpp](#).

References [\\_au](#).

34.83.4.17 `const UPR_T& stdair::LegCabin::getUPR ( ) const` `[inline]`

Unsold Protection (UPR).

Definition at line 130 of file [LegCabin.hpp](#).

References [\\_upr](#).

34.83.4.18 `const Availability_T& stdair::LegCabin::getNetAvailability ( ) const`  
`[inline]`

Net Availability (NAV).

Definition at line 135 of file [LegCabin.hpp](#).

References [\\_nav](#).

34.83.4.19 `const Availability_T& stdair::LegCabin::getGrossAvailability ( ) const`  
`[inline]`

Gross Availability (GAV).

Definition at line 140 of file [LegCabin.hpp](#).

References [\\_gav](#).

34.83.4.20 `const OverbookingRate_T& stdair::LegCabin::getAvgCancellationPercentage ( ) const [inline]`

Average Cancellation Percentage (ACP).

Definition at line 145 of file [LegCabin.hpp](#).

References [\\_acp](#).

34.83.4.21 `const NbOfSeats_T& stdair::LegCabin::getETB ( ) const [inline]`

Expected to Board (ETB).

Definition at line 150 of file [LegCabin.hpp](#).

References [\\_etb](#).

34.83.4.22 `const NbOfSeats_T& stdair::LegCabin::getStaffNbOfSeats ( ) const [inline]`

Number of staff bookings.

Definition at line 155 of file [LegCabin.hpp](#).

References [\\_staffNbOfBookings](#).

34.83.4.23 `const NbOfSeats_T& stdair::LegCabin::getWLNbOfSeats ( ) const [inline]`

Number of wait-listed bookings.

Definition at line 160 of file [LegCabin.hpp](#).

References [\\_wLNbOfBookings](#).

34.83.4.24 `const NbOfSeats_T& stdair::LegCabin::getGroupNbOfSeats ( ) const [inline]`

Number of group bookings.

Definition at line 165 of file [LegCabin.hpp](#).

References [\\_groupNbOfBookings](#).

34.83.4.25 `VirtualClassList_T& stdair::LegCabin::getVirtualClassList ( ) [inline]`

The virtual class list.

Definition at line 170 of file [LegCabin.hpp](#).

References [\\_virtualClassList](#).



**34.83.4.26 BidPriceVector\_T& stdair::LegCabin::getBidPriceVector ( ) [inline]**

Reset the bid price vector and return it.

Definition at line 175 of file [LegCabin.hpp](#).

References [\\_bidPriceVector](#).

**34.83.4.27 const YieldLevelDemandMap\_T stdair::LegCabin::getYieldLevelDemandMap ( ) [inline]**

Get the yield-demand map.

Definition at line 181 of file [LegCabin.hpp](#).

References [\\_yieldLevelDemandMap](#).

**34.83.4.28 void stdair::LegCabin::setCapacities ( const CabinCapacity\_T & iCapacity )**

Set the offered and physical capacities.

Definition at line 47 of file [LegCabin.cpp](#).

References [\\_committedSpace](#), [\\_offeredCapacity](#), [\\_physicalCapacity](#), and [setAvailabilityPool\(\)](#).

**34.83.4.29 void stdair::LegCabin::setSoldSeat ( const NbOfSeats\_T & iSoldSeat ) [inline]**

Set the number of sold seat.

Definition at line 192 of file [LegCabin.hpp](#).

References [\\_soldSeat](#).

**34.83.4.30 void stdair::LegCabin::setCommittedSpace ( const CommittedSpace\_T & iCommittedSpace ) [inline]**

Set the value of committed space.

Definition at line 197 of file [LegCabin.hpp](#).

References [\\_committedSpace](#).

**34.83.4.31 void stdair::LegCabin::setAvailabilityPool ( const Availability\_T & iAvailabilityPool ) [inline]**

Set the value of availability pool.

Definition at line 202 of file [LegCabin.hpp](#).

References [\\_availabilityPool](#).

Referenced by [setCapacities\(\)](#).

34.83.4.32 void stdair::LegCabin::setAvailability ( const Availability\_T & iAvailability )  
[inline]

Set the value of availability.

Definition at line 207 of file [LegCabin.hpp](#).

References [\\_availability](#).

34.83.4.33 void stdair::LegCabin::setCurrentBidPrice ( const BidPrice\_T & iBidPrice )  
[inline]

Set the current Bid-Price.

Definition at line 212 of file [LegCabin.hpp](#).

References [\\_currentBidPrice](#).

34.83.4.34 void stdair::LegCabin::setPreviousBidPrice ( const BidPrice\_T & iBidPrice )  
[inline]

Set the previous Bid-Price.

Definition at line 217 of file [LegCabin.hpp](#).

References [\\_previousBidPrice](#).

34.83.4.35 void stdair::LegCabin::updatePreviousBidPrice ( ) [inline]

Update the previous bid price value with the current one.

Definition at line 222 of file [LegCabin.hpp](#).

References [\\_currentBidPrice](#), and [\\_previousBidPrice](#).

34.83.4.36 void stdair::LegCabin::setRegradeAdjustment ( const CapacityAdjustment\_T & iRegradeAdjustment ) [inline]

Get the capacity adjustment due to check-in (DCS) regrade.

Definition at line 227 of file [LegCabin.hpp](#).

References [\\_dcsRegrade](#).

34.83.4.37 void stdair::LegCabin::setAuthorizationLevel ( const AuthorizationLevel\_T & iAU ) [inline]

Set the Authorisation Level (AU).

Definition at line 232 of file [LegCabin.hpp](#).

References [\\_au](#).

34.83.4.38 void stdair::LegCabin::setUPR ( const UPR\_T & iUPR ) [inline]

Set the Unsold Protection (UPR).

Definition at line 237 of file [LegCabin.hpp](#).

References [\\_upr](#).

**34.83.4.39** void stdair::LegCabin::setNetAvailability ( const Availability\_T & iNAV )  
[inline]

Set the Net Availability (NAV).

Definition at line 242 of file [LegCabin.hpp](#).

References [\\_nav](#).

**34.83.4.40** void stdair::LegCabin::setGrossAvailability ( const Availability\_T & iGAV )  
[inline]

Set the Gross Availability (GAV).

Definition at line 247 of file [LegCabin.hpp](#).

References [\\_gav](#).

**34.83.4.41** void stdair::LegCabin::setAvgCancellationPercentage ( const  
OverbookingRate\_T & iACP ) [inline]

Set the Average Cancellation Percentage (ACP).

Definition at line 252 of file [LegCabin.hpp](#).

References [\\_acp](#).

**34.83.4.42** void stdair::LegCabin::setETB ( const NbOfSeats\_T & iETB ) [inline]

Set the Expected to Board (ETB).

Definition at line 257 of file [LegCabin.hpp](#).

References [\\_etb](#).

**34.83.4.43** void stdair::LegCabin::setStaffNbOfSeats ( const NbOfSeats\_T & iStaffSeats )  
[inline]

Set the Number of staff sold seats.

Definition at line 262 of file [LegCabin.hpp](#).

References [\\_staffNbOfBookings](#).

**34.83.4.44** void stdair::LegCabin::setWLNbOfSeats ( const NbOfSeats\_T & iWLSSeats )  
[inline]

Set the Number of wait-listed sold seats.

Definition at line 267 of file [LegCabin.hpp](#).

References [\\_wLNbOfBookings](#).

34.83.4.45 void stdair::LegCabin::setGroupNbOfSeats ( const NbOfSeats\_T & iGroupSeats )  
[inline]

Set the Number of group sold seats.

Definition at line 272 of file [LegCabin.hpp](#).

References [\\_groupNbOfBookings](#).

34.83.4.46 void stdair::LegCabin::updateCurrentBidPrice ( )

Update the bid price (from bid price vector if not empty).

Definition at line 94 of file [LegCabin.cpp](#).

References [\\_availabilityPool](#), [\\_bidPriceVector](#), and [\\_currentBidPrice](#).

34.83.4.47 void stdair::LegCabin::toStream ( std::ostream & ioOut ) const [inline,  
virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 286 of file [LegCabin.hpp](#).

References [toString\(\)](#).

34.83.4.48 void stdair::LegCabin::fromStream ( std::istream & ioIn ) [inline,  
virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 294 of file [LegCabin.hpp](#).

34.83.4.49 std::string stdair::LegCabin::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 63 of file [LegCabin.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.83.4.50 `const std::string stdair::LegCabin::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 305 of file [LegCabin.hpp](#).

References [\\_key](#), and [stdair::LegCabinKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.83.4.51 `const std::string stdair::LegCabin::displayVirtualClassList ( ) const`

Display the virtual class list content.

Definition at line 70 of file [LegCabin.cpp](#).

References [\\_virtualClassList](#), [stdair::VirtualClassStruct::getCumulatedBookingLimit\(\)](#), [stdair::VirtualClassStruct::getCumulatedBookingLimit\(\)](#), and [stdair::VirtualClassStruct::getYield\(\)](#).

34.83.4.52 `void stdair::LegCabin::updateFromReservation ( const NbOfBookings_T & iNbOfBookings )`

Register a sale.

Definition at line 88 of file [LegCabin.cpp](#).

References [\\_availabilityPool](#), [\\_committedSpace](#), and [\\_offeredCapacity](#).

34.83.4.53 `void stdair::LegCabin::addVirtualClass ( const VirtualClassStruct & iVC ) [inline]`

Add a virtual class to the list.

Definition at line 325 of file [LegCabin.hpp](#).

References [\\_virtualClassList](#).

34.83.4.54 `void stdair::LegCabin::emptyVirtualClassList ( ) [inline]`

Empty the virtual class list.

Definition at line 332 of file [LegCabin.hpp](#).

References [\\_virtualClassList](#).

34.83.4.55 `void stdair::LegCabin::emptyBidPriceVector ( ) [inline]`

Empty the bid price vector.

Definition at line 339 of file [LegCabin.hpp](#).

References [\\_bidPriceVector](#).

34.83.4.56 `void stdair::LegCabin::addDemandInformation ( const YieldValue_T & iYield, const MeanValue_T & iMeanValue, const StdDevValue_T & iStdDevValue )`

Add demand information.

Definition at line 107 of file [LegCabin.cpp](#).

References [\\_yieldLevelDemandMap](#).

34.83.4.57 void stdair::LegCabin::emptyYieldLevelDemandMap ( ) [inline]

Reset the (yield level,demand) map.

Definition at line 352 of file [LegCabin.hpp](#).

References [\\_yieldLevelDemandMap](#).

### 34.83.5 Friends And Related Function Documentation

34.83.5.1 friend class FacBom [friend]

Definition at line 25 of file [LegCabin.hpp](#).

34.83.5.2 friend class FacBomManager [friend]

Definition at line 26 of file [LegCabin.hpp](#).

### 34.83.6 Member Data Documentation

34.83.6.1 Key\_T stdair::LegCabin::\_key [protected]

Primary key (cabin code).

Definition at line 385 of file [LegCabin.hpp](#).

Referenced by [describeKey\(\)](#), [getCabinCode\(\)](#), and [getKey\(\)](#).

34.83.6.2 BomAbstract\* stdair::LegCabin::\_parent [protected]

Pointer on the parent class ([LegDate](#)).

Definition at line 390 of file [LegCabin.hpp](#).

Referenced by [getParent\(\)](#).

34.83.6.3 HolderMap\_T stdair::LegCabin::\_holderMap [protected]

Map holding the children ([Bucket](#) objects).

Definition at line 395 of file [LegCabin.hpp](#).

Referenced by [getHolderMap\(\)](#).

34.83.6.4 CabinCapacity\_T stdair::LegCabin::\_offeredCapacity [protected]

Saleable capacity of the cabin.

Definition at line 398 of file [LegCabin.hpp](#).

Referenced by [getOfferedCapacity\(\)](#), [setCapacities\(\)](#), and [updateFromReservation\(\)](#).

**34.83.6.5 CabinCapacity\_T stdair::LegCabin::\_physicalCapacity** [protected]

Physical capacity of the cabin.

Definition at line 401 of file [LegCabin.hpp](#).

Referenced by [getPhysicalCapacity\(\)](#), and [setCapacities\(\)](#).

**34.83.6.6 NbOfSeats\_T stdair::LegCabin::\_soldSeat** [protected]

Aggregated number of sold seats.

Definition at line 404 of file [LegCabin.hpp](#).

Referenced by [getSoldSeat\(\)](#), and [setSoldSeat\(\)](#).

**34.83.6.7 CommittedSpace\_T stdair::LegCabin::\_committedSpace**  
[protected]

Definition at line 407 of file [LegCabin.hpp](#).

Referenced by [getCommittedSpace\(\)](#), [setCapacities\(\)](#), [setCommittedSpace\(\)](#), and [updateFromReservation\(\)](#).

**34.83.6.8 Availability\_T stdair::LegCabin::\_availabilityPool** [protected]

Availability pool.

Definition at line 410 of file [LegCabin.hpp](#).

Referenced by [getAvailabilityPool\(\)](#), [setAvailabilityPool\(\)](#), [updateCurrentBidPrice\(\)](#), and [updateFromReservation\(\)](#).

**34.83.6.9 Availability\_T stdair::LegCabin::\_availability** [protected]

Availability.

Definition at line 413 of file [LegCabin.hpp](#).

Referenced by [getAvailability\(\)](#), and [setAvailability\(\)](#).

**34.83.6.10 BidPrice\_T stdair::LegCabin::\_currentBidPrice** [protected]

Current Bid-Price (BP).

Definition at line 416 of file [LegCabin.hpp](#).

Referenced by [getCurrentBidPrice\(\)](#), [setCurrentBidPrice\(\)](#), [updateCurrentBidPrice\(\)](#), and [updatePreviousBidPrice\(\)](#).

**34.83.6.11 BidPrice\_T stdair::LegCabin::\_previousBidPrice** [protected]

Previous Bid-Price (BP).

Definition at line 419 of file [LegCabin.hpp](#).

Referenced by [getPreviousBidPrice\(\)](#), [setPreviousBidPrice\(\)](#), and [updatePreviousBidPrice\(\)](#).

**34.83.6.12 BidPriceVector\_T stdair::LegCabin::\_bidPriceVector** [protected]

Bid-Price Vector (BPV).

Definition at line 422 of file [LegCabin.hpp](#).

Referenced by [emptyBidPriceVector\(\)](#), [getBidPriceVector\(\)](#), and [updateCurrentBidPrice\(\)](#).

**34.83.6.13 VirtualClassList\_T stdair::LegCabin::\_virtualClassList**  
[protected]

List of virtual classes (for revenue management optimisation).

Definition at line 425 of file [LegCabin.hpp](#).

Referenced by [addVirtualClass\(\)](#), [displayVirtualClassList\(\)](#), [emptyVirtualClassList\(\)](#), and [getVirtualClassList\(\)](#).

**34.83.6.14 YieldLevelDemandMap\_T stdair::LegCabin::\_yieldLevelDemandMap**  
[protected]

Map holding the demand information indexed by yield.

Definition at line 428 of file [LegCabin.hpp](#).

Referenced by [addDemandInformation\(\)](#), [emptyYieldLevelDemandMap\(\)](#), and [getYieldLevelDemandMap\(\)](#).

**34.83.6.15 CapacityAdjustment\_T stdair::LegCabin::\_dcsRegrade**

Capacity adjustment of the cabin, due to check-in (DCS) regrade.

Definition at line 433 of file [LegCabin.hpp](#).

Referenced by [getRegradeAdjustment\(\)](#), and [setRegradeAdjustment\(\)](#).

**34.83.6.16 AuthorizationLevel\_T stdair::LegCabin::\_au**

Authorisation Level (AU).

Definition at line 436 of file [LegCabin.hpp](#).

Referenced by [getAuthorizationLevel\(\)](#), and [setAuthorizationLevel\(\)](#).

**34.83.6.17 UPR\_T stdair::LegCabin::\_upr**

Unsold Protection (UPR).

Definition at line 439 of file [LegCabin.hpp](#).

Referenced by [getUPR\(\)](#), and [setUPR\(\)](#).

**34.83.6.18 Availability\_T stdair::LegCabin::\_nav**

Net Availability (NAV).

Definition at line 442 of file [LegCabin.hpp](#).

Referenced by [getNetAvailability\(\)](#), and [setNetAvailability\(\)](#).



**34.83.6.19 Availability\_T stdair::LegCabin::\_gav**

Gross Availability (GAV).

Definition at line 445 of file [LegCabin.hpp](#).

Referenced by [getGrossAvailability\(\)](#), and [setGrossAvailability\(\)](#).

**34.83.6.20 OverbookingRate\_T stdair::LegCabin::\_acp**

Average Cancellation Percentage (ACP).

Definition at line 448 of file [LegCabin.hpp](#).

Referenced by [getAvgCancellationPercentage\(\)](#), and [setAvgCancellationPercentage\(\)](#).

**34.83.6.21 NbOfSeats\_T stdair::LegCabin::\_etb**

Expected to Board (ETB).

Definition at line 451 of file [LegCabin.hpp](#).

Referenced by [getETB\(\)](#), and [setETB\(\)](#).

**34.83.6.22 NbOfSeats\_T stdair::LegCabin::\_staffNbOfBookings**

Number of staff bookings.

Definition at line 454 of file [LegCabin.hpp](#).

Referenced by [getStaffNbOfSeats\(\)](#), and [setStaffNbOfSeats\(\)](#).

**34.83.6.23 NbOfSeats\_T stdair::LegCabin::\_wlnNbOfBookings**

Number of wait-listed bookings.

Definition at line 457 of file [LegCabin.hpp](#).

Referenced by [getWLNbOfSeats\(\)](#), and [setWLNbOfSeats\(\)](#).

**34.83.6.24 NbOfSeats\_T stdair::LegCabin::\_groupNbOfBookings**

Number of group bookings.

Definition at line 460 of file [LegCabin.hpp](#).

Referenced by [getGroupNbOfSeats\(\)](#), and [setGroupNbOfSeats\(\)](#).

The documentation for this class was generated from the following files:

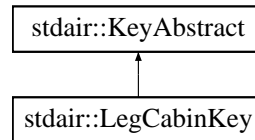
- [stdair/bom/LegCabin.hpp](#)
- [stdair/bom/LegCabin.cpp](#)

**34.84 stdair::LegCabinKey Struct Reference**

Key of a given leg-cabin, made of a cabin code (only).

```
#include <stdair/bom/LegCabinKey.hpp>
```

Inheritance diagram for stdair::LegCabinKey:



#### Public Member Functions

- [LegCabinKey](#) (const [CabinCode\\_T](#) &iCabinCode)
- [LegCabinKey](#) (const [LegCabinKey](#) &)
- [~LegCabinKey](#) ()
- const [CabinCode\\_T](#) & [getCabinCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Friends

- class [boost::serialization::access](#)

#### 34.84.1 Detailed Description

Key of a given leg-cabin, made of a cabin code (only).

Definition at line 26 of file [LegCabinKey.hpp](#).

#### 34.84.2 Constructor & Destructor Documentation

##### 34.84.2.1 stdair::LegCabinKey::LegCabinKey ( const CabinCode\_T & iCabinCode )

Constructor.

Definition at line 23 of file [LegCabinKey.cpp](#).

##### 34.84.2.2 stdair::LegCabinKey::LegCabinKey ( const LegCabinKey & iKey )

Copy constructor.

Definition at line 28 of file [LegCabinKey.cpp](#).

##### 34.84.2.3 stdair::LegCabinKey::~~LegCabinKey ( )

Destructor.

Definition at line 33 of file [LegCabinKey.cpp](#).

## 34.84.3 Member Function Documentation

34.84.3.1 `const CabinCode_T& stdair::LegCabinKey::getCabinCode ( ) const`  
[inline]

Get the cabin code.

Definition at line 56 of file [LegCabinKey.hpp](#).

Referenced by [stdair::LegCabin::getCabinCode\(\)](#).

34.84.3.2 `void stdair::LegCabinKey::toStream ( std::ostream & ioOut ) const` [virtual]

Dump a Business Object Key into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 37 of file [LegCabinKey.cpp](#).

References [toString\(\)](#).

34.84.3.3 `void stdair::LegCabinKey::fromStream ( std::istream & iIn )` [virtual]

Read a Business Object Key from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [LegCabinKey.cpp](#).

34.84.3.4 `const std::string stdair::LegCabinKey::toString ( ) const` [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 46 of file [LegCabinKey.cpp](#).

Referenced by [stdair::LegCabin::describeKey\(\)](#), [stdair::LegDate::getLegCabin\(\)](#), and [toStream\(\)](#).

34.84.3.5 `template<class Archive > void stdair::LegCabinKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 68 of file [LegCabinKey.cpp](#).

#### 34.84.4 Friends And Related Function Documentation

##### 34.84.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file [LegCabinKey.hpp](#).

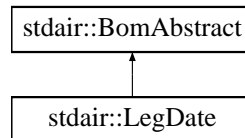
The documentation for this struct was generated from the following files:

- [stdair/bom/LegCabinKey.hpp](#)
- [stdair/bom/LegCabinKey.cpp](#)

#### 34.85 stdair::LegDate Class Reference

```
#include <stdair/bom/LegDate.hpp>
```

Inheritance diagram for stdair::LegDate:



#### Public Types

- typedef [LegDateKey](#) Key\_T

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- [LegCabin](#) \* [getLegCabin](#) (const std::string &iLegCabinKeyStr) const
- [LegCabin](#) \* [getLegCabin](#) (const [LegCabinKey](#) &) const
- const [AirportCode\\_T](#) & [getOffPoint](#) () const
- const [Date\\_T](#) & [getBoardingDate](#) () const
- const [Duration\\_T](#) & [getBoardingTime](#) () const
- const [Date\\_T](#) & [getOffDate](#) () const
- const [Duration\\_T](#) & [getOffTime](#) () const
- const [Duration\\_T](#) & [getElapsedTime](#) () const
- const [Distance\\_T](#) & [getDistance](#) () const
- const [CabinCapacity\\_T](#) & [getCapacity](#) () const

- const [DateOffset\\_T](#) [getDateOffset](#) () const
- const [Duration\\_T](#) [getTimeOffset](#) () const
- void [setOffPoint](#) (const [AirportCode\\_T](#) &iOffPoint)
- void [setBoardingDate](#) (const [Date\\_T](#) &iBoardingDate)
- void [setBoardingTime](#) (const [Duration\\_T](#) &iBoardingTime)
- void [setOffDate](#) (const [Date\\_T](#) &iOffDate)
- void [setOffTime](#) (const [Duration\\_T](#) &iOffTime)
- void [setElapsedTime](#) (const [Duration\\_T](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const

#### Protected Member Functions

- [LegDate](#) (const [Key\\_T](#) &)
- virtual [~LegDate](#) ()

#### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)
- [AirportCode\\_T\\_offPoint](#)
- [Date\\_T\\_boardingDate](#)
- [Duration\\_T\\_boardingTime](#)
- [Date\\_T\\_offDate](#)
- [Duration\\_T\\_offTime](#)
- [Duration\\_T\\_elapsedTime](#)
- [Distance\\_T\\_distance](#)
- [CabinCapacity\\_T\\_capacity](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.85.1 Detailed Description

Class representing the actual attributes for an airline leg-date.

Definition at line 25 of file [LegDate.hpp](#).

### 34.85.2 Member Typedef Documentation

#### 34.85.2.1 typedef LegDateKey stdair::LegDate::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 32 of file [LegDate.hpp](#).

### 34.85.3 Constructor & Destructor Documentation

#### 34.85.3.1 stdair::LegDate::LegDate ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 28 of file [LegDate.cpp](#).

#### 34.85.3.2 stdair::LegDate::~~LegDate ( ) [protected, virtual]

Destructor.

Definition at line 34 of file [LegDate.cpp](#).

### 34.85.4 Member Function Documentation

#### 34.85.4.1 const Key\_T& stdair::LegDate::getKey ( ) const [inline]

Get the leg-date key.

Definition at line 38 of file [LegDate.hpp](#).

References [\\_key](#).

#### 34.85.4.2 BomAbstract\* const stdair::LegDate::getParent ( ) const [inline]

Get the parent object.

Definition at line 43 of file [LegDate.hpp](#).

References [\\_parent](#).

Referenced by [getAirlineCode\(\)](#).

#### 34.85.4.3 const AirportCode\_T& stdair::LegDate::getBoardingPoint ( ) const [inline]

Get the boarding point (part of the primary key).

Definition at line 48 of file [LegDate.hpp](#).

References [\\_key](#), and [stdair::LegDateKey::getBoardingPoint\(\)](#).

#### 34.85.4.4 const AirlineCode\_T & stdair::LegDate::getAirlineCode ( ) const

Get the airline code (key of the parent object).

**Note**

That method assumes that the parent object derives from the [Inventory](#) class, as it needs to have access to the [getAirlineCode\(\)](#) method.

Definition at line 38 of file [LegDate.cpp](#).

References [stdair::FlightDate::getAirlineCode\(\)](#), and [getParent\(\)](#).

#### 34.85.4.5 `const HolderMap_T& stdair::LegDate::getHolderMap ( ) const` [inline]

Get the map of children holders.

Definition at line 64 of file [LegDate.hpp](#).

References [\\_holderMap](#).

#### 34.85.4.6 `LegCabin * stdair::LegDate::getLegCabin ( const std::string & iLegCabinKeyStr ) const`

Get a pointer on the [LegCabin](#) object corresponding to the given key.

**Note**

The [LegCabin](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

**Parameters**

<code>const</code> <a href="#">std::string&amp;</a> The leg-cabin key.
--

**Returns**

[LegCabin\\*](#) Found [LegCabin](#) object. NULL if not found.

Definition at line 53 of file [LegDate.cpp](#).

Referenced by [getLegCabin\(\)](#), and [stdair::BomRetriever::retrieveDummyLegCabin\(\)](#).

#### 34.85.4.7 `LegCabin * stdair::LegDate::getLegCabin ( const LegCabinKey & iLegCabinKey ) const`

Get a pointer on the [LegCabin](#) object corresponding to the given key.

**Note**

The [LegCabin](#) object can be inherited from, if needed. In that case, a `dynamic_cast<>` may be needed.

**Parameters**

<code>const</code> <a href="#">LegCabinKey&amp;</a> The leg-cabin key
---

**Returns**

[LegCabin\\*](#) Found [LegCabin](#) object. NULL if not found.

Definition at line 60 of file [LegDate.cpp](#).

References [getLegCabin\(\)](#), and [stdair::LegCabinKey::toString\(\)](#).

**34.85.4.8** `const AirportCode_T& stdair::LegDate::getOffPoint ( ) const` `[inline]`

Get the off point.

Definition at line 93 of file [LegDate.hpp](#).

References [\\_offPoint](#).

**34.85.4.9** `const Date_T& stdair::LegDate::getBoardingDate ( ) const` `[inline]`

Get the boarding date.

Definition at line 98 of file [LegDate.hpp](#).

References [\\_boardingDate](#).

**34.85.4.10** `const Duration_T& stdair::LegDate::getBoardingTime ( ) const` `[inline]`

Get the boarding time.

Definition at line 103 of file [LegDate.hpp](#).

References [\\_boardingTime](#).

**34.85.4.11** `const Date_T& stdair::LegDate::getOffDate ( ) const` `[inline]`

Get the off date.

Definition at line 108 of file [LegDate.hpp](#).

References [\\_offDate](#).

**34.85.4.12** `const Duration_T& stdair::LegDate::getOffTime ( ) const` `[inline]`

Get the off time.

Definition at line 113 of file [LegDate.hpp](#).

References [\\_offTime](#).

**34.85.4.13** `const Duration_T& stdair::LegDate::getElapsedTime ( ) const` `[inline]`

Get the elapsed time.

Definition at line 118 of file [LegDate.hpp](#).

References [\\_elapsedTime](#).

**34.85.4.14** `const Distance_T& stdair::LegDate::getDistance ( ) const` `[inline]`

Get the distance.

Definition at line 123 of file [LegDate.hpp](#).

References [\\_distance](#).



**34.85.4.15 const CabinCapacity\_T& stdair::LegDate::getCapacity ( ) const** [inline]

Get the leg capacity.

Definition at line 128 of file [LegDate.hpp](#).

References [\\_capacity](#).

**34.85.4.16 const DateOffset\_T stdair::LegDate::getDateOffset ( ) const** [inline]

Get the date offset (off date - boarding date).

Definition at line 133 of file [LegDate.hpp](#).

References [\\_boardingDate](#), and [\\_offDate](#).

Referenced by [getTimeOffset\(\)](#).

**34.85.4.17 const Duration\_T stdair::LegDate::getTimeOffset ( ) const**

Get the time off set between boarding and off points.

It is defined as being:  $\text{TimeOffset} = (\text{OffTime} - \text{BoardingTime}) + (\text{OffDate} - \text{BoardingDate}) * 24$

- [ElapsedTime](#).

Definition at line 65 of file [LegDate.cpp](#).

References [\\_boardingTime](#), [\\_elapsedTime](#), [\\_offTime](#), and [getDateOffset\(\)](#).

**34.85.4.18 void stdair::LegDate::setOffPoint ( const AirportCode\_T & iOffPoint )**  
[inline]

Set the off point.

Definition at line 147 of file [LegDate.hpp](#).

References [\\_offPoint](#).

**34.85.4.19 void stdair::LegDate::setBoardingDate ( const Date\_T & iBoardingDate )**  
[inline]

Set the boarding date.

Definition at line 152 of file [LegDate.hpp](#).

References [\\_boardingDate](#).

**34.85.4.20 void stdair::LegDate::setBoardingTime ( const Duration\_T & iBoardingTime )**  
[inline]

Set the boarding time.

Definition at line 157 of file [LegDate.hpp](#).

References [\\_boardingTime](#).

34.85.4.21 void stdair::LegDate::setOffDate ( const Date\_T & iOffDate ) [inline]

Set the off date.

Definition at line 162 of file [LegDate.hpp](#).

References [\\_offDate](#).

34.85.4.22 void stdair::LegDate::setOffTime ( const Duration\_T & iOffTime ) [inline]

Set the off time.

Definition at line 167 of file [LegDate.hpp](#).

References [\\_offTime](#).

34.85.4.23 void stdair::LegDate::setElapsedTime ( const Duration\_T & iElapsedTime )

Set the elapsed time.

Definition at line 80 of file [LegDate.cpp](#).

References [\\_elapsedTime](#).

34.85.4.24 void stdair::LegDate::toStream ( std::ostream & ioOut ) const [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 183 of file [LegDate.hpp](#).

References [toString\(\)](#).

34.85.4.25 void stdair::LegDate::fromStream ( std::istream & iIn ) [inline, virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 189 of file [LegDate.hpp](#).

34.85.4.26 std::string stdair::LegDate::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 46 of file [LegDate.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.85.4.27 `const std::string stdair::LegDate::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 196 of file [LegDate.hpp](#).

References [\\_key](#), and [stdair::LegDateKey::toString\(\)](#).

Referenced by [stdair::LegCabin::getFullerKey\(\)](#), and [toString\(\)](#).

### 34.85.5 Friends And Related Function Documentation

34.85.5.1 `friend class FacBom [friend]`

Definition at line 26 of file [LegDate.hpp](#).

34.85.5.2 `friend class FacBomManager [friend]`

Definition at line 27 of file [LegDate.hpp](#).

### 34.85.6 Member Data Documentation

34.85.6.1 `Key_T stdair::LegDate::_key [protected]`

Primary key (origin airport).

Definition at line 218 of file [LegDate.hpp](#).

Referenced by [describeKey\(\)](#), [getBoardingPoint\(\)](#), and [getKey\(\)](#).

34.85.6.2 `BomAbstract* stdair::LegDate::_parent [protected]`

Pointer on the parent class ([FlightDate](#)).

Definition at line 221 of file [LegDate.hpp](#).

Referenced by [getParent\(\)](#).

34.85.6.3 `HolderMap_T stdair::LegDate::_holderMap [protected]`

Map holding the children ([LegCabin](#) objects).

Definition at line 224 of file [LegDate.hpp](#).

Referenced by [getHolderMap\(\)](#).

34.85.6.4 `AirportCode_T stdair::LegDate::_offPoint [protected]`

Landing airport.

Definition at line 227 of file [LegDate.hpp](#).

Referenced by [getOffPoint\(\)](#), and [setOffPoint\(\)](#).

#### 34.85.6.5 Date\_T stdair::LegDate::\_boardingDate [protected]

Boarding date.

Definition at line 230 of file [LegDate.hpp](#).

Referenced by [getBoardingDate\(\)](#), [getDateOffset\(\)](#), and [setBoardingDate\(\)](#).

#### 34.85.6.6 Duration\_T stdair::LegDate::\_boardingTime [protected]

Boarding time.

Definition at line 233 of file [LegDate.hpp](#).

Referenced by [getBoardingTime\(\)](#), [getTimeOffset\(\)](#), and [setBoardingTime\(\)](#).

#### 34.85.6.7 Date\_T stdair::LegDate::\_offDate [protected]

Landing date.

Definition at line 236 of file [LegDate.hpp](#).

Referenced by [getDateOffset\(\)](#), [getOffDate\(\)](#), and [setOffDate\(\)](#).

#### 34.85.6.8 Duration\_T stdair::LegDate::\_offTime [protected]

Landing time.

Definition at line 239 of file [LegDate.hpp](#).

Referenced by [getOffTime\(\)](#), [getTimeOffset\(\)](#), and [setOffTime\(\)](#).

#### 34.85.6.9 Duration\_T stdair::LegDate::\_elapsedTime [protected]

Trip elapsed time.

Definition at line 242 of file [LegDate.hpp](#).

Referenced by [getElapsedTime\(\)](#), [getTimeOffset\(\)](#), and [setElapsedTime\(\)](#).

#### 34.85.6.10 Distance\_T stdair::LegDate::\_distance [protected]

Trip distance.

Definition at line 245 of file [LegDate.hpp](#).

Referenced by [getDistance\(\)](#).

#### 34.85.6.11 CabinCapacity\_T stdair::LegDate::\_capacity [protected]

Aggregated capacity for all the leg-cabins.

Definition at line 248 of file [LegDate.hpp](#).

Referenced by [getCapacity\(\)](#).

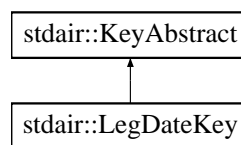
The documentation for this class was generated from the following files:

- [stdair/bom/LegDate.hpp](#)
- [stdair/bom/LegDate.cpp](#)

## 34.86 stdair::LegDateKey Struct Reference

```
#include <stdair/bom/LegDateKey.hpp>
```

Inheritance diagram for stdair::LegDateKey:



### Public Member Functions

- [LegDateKey](#) (const [AirportCode\\_T](#) &iBoardingPoint)
- [LegDateKey](#) (const [LegDateKey](#) &)
- [~LegDateKey](#) ()
- const [AirportCode\\_T](#) &[getBoardingPoint](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

### 34.86.1 Detailed Description

Key of a given leg-date, made of an origin airport.

Definition at line 16 of file [LegDateKey.hpp](#).

### 34.86.2 Constructor & Destructor Documentation

#### 34.86.2.1 stdair::LegDateKey::LegDateKey ( const [AirportCode\\_T](#) &iBoardingPoint )

Constructor.

Definition at line 19 of file [LegDateKey.cpp](#).

#### 34.86.2.2 stdair::LegDateKey::LegDateKey ( const [LegDateKey](#) &iKey )

Default copy constructor.

Definition at line 24 of file [LegDateKey.cpp](#).

### 34.86.2.3 stdair::LegDateKey::~~LegDateKey ( )

Destructor.

Definition at line 29 of file [LegDateKey.cpp](#).

## 34.86.3 Member Function Documentation

### 34.86.3.1 const AirportCode\_T& stdair::LegDateKey::getBoardingPoint ( ) const [inline]

Get the boarding point.

Definition at line 34 of file [LegDateKey.hpp](#).

Referenced by [stdair::LegDate::getBoardingPoint\(\)](#).

### 34.86.3.2 void stdair::LegDateKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 33 of file [LegDateKey.cpp](#).

References [toString\(\)](#).

### 34.86.3.3 void stdair::LegDateKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 38 of file [LegDateKey.cpp](#).

### 34.86.3.4 const std::string stdair::LegDateKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same leg-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [LegDateKey.cpp](#).

Referenced by [stdair::LegDate::describeKey\(\)](#), [stdair::FlightDate::getLegDate\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/LegDateKey.hpp](#)
- [stdair/bom/LegDateKey.cpp](#)

## 34.87 stdair::Logger Class Reference

```
#include <stdair/service/Logger.hpp>
```

### Public Member Functions

- `template<typename T >`  
`void log (const LOG::EN_LogLevel iLevel, const int iLineNumber, const std::string &iFileName, const T &iToBeLogged)`

### Static Public Member Functions

- static `Logger & instance ()`

### Friends

- class [FacSupervisor](#)  
*Friend classes.*
- class [STDAIR\\_Service](#)

#### 34.87.1 Detailed Description

Class holding the stream for logs.

Note that the error logs are seen as standard output logs, but with a higher level of visibility.

Definition at line 48 of file [Logger.hpp](#).

#### 34.87.2 Member Function Documentation

**34.87.2.1** `template<typename T > void stdair::Logger::log ( const LOG::EN_LogLevel iLevel, const int iLineNumber, const std::string &iFileName, const T &iToBeLogged ) [inline]`

Main log entry.

Definition at line 59 of file [Logger.hpp](#).

References [stdair::LOG::\\_logLevels](#).

34.87.2.2 **Logger** & stdair::Logger::instance ( ) [static]

Return the static [Logger](#) instance.

Definition at line 48 of file [Logger.cpp](#).

## 34.87.3 Friends And Related Function Documentation

34.87.3.1 friend class **FacSupervisor** [friend]

Friend classes.

Definition at line 50 of file [Logger.hpp](#).

34.87.3.2 friend class **STDAIR\_Service** [friend]

Definition at line 51 of file [Logger.hpp](#).

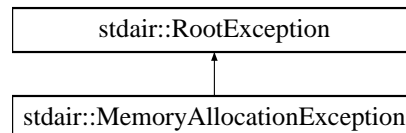
The documentation for this class was generated from the following files:

- [stdair/service/Logger.hpp](#)
- [stdair/service/Logger.cpp](#)

## 34.88 stdair::MemoryAllocationException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::MemoryAllocationException:



## Public Member Functions

- [MemoryAllocationException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

## Protected Attributes

- std::string [\\_what](#)

## 34.88.1 Detailed Description

Memory allocation.

Definition at line 89 of file [stdair\\_exceptions.hpp](#).



### 34.88.2 Constructor & Destructor Documentation

34.88.2.1 `stdair::MemoryAllocationException::MemoryAllocationException ( const std::string & iWhat )` `[inline]`

Constructor.

Definition at line 92 of file [stdair\\_exceptions.hpp](#).

### 34.88.3 Member Function Documentation

34.88.3.1 `const char* stdair::RootException::what ( ) const throw ()` `[inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.88.4 Member Data Documentation

34.88.4.1 `std::string stdair::RootException::_what` `[protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

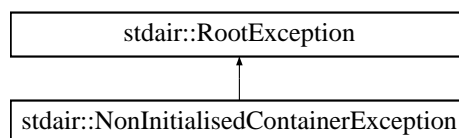
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.89 stdair::NonInitialisedContainerException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::NonInitialisedContainerException`:



### Public Member Functions

- [NonInitialisedContainerException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

## 34.90 stdair::NonInitialisedDBSessionManagerException Class Reference 514

### Protected Attributes

- `std::string _what`

### 34.89.1 Detailed Description

Non initialised container.

Definition at line 73 of file [stdair\\_exceptions.hpp](#).

### 34.89.2 Constructor & Destructor Documentation

34.89.2.1 `stdair::NonInitialisedContainerException::NonInitialisedContainerException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 76 of file [stdair\\_exceptions.hpp](#).

### 34.89.3 Member Function Documentation

34.89.3.1 `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.89.4 Member Data Documentation

34.89.4.1 `std::string stdair::RootException::_what [protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

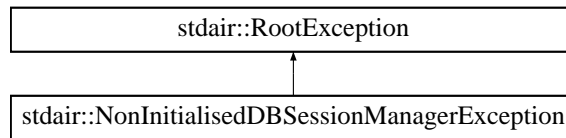
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.90 stdair::NonInitialisedDBSessionManagerException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::NonInitialisedDBSessionManagerException`:



#### Public Member Functions

- [NonInitialisedDBSessionManagerException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

#### 34.90.1 Detailed Description

Non initialised database session.

Definition at line [180](#) of file [stdair\\_exceptions.hpp](#).

#### 34.90.2 Constructor & Destructor Documentation

**34.90.2.1** `stdair::NonInitialisedDBSessionManagerException::NonInitialisedDBSessionManagerException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line [183](#) of file [stdair\\_exceptions.hpp](#).

#### 34.90.3 Member Function Documentation

**34.90.3.1** `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line [38](#) of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.90.4 Member Data Documentation

**34.90.4.1** `std::string stdair::RootException::_what [protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

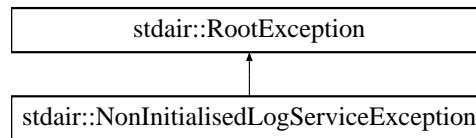
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

### 34.91 stdair::NonInitialisedLogServiceException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::NonInitialisedLogServiceException:



#### Public Member Functions

- [NonInitialisedLogServiceException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

#### 34.91.1 Detailed Description

Non initialised log service.

Definition at line 57 of file [stdair\\_exceptions.hpp](#).

#### 34.91.2 Constructor & Destructor Documentation

34.91.2.1 `stdair::NonInitialisedLogServiceException::NonInitialisedLogServiceException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 60 of file [stdair\\_exceptions.hpp](#).

#### 34.91.3 Member Function Documentation

34.91.3.1 `const char* stdair::RootException::what ( ) const throw ()` [`inline`, `inherited`]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.91.4 Member Data Documentation

34.91.4.1 `std::string stdair::RootException::_what` [`protected`, `inherited`]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

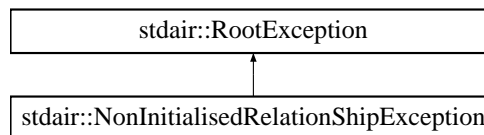
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.92 stdair::NonInitialisedRelationshipException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::NonInitialisedRelationshipException`:



#### Public Member Functions

- [NonInitialisedRelationshipException](#) (`const std::string &iWhat`)
- `const char * what () const throw ()`

#### Protected Attributes

- `std::string \_what`

#### 34.92.1 Detailed Description

Non initialised relationship.

Definition at line 81 of file [stdair\\_exceptions.hpp](#).

## 34.92.2 Constructor &amp; Destructor Documentation

34.92.2.1 `stdair::NonInitialisedRelationShipException::NonInitialisedRelationShipException (const std::string & iWhat )` `[inline]`

Constructor.

Definition at line 84 of file [stdair\\_exceptions.hpp](#).

## 34.92.3 Member Function Documentation

34.92.3.1 `const char* stdair::RootException::what ( ) const throw ( )` `[inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

## 34.92.4 Member Data Documentation

34.92.4.1 `std::string stdair::RootException::_what` `[protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

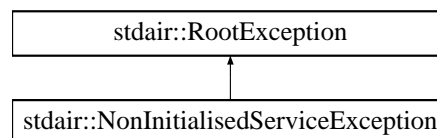
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.93 stdair::NonInitialisedServiceException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::NonInitialisedServiceException`:



## Public Member Functions

- [NonInitialisedServiceException](#) (const std::string &iWhat)
- const char \* [what](#) ( ) const throw ( )

#### Protected Attributes

- `std::string _what`

#### 34.93.1 Detailed Description

Non initialised service.

Definition at line 65 of file [stdair\\_exceptions.hpp](#).

#### 34.93.2 Constructor & Destructor Documentation

34.93.2.1 `stdair::NonInitialisedServiceException::NonInitialisedServiceException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 68 of file [stdair\\_exceptions.hpp](#).

#### 34.93.3 Member Function Documentation

34.93.3.1 `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.93.4 Member Data Documentation

34.93.4.1 `std::string stdair::RootException::_what [protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

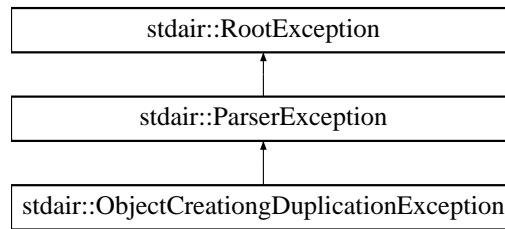
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.94 stdair::ObjectCreationDuplicationException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::ObjectCreationDuplicationException`:



#### Public Member Functions

- [ObjectCreationgDuplicationException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

##### 34.94.1 Detailed Description

Duplicated object.

Definition at line 149 of file [stdair\\_exceptions.hpp](#).

##### 34.94.2 Constructor & Destructor Documentation

**34.94.2.1** `stdair::ObjectCreationgDuplicationException::ObjectCreationgDuplicationException (const std::string & iWhat ) [inline]`

Constructor.

Definition at line 152 of file [stdair\\_exceptions.hpp](#).

##### 34.94.3 Member Function Documentation

**34.94.3.1** `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

##### 34.94.4 Member Data Documentation



#### 34.94.4.1 std::string stdair::RootException::\_what [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

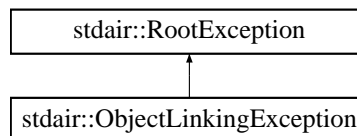
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

### 34.95 stdair::ObjectLinkingException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::ObjectLinkingException:



#### Public Member Functions

- [ObjectLinkingException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

#### 34.95.1 Detailed Description

Object link.

Definition at line 97 of file [stdair\\_exceptions.hpp](#).

#### 34.95.2 Constructor & Destructor Documentation

##### 34.95.2.1 stdair::ObjectLinkingException::ObjectLinkingException ( const std::string & iWhat ) [inline]

Constructor.

Definition at line 100 of file [stdair\\_exceptions.hpp](#).

### 34.95.3 Member Function Documentation

**34.95.3.1** `const char* stdair::RootException::what ( ) const throw ()` [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.95.4 Member Data Documentation

**34.95.4.1** `std::string stdair::RootException::_what` [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

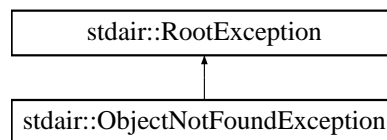
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.96 stdair::ObjectNotFoundException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for `stdair::ObjectNotFoundException`:



### Public Member Functions

- [ObjectNotFoundException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

### 34.96.1 Detailed Description

Not found object.

Definition at line 157 of file [stdair\\_exceptions.hpp](#).

### 34.96.2 Constructor & Destructor Documentation

#### 34.96.2.1 stdair::ObjectNotFoundException::ObjectNotFoundException ( const std::string & *iWhat* ) [inline]

Constructor.

Definition at line 160 of file [stdair\\_exceptions.hpp](#).

### 34.96.3 Member Function Documentation

#### 34.96.3.1 const char\* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.96.4 Member Data Documentation

#### 34.96.4.1 std::string stdair::RootException::\_what [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

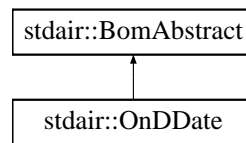
- [stdair/stdair\\_exceptions.hpp](#)

## 34.97 stdair::OnDDate Class Reference

Class representing the actual attributes for an airline flight-date.

```
#include <stdair/bom/OnDDate.hpp>
```

Inheritance diagram for stdair::OnDDate:



### Public Types

- typedef [OnDDateKey](#) [Key\\_T](#)

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- const [stdair::Date\\_T](#) [getDate](#) () const
- const [stdair::AirportCode\\_T](#) [getOrigin](#) () const
- const [stdair::AirportCode\\_T](#) [getDestination](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [StringDemandStructMap\\_T](#) & [getDemandInfoMap](#) () const
- const [CabinForecastMap\\_T](#) & [getTotalForecastMap](#) () const
- const [WTPDemandPair\\_T](#) & [getTotalForecast](#) (const [CabinCode\\_T](#) & iCC) const
- const [CabinClassPairList\\_T](#) & [getCabinClassPairList](#) (const std::string & iStr) const
- const short [getNbOfSegments](#) () const
- void [setDemandInformation](#) (const [CabinClassPairList\\_T](#) &, const [YieldDemandPair\\_T](#) &)
- void [setTotalForecast](#) (const [CabinCode\\_T](#) &, const [WTPDemandPair\\_T](#) &)
- void [toStream](#) (std::ostream & ioOut) const
- void [fromStream](#) (std::istream & ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive & ar, const unsigned int iFileVersion)

### Protected Member Functions

- [OnDDate](#) (const [Key\\_T](#) &)
- virtual [~OnDDate](#) ()

### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)
- [StringDemandStructMap\\_T\\_classPathDemandMap](#)
- [StringCabinClassPairListMap\\_T\\_stringCabinClassPairListMap](#)
- [CabinForecastMap\\_T\\_cabinForecastMap](#)

## Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

### 34.97.1 Detailed Description

Class representing the actual attributes for an airline flight-date.

Definition at line 33 of file [OnDDate.hpp](#).

### 34.97.2 Member Typedef Documentation

#### 34.97.2.1 typedef OnDDateKey stdair::OnDDate::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 43 of file [OnDDate.hpp](#).

### 34.97.3 Constructor & Destructor Documentation

#### 34.97.3.1 stdair::OnDDate::OnDDate ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 29 of file [OnDDate.cpp](#).

#### 34.97.3.2 stdair::OnDDate::~~OnDDate ( ) [protected, virtual]

Destructor.

Definition at line 34 of file [OnDDate.cpp](#).

### 34.97.4 Member Function Documentation

#### 34.97.4.1 const Key\_T& stdair::OnDDate::getKey ( ) const [inline]

Get the O&D date key.

Definition at line 49 of file [OnDDate.hpp](#).

References [\\_key](#).

#### 34.97.4.2 BomAbstract\* const stdair::OnDDate::getParent ( ) const [inline]

Get the parent object.

Definition at line 54 of file [OnDDate.hpp](#).

References [\\_parent](#).

Referenced by [getAirlineCode\(\)](#).

34.97.4.3 `const AirlineCode_T & stdair::OnDDate::getAirlineCode ( ) const`

Get the airline code (key of the parent object).

#### Note

That method assumes that the parent object derives from the [Inventory](#) class, as it needs to have access to the [getAirlineCode\(\)](#) method.

Definition at line 45 of file [OnDDate.cpp](#).

References [stdair::Inventory::getAirlineCode\(\)](#), and [getParent\(\)](#).

34.97.4.4 `const stdair::Date_T stdair::OnDDate::getDate ( ) const [inline]`

Get the boarding date.

Definition at line 69 of file [OnDDate.hpp](#).

References [\\_key](#), and [stdair::OnDDateKey::getDate\(\)](#).

34.97.4.5 `const stdair::AirportCode_T stdair::OnDDate::getOrigin ( ) const [inline]`

Get the origin.

Definition at line 74 of file [OnDDate.hpp](#).

References [\\_key](#), and [stdair::OnDDateKey::getOrigin\(\)](#).

34.97.4.6 `const stdair::AirportCode_T stdair::OnDDate::getDestination ( ) const [inline]`

Get the destination.

Definition at line 79 of file [OnDDate.hpp](#).

References [\\_key](#), and [stdair::OnDDateKey::getDestination\(\)](#).

34.97.4.7 `const HolderMap_T& stdair::OnDDate::getHolderMap ( ) const [inline]`

Get the map of children holders.

Definition at line 86 of file [OnDDate.hpp](#).

References [\\_holderMap](#).

34.97.4.8 `const StringDemandStructMap_T& stdair::OnDDate::getDemandInfoMap ( ) const [inline]`

Get the map of demand information.

Definition at line 93 of file [OnDDate.hpp](#).

References [\\_classPathDemandMap](#).

34.97.4.9 `const CabinForecastMap_T& stdair::OnDDate::getTotalForecastMap ( ) const`  
[inline]

Get the map of total forecast.

Definition at line 100 of file [OnDDate.hpp](#).

References [\\_cabinForecastMap](#).

34.97.4.10 `const WTPDemandPair_T& stdair::OnDDate::getTotalForecast ( const CabinCode_T & iCC ) const` [inline]

Get the total forecast for a given cabin.

Definition at line 107 of file [OnDDate.hpp](#).

References [\\_cabinForecastMap](#).

34.97.4.11 `const CabinClassPairList_T& stdair::OnDDate::getCabinClassPairList ( const std::string & iStr ) const` [inline]

Get the cabin-class pair out of a string.

Definition at line 115 of file [OnDDate.hpp](#).

References [\\_stringCabinClassPairListMap](#).

34.97.4.12 `const short stdair::OnDDate::getNbOfSegments ( ) const` [inline]

Get the number of segments of the O&D.

Definition at line 123 of file [OnDDate.hpp](#).

References [\\_key](#), and [stdair::OnDDateKey::getNbOfSegments\(\)](#).

34.97.4.13 `void stdair::OnDDate::setDemandInformation ( const CabinClassPairList_T & iCabinClassPairList, const YieldDemandPair_T & iYieldDemandPair )`

Set demand information.

Definition at line 54 of file [OnDDate.cpp](#).

References [\\_classPathDemandMap](#), and [\\_stringCabinClassPairListMap](#).

34.97.4.14 `void stdair::OnDDate::setTotalForecast ( const CabinCode_T & iCabinCode, const WTPDemandPair_T & iWTPDemandPair )`

Set forecast information per cabin.

Definition at line 77 of file [OnDDate.cpp](#).

References [\\_cabinForecastMap](#).

34.97.4.15 `void stdair::OnDDate::toStream ( std::ostream & ioOut ) const` [inline, virtual]

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 146 of file [OnDDate.hpp](#).

References [toString\(\)](#).

```
34.97.4.16 void stdair::OnDDate::fromStream ( std::istream & ioln ) [inline,
virtual]
```

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 155 of file [OnDDate.hpp](#).

```
34.97.4.17 std::string stdair::OnDDate::toString ( ) const [virtual]
```

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 38 of file [OnDDate.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

```
34.97.4.18 const std::string stdair::OnDDate::describeKey ( ) const [inline]
```

Get a string describing the key.

Definition at line 166 of file [OnDDate.hpp](#).

References [\\_key](#), and [stdair::OnDDateKey::toString\(\)](#).

Referenced by [toString\(\)](#).

```
34.97.4.19 template<class Archive > void stdair::OnDDate::serialize ( Archive & ar, const
unsigned int iFileVersion )
```

Serialisation.

**34.97.5 Friends And Related Function Documentation**

```
34.97.5.1 friend class FacBom [friend]
```

Definition at line 34 of file [OnDDate.hpp](#).



### 34.97.5.2 friend class FacBomManager [friend]

Definition at line 35 of file [OnDDate.hpp](#).

### 34.97.5.3 friend class boost::serialization::access [friend]

Definition at line 36 of file [OnDDate.hpp](#).

## 34.97.6 Member Data Documentation

### 34.97.6.1 Key\_T stdair::OnDDate::\_key [protected]

Primary key (list of OnD string keys).

Definition at line 216 of file [OnDDate.hpp](#).

Referenced by [describeKey\(\)](#), [getDate\(\)](#), [getDestination\(\)](#), [getKey\(\)](#), [getNbOfSegments\(\)](#), and [getOrigin\(\)](#).

### 34.97.6.2 BomAbstract\* stdair::OnDDate::\_parent [protected]

Pointer on the parent class ([Inventory](#)).

Definition at line 221 of file [OnDDate.hpp](#).

Referenced by [getParent\(\)](#).

### 34.97.6.3 HolderMap\_T stdair::OnDDate::\_holderMap [protected]

Map holding the children ([SegmentDate](#) and [LegDate](#) objects).

Definition at line 226 of file [OnDDate.hpp](#).

Referenced by [getHolderMap\(\)](#).

### 34.97.6.4 StringDemandStructMap\_T stdair::OnDDate::\_classPathDemandMap [protected]

O&D demand information.

Definition at line 231 of file [OnDDate.hpp](#).

Referenced by [getDemandInfoMap\(\)](#), and [setDemandInformation\(\)](#).

### 34.97.6.5 StringCabinClassPairListMap\_T stdair::OnDDate::\_stringCabinClassPairListMap [protected]

O&D cabin and associated class map.

Definition at line 236 of file [OnDDate.hpp](#).

Referenced by [getCabinClassPairList\(\)](#), and [setDemandInformation\(\)](#).

### 34.97.6.6 CabinForecastMap\_T stdair::OnDDate::\_cabinForecastMap [protected]

O&D demand total forecast.

Definition at line 241 of file [OnDDate.hpp](#).

Referenced by [getTotalForecast\(\)](#), [getTotalForecastMap\(\)](#), and [setTotalForecast\(\)](#).

The documentation for this class was generated from the following files:

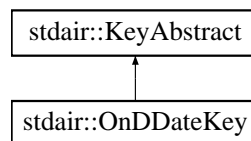
- [stdair/bom/OnDDate.hpp](#)
- [stdair/bom/OnDDate.cpp](#)

## 34.98 stdair::OnDDateKey Struct Reference

Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).

```
#include <stdair/bom/OnDDateKey.hpp>
```

Inheritance diagram for stdair::OnDDateKey:



### Public Member Functions

- [OnDDateKey](#) (const [OnDStringList\\_T](#) &)
- [OnDDateKey](#) (const [OnDDateKey](#) &)
- [~OnDDateKey](#) ()
- const [Date\\_T](#) [getDate](#) () const
- const [AirportCode\\_T](#) [getOrigin](#) () const
- const [AirportCode\\_T](#) [getDestination](#) () const
- const short [getNbOfSegments](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Friends

- class [boost::serialization::access](#)

### 34.98.1 Detailed Description

Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).

Definition at line 23 of file [OnDDateKey.hpp](#).

### 34.98.2 Constructor & Destructor Documentation

#### 34.98.2.1 `stdair::OnDDateKey::OnDDateKey ( const OnDStringList_T & iOnDStringList )`

Constructor.

Definition at line 33 of file [OnDDateKey.cpp](#).

#### 34.98.2.2 `stdair::OnDDateKey::OnDDateKey ( const OnDDateKey & iKey )`

Copy constructor.

Definition at line 38 of file [OnDDateKey.cpp](#).

#### 34.98.2.3 `stdair::OnDDateKey::~~OnDDateKey ( )`

Destructor.

Definition at line 43 of file [OnDDateKey.cpp](#).

### 34.98.3 Member Function Documentation

#### 34.98.3.1 `const Date_T stdair::OnDDateKey::getDate ( ) const`

Get the boarding date.

Definition at line 47 of file [OnDDateKey.cpp](#).

References [stdair::BomKeyManager::extractFlightDateKey\(\)](#), and [stdair::FlightDateKey::getDepartureDate\(\)](#).

Referenced by [stdair::OnDDate::getDate\(\)](#).

#### 34.98.3.2 `const AirportCode_T stdair::OnDDateKey::getOrigin ( ) const`

Get the origin.

Definition at line 54 of file [OnDDateKey.cpp](#).

References [stdair::BomKeyManager::extractSegmentDateKey\(\)](#), and [stdair::SegmentDateKey::getBoardingPoint\(\)](#).

Referenced by [stdair::OnDDate::getOrigin\(\)](#).

#### 34.98.3.3 `const AirportCode_T stdair::OnDDateKey::getDestination ( ) const`

Get the destination.

Definition at line 61 of file [OnDDateKey.cpp](#).

References [stdair::BomKeyManager::extractSegmentDateKey\(\)](#), and [stdair::SegmentDateKey::getOffPoint\(\)](#).

Referenced by [stdair::OnDDate::getDestination\(\)](#).

34.98.3.4 `const short stdair::OnDDateKey::getNbOfSegments ( ) const` `[inline]`

Get the number of segments.

Definition at line 70 of file [OnDDateKey.hpp](#).

Referenced by [stdair::OnDDate::getNbOfSegments\(\)](#).

34.98.3.5 `void stdair::OnDDateKey::toStream ( std::ostream & ioOut ) const` `[virtual]`

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 68 of file [OnDDateKey.cpp](#).

References [toString\(\)](#).

34.98.3.6 `void stdair::OnDDateKey::fromStream ( std::istream & iIn )` `[virtual]`

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 73 of file [OnDDateKey.cpp](#).

34.98.3.7 `const std::string stdair::OnDDateKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 77 of file [OnDDateKey.cpp](#).

Referenced by [stdair::OnDDate::describeKey\(\)](#), and [toStream\(\)](#).

34.98.3.8 `template<class Archive > void stdair::OnDDateKey::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 102 of file [OnDDateKey.cpp](#).

#### 34.98.4 Friends And Related Function Documentation

##### 34.98.4.1 friend class boost::serialization::access [friend]

Definition at line 24 of file [OnDDateKey.hpp](#).

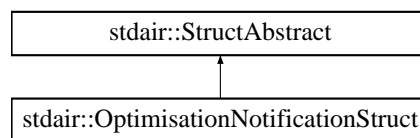
The documentation for this struct was generated from the following files:

- [stdair/bom/OnDDateKey.hpp](#)
- [stdair/bom/OnDDateKey.cpp](#)

## 34.99 stdair::OptimisationNotificationStruct Struct Reference

```
#include <stdair/bom/OptimisationNotificationStruct.hpp>
```

Inheritance diagram for stdair::OptimisationNotificationStruct:



#### Public Member Functions

- const [AirportCode\\_T](#) & [getOrigin](#) () const
- const [AirportCode\\_T](#) & [getDestination](#) () const
- const [CityCode\\_T](#) & [getPOS](#) () const
- const [Date\\_T](#) & [getPreferedDepartureDate](#) () const
- const [DateTime\\_T](#) & [getNotificationDateTime](#) () const
- const [CabinCode\\_T](#) & [getPreferredCabin](#) () const
- const [NbOfSeats\\_T](#) & [getPartySize](#) () const
- const [Channellabel\\_T](#) & [getOptimisationChannel](#) () const
- const [TripType\\_T](#) & [getTripType](#) () const
- const [DayDuration\\_T](#) & [getStayDuration](#) () const
- const [FrequentFlyer\\_T](#) & [getFrequentFlyerType](#) () const
- const [Duration\\_T](#) & [getPreferredDepartureTime](#) () const
- const [WTP\\_T](#) & [getWTP](#) () const
- const [PriceValue\\_T](#) & [getValueOfTime](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [describe](#) () const

- [OptimisationNotificationStruct](#) (const [AirportCode\\_T](#) &iOrigin, const [AirportCode\\_T](#) &iDestination, const [CityCode\\_T](#) &iPOS, const [Date\\_T](#) &iDepartureDate, const [DateTime\\_T](#) &iNotificationDateTime, const [CabinCode\\_T](#) &iPreferredCabin, const [NbOfSeats\\_T](#) &iPartySize, const [ChannelLabel\\_T](#) &iChannel, const [TripType\\_T](#) &iTripType, const [DayDuration\\_T](#) &iStayDuration, const [FrequentFlyer\\_T](#) &iFrequentFlyerType, const [Duration\\_T](#) &iPreferredDepartureTime, const [WTP\\_T](#) &iWTP, const [PriceValue\\_T](#) &iValueOfTime)
- [OptimisationNotificationStruct](#) (const [OptimisationNotificationStruct](#) &)
- [~OptimisationNotificationStruct](#) ()

#### 34.99.1 Detailed Description

Structure holding the elements of a optimisation notification.

Definition at line 19 of file [OptimisationNotificationStruct.hpp](#).

#### 34.99.2 Constructor & Destructor Documentation

34.99.2.1 `stdair::OptimisationNotificationStruct::OptimisationNotificationStruct ( const AirportCode\_T & iOrigin, const AirportCode\_T & iDestination, const CityCode\_T & iPOS, const Date\_T & iDepartureDate, const DateTime\_T & iNotificationDateTime, const CabinCode\_T & iPreferredCabin, const NbOfSeats\_T & iPartySize, const ChannelLabel\_T & iChannel, const TripType\_T & iTripType, const DayDuration\_T & iStayDuration, const FrequentFlyer\_T & iFrequentFlyerType, const Duration\_T & iPreferredDepartureTime, const WTP\_T & iWTP, const PriceValue\_T & iValueOfTime )`

Constructor.

Definition at line 39 of file [OptimisationNotificationStruct.cpp](#).

34.99.2.2 `stdair::OptimisationNotificationStruct::OptimisationNotificationStruct ( const OptimisationNotificationStruct & iOptimisationNotification )`

Copy constructor.

Definition at line 20 of file [OptimisationNotificationStruct.cpp](#).

34.99.2.3 `stdair::OptimisationNotificationStruct::~~OptimisationNotificationStruct ( )`

Destructor.

Definition at line 64 of file [OptimisationNotificationStruct.cpp](#).

#### 34.99.3 Member Function Documentation

**34.99.3.1** `const AirportCode_T& stdair::OptimisationNotificationStruct::getOrigin ( ) const`  
`[inline]`

Get the notificationed origin.

Definition at line 23 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.2** `const AirportCode_T& stdair::OptimisationNotificationStruct::getDestination ( )`  
`const [inline]`

Get the notificationed destination.

Definition at line 28 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.3** `const CityCode_T& stdair::OptimisationNotificationStruct::getPOS ( ) const`  
`[inline]`

Get the point-of-sale.

Definition at line 33 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.4** `const Date_T& stdair::OptimisationNotificationStruct::getPreferedDepartureDate ( )`  
`const [inline]`

Get the notificationed departure date.

Definition at line 38 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.5** `const DateTime_T& stdair::OptimisationNotificationStruct::getNotificationDateTime`  
`( ) const [inline]`

Get the notification datetime.

Definition at line 43 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.6** `const CabinCode_T& stdair::OptimisationNotificationStruct::getPreferredCabin ( )`  
`const [inline]`

Get the preferred cabin.

Definition at line 48 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.7** `const NbOfSeats_T& stdair::OptimisationNotificationStruct::getPartySize ( ) const`  
`[inline]`

Get the party size.

Definition at line 53 of file [OptimisationNotificationStruct.hpp](#).

**34.99.3.8** `const ChannelLabel_T& stdair::OptimisationNotificationStruct::getOptimisationChannel`  
`( ) const [inline]`

Get the reservation channel.

Definition at line 58 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.9 `const TripType_T& stdair::OptimisationNotificationStruct::getTripType ( ) const`  
`[inline]`

Get the trip type.

Definition at line 63 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.10 `const DayDuration_T& stdair::OptimisationNotificationStruct::getStayDuration ( ) const`  
`[inline]`

Get the duration of stay.

Definition at line 68 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.11 `const FrequentFlyer_T& stdair::OptimisationNotificationStruct::getFrequentFlyerType ( ) const`  
`[inline]`

Get the frequent flyer type.

Definition at line 73 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.12 `const Duration_T& stdair::OptimisationNotificationStruct::getPreferredDepartureTime ( ) const`  
`[inline]`

Get the preferred departure time.

Definition at line 78 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.13 `const WTP_T& stdair::OptimisationNotificationStruct::getWTP ( ) const`  
`[inline]`

Get the willingness-to-pay.

Definition at line 83 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.14 `const PriceValue_T& stdair::OptimisationNotificationStruct::getValueOfTime ( ) const`  
`[inline]`

Get the value of time.

Definition at line 88 of file [OptimisationNotificationStruct.hpp](#).

34.99.3.15 `void stdair::OptimisationNotificationStruct::toStream ( std::ostream & ioOut ) const`

Dump a Business Object into an output stream.

#### Parameters

<code>ostream&amp;</code> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 68 of file [OptimisationNotificationStruct.cpp](#).

References [describe\(\)](#).



34.99.3.16 `void stdair::OptimisationNotificationStruct::fromStream ( std::istream & ioln )`  
`[virtual]`

Read a Business Object from an input stream.

#### Parameters

<code>istream&amp;</code> the input stream.
---

Reimplemented from [stdair::StructAbstract](#).

Definition at line 73 of file [OptimisationNotificationStruct.cpp](#).

34.99.3.17 `const std::string stdair::OptimisationNotificationStruct::describe ( ) const`  
`[virtual]`

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 77 of file [OptimisationNotificationStruct.cpp](#).

Referenced by [toStream\(\)](#).

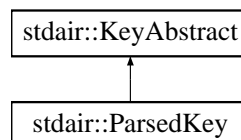
The documentation for this struct was generated from the following files:

- [stdair/bom/OptimisationNotificationStruct.hpp](#)
- [stdair/bom/OptimisationNotificationStruct.cpp](#)

## 34.100 stdair::ParsedKey Struct Reference

```
#include <stdair/bom/ParsedKey.hpp>
```

Inheritance diagram for `stdair::ParsedKey`:



#### Public Member Functions

- [InventoryKey](#) `getInventoryKey () const`
- [FlightDateKey](#) `getFlightDateKey () const`
- [SegmentDateKey](#) `getSegmentKey () const`
- `const` [Duration\\_T](#) `getBoardingTime () const`
- `void` [toStream](#) `(std::ostream &ioOut) const`
- `void` [fromStream](#) `(std::istream &ioIn)`
- `const` `std::string` [toString](#) `() const`
- [ParsedKey](#) `()`
- [~ParsedKey](#) `()`

#### Public Attributes

- [std::string \\_fullKey](#)
- [std::string \\_airlineCode](#)
- [std::string \\_flightNumber](#)
- [std::string \\_departureDate](#)
- [std::string \\_boardingPoint](#)
- [std::string \\_offPoint](#)
- [std::string \\_boardingTime](#)

#### 34.100.1 Detailed Description

Structure which holds the results/keys after the parsing.

Definition at line 21 of file [ParsedKey.hpp](#).

#### 34.100.2 Constructor & Destructor Documentation

##### 34.100.2.1 stdair::ParsedKey::ParsedKey ( )

Definition at line 40 of file [ParsedKey.cpp](#).

##### 34.100.2.2 stdair::ParsedKey::~ParsedKey ( )

Definition at line 46 of file [ParsedKey.cpp](#).

#### 34.100.3 Member Function Documentation

##### 34.100.3.1 InventoryKey stdair::ParsedKey::getInventoryKey ( ) const

[Inventory](#) key.

Definition at line 50 of file [ParsedKey.cpp](#).

References [\\_airlineCode](#), [\\_fullKey](#), [STDAIR\\_LOG\\_DEBUG](#), [STDAIR\\_LOG\\_ERROR](#), and [toString\(\)](#).

Referenced by [stdair::BomKeyManager::extractInventoryKey\(\)](#).

##### 34.100.3.2 FlightDateKey stdair::ParsedKey::getFlightDateKey ( ) const

Flight-date key.

Definition at line 61 of file [ParsedKey.cpp](#).

References [\\_departureDate](#), [\\_flightNumber](#), [\\_fullKey](#), [STDAIR\\_LOG\\_DEBUG](#), [STDAIR\\_LOG\\_ERROR](#), [stdair::TokeniserDashSeparator\(\)](#), and [toString\(\)](#).

Referenced by [stdair::BomKeyManager::extractFlightDateKey\(\)](#), and [stdair::BomRetriever::retrieveSegmentDateFromLo](#)

### 34.100.3.3 SegmentDateKey stdair::ParsedKey::getSegmentKey ( ) const

Segment-date key.

Definition at line 83 of file [ParsedKey.cpp](#).

References [\\_boardingPoint](#), [\\_fullKey](#), [\\_offPoint](#), [STDAIR\\_LOG\\_DEBUG](#), [STDAIR\\_LOG\\_ERROR](#), and [toString\(\)](#).

Referenced by [stdair::BomKeyManager::extractSegmentDateKey\(\)](#), and [stdair::BomRetriever::retrieveSegmentDateFrom](#).

### 34.100.3.4 const Duration\_T stdair::ParsedKey::getBoardingTime ( ) const

Boarding time.

Definition at line 97 of file [ParsedKey.cpp](#).

References [\\_boardingTime](#), [\\_fullKey](#), [STDAIR\\_LOG\\_DEBUG](#), [STDAIR\\_LOG\\_ERROR](#), [stdair::TokeniserTimeSeparator\(\)](#), and [toString\(\)](#).

### 34.100.3.5 void stdair::ParsedKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 115 of file [ParsedKey.cpp](#).

References [toString\(\)](#).

### 34.100.3.6 void stdair::ParsedKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 120 of file [ParsedKey.cpp](#).

### 34.100.3.7 const std::string stdair::ParsedKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 124 of file [ParsedKey.cpp](#).

References [\\_airlineCode](#), [\\_boardingPoint](#), [\\_boardingTime](#), [\\_departureDate](#), [\\_flightNumber](#), [\\_offPoint](#), [stdair::DEFAULT\\_KEY\\_FLD\\_DELIMITER](#), and [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#).

Referenced by [stdair::TravelSolutionStruct::describe\(\)](#), [stdair::TravelSolutionStruct::display\(\)](#), [getBoardingTime\(\)](#), [getFlightDateKey\(\)](#), [getInventoryKey\(\)](#), [getSegmentKey\(\)](#), and [toStream\(\)](#).

#### 34.100.4 Member Data Documentation

##### 34.100.4.1 std::string stdair::ParsedKey::\_fullKey

Definition at line 72 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getBoardingTime\(\)](#), [getFlightDateKey\(\)](#), [getInventoryKey\(\)](#), and [getSegmentKey\(\)](#).

##### 34.100.4.2 std::string stdair::ParsedKey::\_airlineCode

Definition at line 73 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getInventoryKey\(\)](#), [stdair::BomRetriever::retrieveSegmentDateFromKey\(\)](#), and [toString\(\)](#).

##### 34.100.4.3 std::string stdair::ParsedKey::\_flightNumber

Definition at line 74 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getFlightDateKey\(\)](#), and [toString\(\)](#).

##### 34.100.4.4 std::string stdair::ParsedKey::\_departureDate

Definition at line 75 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getFlightDateKey\(\)](#), and [toString\(\)](#).

##### 34.100.4.5 std::string stdair::ParsedKey::\_boardingPoint

Definition at line 76 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getSegmentKey\(\)](#), and [toString\(\)](#).

##### 34.100.4.6 std::string stdair::ParsedKey::\_offPoint

Definition at line 77 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getSegmentKey\(\)](#), and [toString\(\)](#).

##### 34.100.4.7 std::string stdair::ParsedKey::\_boardingTime

Definition at line 78 of file [ParsedKey.hpp](#).

Referenced by [stdair::BomKeyManager::extractKeys\(\)](#), [getBoardingTime\(\)](#), and [toString\(\)](#).

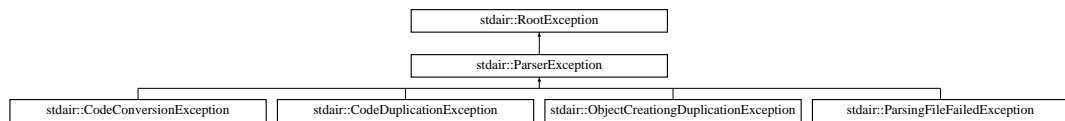
The documentation for this struct was generated from the following files:

- [stdair/bom/ParsedKey.hpp](#)
- [stdair/bom/ParsedKey.cpp](#)

### 34.101 stdair::ParserException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::ParserException:



#### Public Member Functions

- [ParserException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

#### 34.101.1 Detailed Description

Parser.

Definition at line 112 of file [stdair\\_exceptions.hpp](#).

#### 34.101.2 Constructor & Destructor Documentation

34.101.2.1 [stdair::ParserException::ParserException \( const std::string &iWhat \)](#)  
[inline]

Constructor.

Definition at line 115 of file [stdair\\_exceptions.hpp](#).

#### 34.101.3 Member Function Documentation

34.101.3.1 [const char\\* stdair::RootException::what \( \) const throw \(\)](#) [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.101.4 Member Data Documentation

##### 34.101.4.1 std::string stdair::RootException::\_what [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

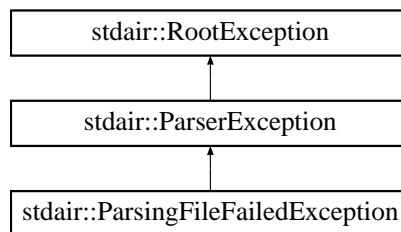
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.102 stdair::ParsingFileFailedException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::ParsingFileFailedException:



#### Public Member Functions

- [ParsingFileFailedException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

#### Protected Attributes

- std::string [\\_what](#)

#### 34.102.1 Detailed Description

Input file parsing failure.

Definition at line 165 of file [stdair\\_exceptions.hpp](#).

#### 34.102.2 Constructor & Destructor Documentation

34.102.2.1 `stdair::ParsingFileFailedException::ParsingFileFailedException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 168 of file [stdair\\_exceptions.hpp](#).

#### 34.102.3 Member Function Documentation

34.102.3.1 `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

#### 34.102.4 Member Data Documentation

34.102.4.1 `std::string stdair::RootException::_what [protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

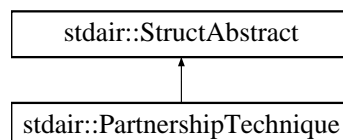
- [stdair/stdair\\_exceptions.hpp](#)

### 34.103 stdair::PartnershipTechnique Struct Reference

Enumeration of partnership techniques.

```
#include <stdair/basic/PartnershipTechnique.hpp>
```

Inheritance diagram for `stdair::PartnershipTechnique`:



#### Public Types

- enum [EN\\_PartnershipTechnique](#) {

```
NONE = 0, RAE_DA, RAE_YP, IBP_DA,  
IBP_YP, IBP_YP_U, RMC, A_RMC,  
LAST_VALUE }
```

#### Public Member Functions

- [EN\\_PartnershipTechnique](#) [getTechnique](#) () const
- char [getTechniqueAsChar](#) () const
- std::string [getTechniqueAsString](#) () const
- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_PartnershipTechnique](#) &) const
- [PartnershipTechnique](#) (const [EN\\_PartnershipTechnique](#) &)
- [PartnershipTechnique](#) (const char iTechnique)
- [PartnershipTechnique](#) (const std::string &iTechnique)
- [PartnershipTechnique](#) (const [PartnershipTechnique](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_PartnershipTechnique](#) &)
- static [EN\\_PartnershipTechnique](#) [getTechnique](#) (const char)
- static char [getTechniqueLabel](#) (const [EN\\_PartnershipTechnique](#) &)
- static std::string [getTechniqueLabelAsString](#) (const [EN\\_PartnershipTechnique](#) &)
- static std::string [describeLabels](#) ()

#### 34.103.1 Detailed Description

Enumeration of partnership techniques.

Definition at line 17 of file [PartnershipTechnique.hpp](#).

#### 34.103.2 Member Enumeration Documentation

##### 34.103.2.1 enum stdair::PartnershipTechnique::EN\_PartnershipTechnique

Enumerator:

```
NONE  
RAE_DA  
RAE_YP  
IBP_DA  
IBP_YP  
IBP_YP_U  
RMC
```



***A\_RMC***  
***LAST\_VALUE***

Definition at line 19 of file [PartnershipTechnique.hpp](#).

#### 34.103.3 Constructor & Destructor Documentation

34.103.3.1 `stdair::PartnershipTechnique::PartnershipTechnique ( const  
EN_PartnershipTechnique & iPartnershipTechnique )`

Main constructor.

Definition at line 48 of file [PartnershipTechnique.cpp](#).

34.103.3.2 `stdair::PartnershipTechnique::PartnershipTechnique ( const char iTechnique )`

Alternative constructor.

Definition at line 82 of file [PartnershipTechnique.cpp](#).

34.103.3.3 `stdair::PartnershipTechnique::PartnershipTechnique ( const std::string & iTechnique  
)`

Alternative constructor.

Definition at line 88 of file [PartnershipTechnique.cpp](#).

References [getTechnique\(\)](#).

34.103.3.4 `stdair::PartnershipTechnique::PartnershipTechnique ( const  
PartnershipTechnique & iPartnershipTechnique )`

Default copy constructor.

Definition at line 42 of file [PartnershipTechnique.cpp](#).

#### 34.103.4 Member Function Documentation

34.103.4.1 `const std::string & stdair::PartnershipTechnique::getLabel ( const  
EN_PartnershipTechnique & iTechnique ) [static]`

Get the label as a string (e.g., "RevenueManagementCooperation").

Definition at line 98 of file [PartnershipTechnique.cpp](#).

34.103.4.2 `PartnershipTechnique::EN_PartnershipTechnique  
stdair::PartnershipTechnique::getTechnique ( const char iTechniqueChar )  
[static]`

Get the technique value from parsing a single char (e.g., 'r' or 'C').

Definition at line 54 of file [PartnershipTechnique.cpp](#).

References [A\\_RMC](#), [describeLabels\(\)](#), [IBP\\_DA](#), [IBP\\_YP](#), [IBP\\_YP\\_U](#), [LAST\\_VALUE](#), [NONE](#), [RAE\\_DA](#), [RAE\\_YP](#), and [RMC](#).

**34.103.4.3** `char stdair::PartnershipTechnique::getTechniqueLabel ( const EN_PartnershipTechnique & iTechnique ) [static]`

Get the label as a single char (e.g., 'r' or 'C').

Definition at line 104 of file [PartnershipTechnique.cpp](#).

**34.103.4.4** `std::string stdair::PartnershipTechnique::getTechniqueLabelAsString ( const EN_PartnershipTechnique & iTechnique ) [static]`

Get the label as a string of a single char (e.g., "r" or "C").

Definition at line 110 of file [PartnershipTechnique.cpp](#).

**34.103.4.5** `std::string stdair::PartnershipTechnique::describeLabels ( ) [static]`

List the labels.

Definition at line 117 of file [PartnershipTechnique.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [getTechnique\(\)](#).

**34.103.4.6** `PartnershipTechnique::EN_PartnershipTechnique stdair::PartnershipTechnique::getTechnique ( ) const`

Get the enumerated value.

Definition at line 130 of file [PartnershipTechnique.cpp](#).

Referenced by [PartnershipTechnique\(\)](#).

**34.103.4.7** `char stdair::PartnershipTechnique::getTechniqueAsChar ( ) const`

Get the enumerated value as a short string (e.g., 'r' or 'C').

Definition at line 135 of file [PartnershipTechnique.cpp](#).

**34.103.4.8** `std::string stdair::PartnershipTechnique::getTechniqueAsString ( ) const`

Get the enumerated value as a short string (e.g., "r" or "C").

Definition at line 141 of file [PartnershipTechnique.cpp](#).

**34.103.4.9** `const std::string stdair::PartnershipTechnique::describe ( ) const [virtual]`

Give a description of the structure (e.g., "RevenueManagementCooperation" or "Inter-lineBidPriceYieldProration").

Implements [stdair::StructAbstract](#).

Definition at line 148 of file [PartnershipTechnique.cpp](#).

34.103.4.10 `bool stdair::PartnershipTechnique::operator== ( const  
EN_PartnershipTechnique & iTechnique ) const`

Comparison operator.

Definition at line 156 of file [PartnershipTechnique.cpp](#).

34.103.4.11 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline,  
inherited]`

Dump a Business Object into an output stream.

#### Parameters

<code>ostream&amp;</code> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.103.4.12 `virtual void stdair::StructAbstract::fromStream ( std::istream & ioIn )  
[inline, virtual, inherited]`

Read a Business Object from an input stream.

#### Parameters

<code>istream&amp;</code> the input stream.
---

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

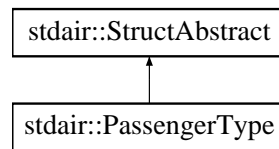
The documentation for this struct was generated from the following files:

- [stdair/basic/PartnershipTechnique.hpp](#)
- [stdair/basic/PartnershipTechnique.cpp](#)

## 34.104 stdair::PassengerType Struct Reference

```
#include <stdair/basic/PassengerType.hpp>
```

Inheritance diagram for `stdair::PassengerType`:



### Public Types

- enum [EN\\_PassengerType](#) { [LEISURE](#) = 0, [BUSINESS](#), [FIRST](#), [LAST\\_VALUE](#) }

### Public Member Functions

- [EN\\_PassengerType](#) [getType](#) () const
- std::string [getTypeAsString](#) () const
- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_PassengerType](#) &) const
- [PassengerType](#) (const [EN\\_PassengerType](#) &)
- [PassengerType](#) (const char iType)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_PassengerType](#) &)
- static char [getTypeLabel](#) (const [EN\\_PassengerType](#) &)
- static std::string [getTypeLabelAsString](#) (const [EN\\_PassengerType](#) &)
- static std::string [describeLabels](#) ()

#### 34.104.1 Detailed Description

Enumeration of Frequent Flyer types.

Definition at line 15 of file [PassengerType.hpp](#).

#### 34.104.2 Member Enumeration Documentation

##### 34.104.2.1 enum stdair::PassengerType::EN\_PassengerType

###### Enumerator:

***LEISURE***  
***BUSINESS***  
***FIRST***  
***LAST\_VALUE***

Definition at line 17 of file [PassengerType.hpp](#).

### 34.104.3 Constructor & Destructor Documentation

#### 34.104.3.1 stdair::PassengerType::PassengerType ( const EN\_PassengerType & *iPassengerType* )

Constructor.

Definition at line 21 of file [PassengerType.cpp](#).

#### 34.104.3.2 stdair::PassengerType::PassengerType ( const char *iType* )

Constructor.

Definition at line 26 of file [PassengerType.cpp](#).

References [BUSINESS](#), [describeLabels\(\)](#), [FIRST](#), [LAST\\_VALUE](#), and [LEISURE](#).

### 34.104.4 Member Function Documentation

#### 34.104.4.1 const std::string & stdair::PassengerType::getLabel ( const EN\_PassengerType & *iType* ) [static]

Get the label as a string (e.g., "Leisure" or "Business").

Definition at line 44 of file [PassengerType.cpp](#).

#### 34.104.4.2 char stdair::PassengerType::getTypeLabel ( const EN\_PassengerType & *iType* ) [static]

Get the label as a single char (e.g., 'L' or 'B').

Definition at line 49 of file [PassengerType.cpp](#).

#### 34.104.4.3 std::string stdair::PassengerType::getTypeLabelAsString ( const EN\_PassengerType & *iType* ) [static]

Get the label as a single char (e.g., 'L' or 'B').

Definition at line 55 of file [PassengerType.cpp](#).

#### 34.104.4.4 std::string stdair::PassengerType::describeLabels ( ) [static]

List the labels.

Definition at line 62 of file [PassengerType.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [PassengerType\(\)](#).

#### 34.104.4.5 PassengerType::EN\_PassengerType stdair::PassengerType::getType ( ) const

Get the enumerated value.

Definition at line 74 of file [PassengerType.cpp](#).

## 34.104.4.6 std::string stdair::PassengerType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., 'L' or 'B').

Definition at line 79 of file [PassengerType.cpp](#).

## 34.104.4.7 const std::string stdair::PassengerType::describe ( ) const [virtual]

Give a description of the structure (e.g., "Leisure" or "Business").

Implements [stdair::StructAbstract](#).

Definition at line 86 of file [PassengerType.cpp](#).

## 34.104.4.8 bool stdair::PassengerType::operator== ( const EN\_PassengerType &amp; iType ) const

Comparison operator.

Definition at line 93 of file [PassengerType.cpp](#).

## 34.104.4.9 void stdair::StructAbstract::toStream ( std::ostream &amp; ioOut ) const [inline, inherited]

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

## 34.104.4.10 virtual void stdair::StructAbstract::fromStream ( std::istream &amp; ioIn ) [inline, virtual, inherited]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

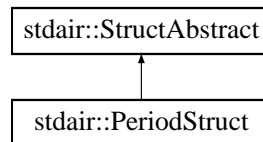
The documentation for this struct was generated from the following files:

- [stdair/basic/PassengerType.hpp](#)
- [stdair/basic/PassengerType.cpp](#)

### 34.105 stdair::PeriodStruct Struct Reference

```
#include <stdair/bom/PeriodStruct.hpp>
```

Inheritance diagram for stdair::PeriodStruct:



#### Public Member Functions

- const [DatePeriod\\_T](#) & [getDateRange](#) () const
- const [DoWStruct](#) & [getDoW](#) () const
- void [setDateRange](#) (const [DatePeriod\\_T](#) &iDateRange)
- void [setDoW](#) (const [DoWStruct](#) &iDoW)
- const std::string [describe](#) () const
- const std::string [describeShort](#) () const
- [PeriodStruct](#) [addDateOffset](#) (const [DateOffset\\_T](#) &) const
- [PeriodStruct](#) [intersection](#) (const [PeriodStruct](#) &) const
- const bool [isValid](#) () const
- [PeriodStruct](#) (const [DatePeriod\\_T](#) &, const [DoWStruct](#) &)
- [PeriodStruct](#) ()
- [PeriodStruct](#) (const [PeriodStruct](#) &)
- [~PeriodStruct](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### 34.105.1 Detailed Description

Define a departure period

A period is defined by a date range and a day-of-week struct.

Definition at line 19 of file [PeriodStruct.hpp](#).

### 34.105.2 Constructor & Destructor Documentation

#### 34.105.2.1 **stdair::PeriodStruct::PeriodStruct** ( **const DatePeriod\_T & *iDateRange***, **const DoWStruct & *iDoW*** )

Constructor.

Definition at line 19 of file [PeriodStruct.cpp](#).

#### 34.105.2.2 **stdair::PeriodStruct::PeriodStruct** ( )

Default constructors.

Definition at line 14 of file [PeriodStruct.cpp](#).

Referenced by [addDateOffset\(\)](#), and [intersection\(\)](#).

#### 34.105.2.3 **stdair::PeriodStruct::PeriodStruct** ( **const PeriodStruct & *iPeriodStruct*** )

Definition at line 25 of file [PeriodStruct.cpp](#).

#### 34.105.2.4 **stdair::PeriodStruct::~~PeriodStruct** ( ) `[inline]`

Default destructor.

Definition at line 64 of file [PeriodStruct.hpp](#).

### 34.105.3 Member Function Documentation

#### 34.105.3.1 **const DatePeriod\_T& stdair::PeriodStruct::getDateRange** ( ) **const** `[inline]`

Retrieve the attributes.

Definition at line 23 of file [PeriodStruct.hpp](#).

Referenced by [addDateOffset\(\)](#).

#### 34.105.3.2 **const DoWStruct& stdair::PeriodStruct::getDoW** ( ) **const** `[inline]`

Definition at line 26 of file [PeriodStruct.hpp](#).

Referenced by [addDateOffset\(\)](#).

#### 34.105.3.3 **void stdair::PeriodStruct::setDateRange** ( **const DatePeriod\_T & *iDateRange*** ) `[inline]`

Set the new value for the attributes.

Definition at line 33 of file [PeriodStruct.hpp](#).

#### 34.105.3.4 **void stdair::PeriodStruct::setDoW** ( **const DoWStruct & *iDoW*** ) `[inline]`

Definition at line 36 of file [PeriodStruct.hpp](#).



34.105.3.5 `const std::string stdair::PeriodStruct::describe ( ) const` [virtual]

Display explicitly (e.g., "Mon.Tue.Wed.Thu.Fri.").

Implements [stdair::StructAbstract](#).

Definition at line 38 of file [PeriodStruct.cpp](#).

References [stdair::DoWStruct::describe\(\)](#).

34.105.3.6 `const std::string stdair::PeriodStruct::describeShort ( ) const`

Display as a bit set (e.g., "1111100").

Definition at line 31 of file [PeriodStruct.cpp](#).

References [stdair::DoWStruct::describeShort\(\)](#).

Referenced by [stdair::FlightPeriodKey::toString\(\)](#).

34.105.3.7 `PeriodStruct stdair::PeriodStruct::addDateOffset ( const DateOffset_T & iDateOffset ) const`

Build a period struct from this period struct by adding a date offset.

Definition at line 46 of file [PeriodStruct.cpp](#).

References [getDateRange\(\)](#), [getDoW\(\)](#), [PeriodStruct\(\)](#), and [stdair::DoWStruct::shift\(\)](#).

34.105.3.8 `PeriodStruct stdair::PeriodStruct::intersection ( const PeriodStruct & iPeriodStruct ) const`

Build a new period struct which is the intersection of two period structs.

Definition at line 63 of file [PeriodStruct.cpp](#).

References [stdair::DoWStruct::intersection\(\)](#), and [PeriodStruct\(\)](#).

34.105.3.9 `const bool stdair::PeriodStruct::isValid ( ) const`

Return if the period is valid (i.e., valid date range and valid DoW).

Definition at line 72 of file [PeriodStruct.cpp](#).

References [stdair::DoWStruct::isValid\(\)](#).

34.105.3.10 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const` [inline, inherited]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.105.3.11 virtual void stdair::StructAbstract::fromStream ( std::istream & ioln )  
[inline, virtual, inherited]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this struct was generated from the following files:

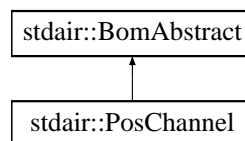
- [stdair/bom/PeriodStruct.hpp](#)
- [stdair/bom/PeriodStruct.cpp](#)

## 34.106 stdair::PosChannel Class Reference

Class representing the actual attributes for a fare point of sale.

```
#include <stdair/bom/PosChannel.hpp>
```

Inheritance diagram for stdair::PosChannel:



#### Public Types

- typedef [PosChannelKey](#) Key\_T

#### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioln)

- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [stdair::HolderMap\\_T](#) & [getHolderMap](#) () const
- const [CityCode\\_T](#) & [getPos](#) () const
- const [ChannelLabel\\_T](#) & [getChannel](#) () const

#### Protected Member Functions

- [PosChannel](#) (const [Key\\_T](#) &)
- virtual [~PosChannel](#) ()

#### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T \\_holderMap](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.106.1 Detailed Description

Class representing the actual attributes for a fare point of sale.

Definition at line 19 of file [PosChannel.hpp](#).

#### 34.106.2 Member Typedef Documentation

##### 34.106.2.1 typedef [PosChannelKey](#) [stdair::PosChannel::Key\\_T](#)

Definition allowing to retrieve the associated BOM key type.

Definition at line 28 of file [PosChannel.hpp](#).

#### 34.106.3 Constructor & Destructor Documentation

##### 34.106.3.1 [stdair::PosChannel::PosChannel](#) ( const [Key\\_T](#) & *iKey* ) [protected]

Main constructor.

Definition at line 29 of file [PosChannel.cpp](#).

## 34.106.3.2 stdair::PosChannel::~~PosChannel ( ) [protected, virtual]

Destructor.

Definition at line 34 of file [PosChannel.cpp](#).

## 34.106.4 Member Function Documentation

34.106.4.1 void stdair::PosChannel::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [PosChannel.hpp](#).

References [toString\(\)](#).

34.106.4.2 void stdair::PosChannel::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 46 of file [PosChannel.hpp](#).

## 34.106.4.3 std::string stdair::PosChannel::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 38 of file [PosChannel.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

## 34.106.4.4 const std::string stdair::PosChannel::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 57 of file [PosChannel.hpp](#).

References [\\_key](#), and [stdair::PosChannelKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.106.4.5 `const Key_T& stdair::PosChannel::getKey ( ) const` `[inline]`

Get the primary key (pos, channel).

Definition at line 66 of file [PosChannel.hpp](#).

References [\\_key](#).

34.106.4.6 `BomAbstract* const stdair::PosChannel::getParent ( ) const` `[inline]`

Get a reference on the parent object instance.

Definition at line 73 of file [PosChannel.hpp](#).

References [\\_parent](#).

34.106.4.7 `const stdair::HolderMap_T& stdair::PosChannel::getHolderMap ( ) const`  
`[inline]`

Get a reference on the children holder.

Definition at line 80 of file [PosChannel.hpp](#).

References [\\_holderMap](#).

34.106.4.8 `const CityCode_T& stdair::PosChannel::getPos ( ) const` `[inline]`

Get the point-of-sale.

Definition at line 87 of file [PosChannel.hpp](#).

References [\\_key](#), and [stdair::PosChannelKey::getPos\(\)](#).

34.106.4.9 `const ChannelLabel_T& stdair::PosChannel::getChannel ( ) const`  
`[inline]`

Get the channel.

Definition at line 94 of file [PosChannel.hpp](#).

References [\\_key](#), and [stdair::PosChannelKey::getChannel\(\)](#).

#### 34.106.5 Friends And Related Function Documentation

34.106.5.1 `friend class FacBom` `[friend]`

Definition at line 20 of file [PosChannel.hpp](#).

34.106.5.2 `friend class FacBomManager` `[friend]`

Definition at line 21 of file [PosChannel.hpp](#).

## 34.106.6 Member Data Documentation

## 34.106.6.1 Key\_T stdair::PosChannel::\_key [protected]

Primary key (flight number and departure date).

Definition at line 126 of file [PosChannel.hpp](#).

Referenced by [describeKey\(\)](#), [getChannel\(\)](#), [getKey\(\)](#), and [getPos\(\)](#).

## 34.106.6.2 BomAbstract\* stdair::PosChannel::\_parent [protected]

Pointer on the parent class.

Definition at line 131 of file [PosChannel.hpp](#).

Referenced by [getParent\(\)](#).

## 34.106.6.3 HolderMap\_T stdair::PosChannel::\_holderMap [protected]

Map holding the children.

Definition at line 136 of file [PosChannel.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

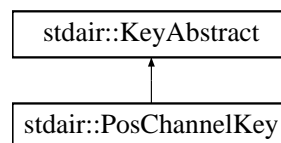
- [stdair/bom/PosChannel.hpp](#)
- [stdair/bom/PosChannel.cpp](#)

## 34.107 stdair::PosChannelKey Struct Reference

Key of point of sale and channel.

```
#include <stdair/bom/PosChannelKey.hpp>
```

Inheritance diagram for stdair::PosChannelKey:



## Public Member Functions

- [PosChannelKey](#) (const [stdair::CityCode\\_T](#) &, const [stdair::ChannelLabel\\_T](#) &)
- [PosChannelKey](#) (const [PosChannelKey](#) &)
- [~PosChannelKey](#) ()
- const [stdair::CityCode\\_T](#) & [getPos](#) () const
- const [stdair::ChannelLabel\\_T](#) & [getChannel](#) () const

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &iIn)
- const std::string [toString](#) () const

#### 34.107.1 Detailed Description

Key of point of sale and channel.

Definition at line 15 of file [PosChannelKey.hpp](#).

#### 34.107.2 Constructor & Destructor Documentation

34.107.2.1 `stdair::PosChannelKey::PosChannelKey ( const stdair::CityCode_T & iPos,  
const stdair::ChannelLabel_T & iChannel )`

Main constructor.

Definition at line 22 of file [PosChannelKey.cpp](#).

34.107.2.2 `stdair::PosChannelKey::PosChannelKey ( const PosChannelKey & iKey )`

Copy constructor.

Definition at line 28 of file [PosChannelKey.cpp](#).

34.107.2.3 `stdair::PosChannelKey::~~PosChannelKey ( )`

Destructor.

Definition at line 33 of file [PosChannelKey.cpp](#).

#### 34.107.3 Member Function Documentation

34.107.3.1 `const stdair::CityCode_T& stdair::PosChannelKey::getPos ( ) const  
[inline]`

Get the point of sale.

Definition at line 43 of file [PosChannelKey.hpp](#).

Referenced by [stdair::PosChannel::getPos\(\)](#).

34.107.3.2 `const stdair::ChannelLabel_T& stdair::PosChannelKey::getChannel ( ) const  
[inline]`

Get the channel.

Definition at line 50 of file [PosChannelKey.hpp](#).

Referenced by [stdair::PosChannel::getChannel\(\)](#).

34.107.3.3 void stdair::PosChannelKey::toStream ( std::ostream & *ioOut* ) const  
[virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 37 of file [PosChannelKey.cpp](#).

References [toString\(\)](#).

34.107.3.4 void stdair::PosChannelKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [PosChannelKey.cpp](#).

34.107.3.5 const std::string stdair::PosChannelKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 46 of file [PosChannelKey.cpp](#).

References [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#).

Referenced by [stdair::PosChannel::describeKey\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

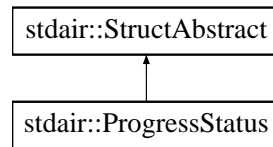
- [stdair/bom/PosChannelKey.hpp](#)
- [stdair/bom/PosChannelKey.cpp](#)

## 34.108 stdair::ProgressStatus Struct Reference

```
#include <stdair/basic/ProgressStatus.hpp>
```

Inheritance diagram for stdair::ProgressStatus:





### Public Member Functions

- const [Count\\_T](#) & [count](#) () const
- const [Count\\_T](#) & [getCurrentNb](#) () const
- const [Count\\_T](#) & [getExpectedNb](#) () const
- const [Count\\_T](#) & [getActualNb](#) () const
- const [ProgressPercentage\\_T](#) [progress](#) () const
- void [setCurrentNb](#) (const [Count\\_T](#) &iCurrentNb)
- void [setExpectedNb](#) (const [Count\\_T](#) &iExpectedNb)
- void [setActualNb](#) (const [Count\\_T](#) &iActualNb)
- void [reset](#) ()
- [Count\\_T](#) operator+= ([Count\\_T](#) iIncrement)
- [Count\\_T](#) operator++ ()
- const std::string [describe](#) () const
- [ProgressStatus](#) (const [Count\\_T](#) &iCurrentNb, const [Count\\_T](#) &iExpectedNb, const [Count\\_T](#) &iActualNb)
- [ProgressStatus](#) (const [Count\\_T](#) &iExpectedNb, const [Count\\_T](#) &iActualNb)
- [ProgressStatus](#) (const [Count\\_T](#) &iActualNb)
- [ProgressStatus](#) ()
- [ProgressStatus](#) (const [ProgressStatus](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### 34.108.1 Detailed Description

Structure holding the details of a progress status.

The progress status is given by the ratio between the "current" and the "expected" (or "actual") numbers. For instance, when the expected/actual number is 1000 and the current number is 200, then the progress status is 20% (= 200 / 1000).

Definition at line 25 of file [ProgressStatus.hpp](#).

#### 34.108.2 Constructor & Destructor Documentation

34.108.2.1 `stdair::ProgressStatus::ProgressStatus ( const Count\_T & iCurrentNb, const Count\_T & iExpectedNb, const Count\_T & iActualNb )`

Constructor.

### Parameters

<i>const</i>	Count_T& The current number.
<i>const</i>	Count_T& The expected number.
<i>const</i>	Count_T& The actual number.

Definition at line 15 of file [ProgressStatus.cpp](#).

34.108.2.2 **stdair::ProgressStatus::ProgressStatus** ( *const* Count\_T & *iExpectedNb*, *const* Count\_T & *iActualNb* )

Constructor.

As no current number is given, it is set to 0.

#### Parameters

<i>const</i>	Count_T& The expected number.
<i>const</i>	Count_T& The actual number.

Definition at line 23 of file [ProgressStatus.cpp](#).

34.108.2.3 **stdair::ProgressStatus::ProgressStatus** ( *const* Count\_T & *iActualNb* )

Constructor.

As no expected number is given, it is assumed to be equal to the actual one. The current number is set to 0.

#### Parameters

<i>const</i>	Count_T& The actual number.
--------------	-----------------------------

Definition at line 30 of file [ProgressStatus.cpp](#).

34.108.2.4 **stdair::ProgressStatus::ProgressStatus** ( )

Constructor.

All the numbers are set to 0.

Definition at line 36 of file [ProgressStatus.cpp](#).

34.108.2.5 **stdair::ProgressStatus::ProgressStatus** ( *const* ProgressStatus & *iProgressStatus* )

Copy Constructor.

Definition at line 43 of file [ProgressStatus.cpp](#).

#### 34.108.3 Member Function Documentation

34.108.3.1 `const Count_T& stdair::ProgressStatus::count ( ) const [inline]`

Get the current number.

Definition at line 29 of file [ProgressStatus.hpp](#).

34.108.3.2 `const Count_T& stdair::ProgressStatus::getCurrentNb ( ) const [inline]`

Get the current number.

Definition at line 34 of file [ProgressStatus.hpp](#).

Referenced by [stdair::ProgressStatusSet::describe\(\)](#), [stdair::EventQueue::getCurrentNbOfEvents\(\)](#), [stdair::EventQueue::toString\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

34.108.3.3 `const Count_T& stdair::ProgressStatus::getExpectedNb ( ) const [inline]`

Get the expected number.

Definition at line 39 of file [ProgressStatus.hpp](#).

Referenced by [stdair::EventQueue::addStatus\(\)](#), [stdair::ProgressStatusSet::describe\(\)](#), [stdair::EventQueue::getExpectedTotalNbOfEvents\(\)](#), [stdair::EventQueue::toString\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

34.108.3.4 `const Count_T& stdair::ProgressStatus::getActualNb ( ) const [inline]`

Get the actual number.

Definition at line 44 of file [ProgressStatus.hpp](#).

Referenced by [stdair::EventQueue::addStatus\(\)](#), [stdair::ProgressStatusSet::describe\(\)](#), [stdair::EventQueue::getActualTotalNbOfEvents\(\)](#), [stdair::EventQueue::toString\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

34.108.3.5 `const ProgressPercentage_T stdair::ProgressStatus::progress ( ) const [inline]`

Get the progress as a percentage.

Definition at line 49 of file [ProgressStatus.hpp](#).

Referenced by [stdair::EventQueue::calculateProgress\(\)](#).

34.108.3.6 `void stdair::ProgressStatus::setCurrentNb ( const Count_T & iCurrentNb ) [inline]`

Set the current number.

Definition at line 60 of file [ProgressStatus.hpp](#).

Referenced by [stdair::EventQueue::setCurrentNbOfEvents\(\)](#), [stdair::EventQueue::setStatus\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

34.108.3.7 `void stdair::ProgressStatus::setExpectedNb ( const Count_T & iExpectedNb ) [inline]`

Set the expected number.

Definition at line 65 of file [ProgressStatus.hpp](#).

Referenced by [stdair::EventQueue::addStatus\(\)](#), [stdair::EventQueue::setExpectedTotalNbOfEvents\(\)](#), [stdair::EventQueue::setStatus\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

```
34.108.3.8 void stdair::ProgressStatus::setActualNb ( const Count_T & iActualNb )
           [inline]
```

Set the actual number.

Definition at line 70 of file [ProgressStatus.hpp](#).

Referenced by [stdair::EventQueue::addStatus\(\)](#), [stdair::EventQueue::setActualTotalNbOfEvents\(\)](#), [stdair::EventQueue::setStatus\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

```
34.108.3.9 void stdair::ProgressStatus::reset ( )
```

Reset the current number (to 0).

Definition at line 50 of file [ProgressStatus.cpp](#).

References [stdair::DEFAULT\\_PROGRESS\\_STATUS](#).

Referenced by [stdair::EventQueue::reset\(\)](#).

```
34.108.3.10 Count_T stdair::ProgressStatus::operator+= ( Count_T iIncrement )
           [inline]
```

Increment the current number.

Definition at line 78 of file [ProgressStatus.hpp](#).

```
34.108.3.11 Count_T stdair::ProgressStatus::operator++ ( ) [inline]
```

Increment the current number.

Definition at line 84 of file [ProgressStatus.hpp](#).

```
34.108.3.12 const std::string stdair::ProgressStatus::describe ( ) const [virtual]
```

Give a description of the structure (e.g., "4 / 100 / 101").

Implements [stdair::StructAbstract](#).

Definition at line 56 of file [ProgressStatus.cpp](#).

```
34.108.3.13 void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline,
           inherited]
```

Dump a Business Object into an output stream.

### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#),

[stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

```
34.108.3.14 virtual void stdair::StructAbstract::fromStream ( std::istream & ioln )
               [inline, virtual, inherited]
```

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

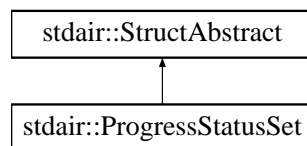
The documentation for this struct was generated from the following files:

- [stdair/basic/ProgressStatus.hpp](#)
- [stdair/basic/ProgressStatus.cpp](#)

## 34.109 stdair::ProgressStatusSet Struct Reference

```
#include <stdair/basic/ProgressStatusSet.hpp>
```

Inheritance diagram for `stdair::ProgressStatusSet`:



#### Public Member Functions

- const [ProgressStatus](#) & [getTypeSpecificStatus](#) () const
- const [ProgressStatus](#) & [getSpecificGeneratorStatus](#) () const
- const [ProgressStatus](#) & [getOverallStatus](#) () const
- void [setTypeSpecificStatus](#) (const [ProgressStatus](#) &iProgressStatus)
- void [setSpecificGeneratorStatus](#) (const [ProgressStatus](#) &iProgressStatus, const [EventGeneratorKey\\_T](#) &iKey)

- void [setOverallStatus](#) (const [ProgressStatus](#) &iProgressStatus)
- void [fromStream](#) (std::istream &iIn)
- const std::string [describe](#) () const
- [ProgressStatusSet](#) (const [EventType::EN\\_EventType](#) &)
- [ProgressStatusSet](#) (const [ProgressStatusSet](#) &)
- [~ProgressStatusSet](#) ()
- void [toStream](#) (std::ostream &iOut) const

#### 34.109.1 Detailed Description

Structure holding a set of progress status.

Definition at line 22 of file [ProgressStatusSet.hpp](#).

#### 34.109.2 Constructor & Destructor Documentation

##### 34.109.2.1 stdair::ProgressStatusSet::ProgressStatusSet ( const [EventType::EN\\_EventType](#) & iType )

Constructor .

Definition at line 20 of file [ProgressStatusSet.cpp](#).

##### 34.109.2.2 stdair::ProgressStatusSet::ProgressStatusSet ( const [ProgressStatusSet](#) & iProgressStatusSet )

Copy constructor.

Definition at line 27 of file [ProgressStatusSet.cpp](#).

##### 34.109.2.3 stdair::ProgressStatusSet::~~ProgressStatusSet ( )

Destructor.

Definition at line 36 of file [ProgressStatusSet.cpp](#).

#### 34.109.3 Member Function Documentation

##### 34.109.3.1 const [ProgressStatus&](#) stdair::ProgressStatusSet::getTypeSpecificStatus ( ) const [inline]

Get the progress status specific to that event type.

Note that that progress status may not be up-to-date. That attribute is up-to-date only after a call to the [EventQueue::popEvent\(\)](#) method.

Definition at line 31 of file [ProgressStatusSet.hpp](#).

##### 34.109.3.2 const [ProgressStatus&](#) stdair::ProgressStatusSet::getSpecificGeneratorStatus ( ) const [inline]

Get the progress status specific to the content key for that event.

Note that that progress status may not be up-to-date. That attribute is up-to-date only after a call to the [EventQueue::popEvent\(\)](#) method.

Definition at line 43 of file [ProgressStatusSet.hpp](#).

**34.109.3.3** `const ProgressStatus& stdair::ProgressStatusSet::getOverallStatus ( ) const`  
`[inline]`

Get the overall progress status (absolute, for all the events).

Note that that progress status may not be up-to-date. That attribute is up-to-date only after a call to the [EventQueue::popEvent\(\)](#) method.

Definition at line 54 of file [ProgressStatusSet.hpp](#).

**34.109.3.4** `void stdair::ProgressStatusSet::setTypeSpecificStatus ( const ProgressStatus & iProgressStatus )`  
`[inline]`

Set/update the progress status specific to that event type.

Definition at line 62 of file [ProgressStatusSet.hpp](#).

Referenced by [stdair::EventQueue::popEvent\(\)](#).

**34.109.3.5** `void stdair::ProgressStatusSet::setSpecificGeneratorStatus ( const ProgressStatus & iProgressStatus, const EventGeneratorKey_T & iKey )`  
`[inline]`

Set/update the progress status specific to the content key for that event.

Definition at line 68 of file [ProgressStatusSet.hpp](#).

**34.109.3.6** `void stdair::ProgressStatusSet::setOverallStatus ( const ProgressStatus & iProgressStatus )`  
`[inline]`

Set/update the overall progress status (absolute, for all the events).

Definition at line 76 of file [ProgressStatusSet.hpp](#).

Referenced by [stdair::EventQueue::popEvent\(\)](#).

**34.109.3.7** `void stdair::ProgressStatusSet::fromStream ( std::istream & iIn )` `[virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 40 of file [ProgressStatusSet.cpp](#).

**34.109.3.8** `const std::string stdair::ProgressStatusSet::describe ( ) const` `[virtual]`

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 44 of file [ProgressStatusSet.cpp](#).

References [stdair::ProgressStatus::getActualNb\(\)](#), [stdair::ProgressStatus::getCurrentNb\(\)](#), and [stdair::ProgressStatus::getExpectedNb\(\)](#).

**34.109.3.9** `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const` [inline, inherited]

Dump a Business Object into an output stream.

#### Parameters

<code>ostream&amp;</code> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

The documentation for this struct was generated from the following files:

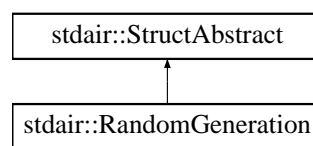
- [stdair/basic/ProgressStatusSet.hpp](#)
- [stdair/basic/ProgressStatusSet.cpp](#)

## 34.110 stdair::RandomGeneration Struct Reference

Class holding a random generator.

```
#include <stdair/basic/RandomGeneration.hpp>
```

Inheritance diagram for `stdair::RandomGeneration`:



#### Public Member Functions

- [RealNumber\\_T generateUniform01 \(\)](#)
- [RealNumber\\_T operator\(\) \(\)](#)
- [RealNumber\\_T generateUniform \(const RealNumber\\_T &, const RealNumber\\_T &\)](#)



- [RealNumber\\_T generateNormal](#) (const [RealNumber\\_T](#) &, const [RealNumber\\_T](#) &)
- [RealNumber\\_T generateExponential](#) (const [RealNumber\\_T](#) &)
- [BaseGenerator\\_T & getBaseGenerator](#) ()
- const std::string [describe](#) () const
- [RandomGeneration](#) (const [RandomSeed\\_T](#) &)
- [RandomGeneration](#) ()
- [~RandomGeneration](#) ()
- void [init](#) (const [RandomSeed\\_T](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Public Attributes

- [BaseGenerator\\_T \\_generator](#)

#### 34.110.1 Detailed Description

Class holding a random generator.

Definition at line 17 of file [RandomGeneration.hpp](#).

#### 34.110.2 Constructor & Destructor Documentation

##### 34.110.2.1 stdair::RandomGeneration::RandomGeneration ( const [RandomSeed\\_T](#) & *iSeed* )

Main constructor.

Definition at line 27 of file [RandomGeneration.cpp](#).

##### 34.110.2.2 stdair::RandomGeneration::RandomGeneration ( )

Default constructor.

#### Note

As per Boost bug #3516 (<https://svn.boost.org/trac/boost/ticket/3516>) the seed should not be set to 0 (at least on versions of Boost lower than 1.44).

Definition at line 23 of file [RandomGeneration.cpp](#).

##### 34.110.2.3 stdair::RandomGeneration::~~RandomGeneration ( )

Destructor.

Definition at line 37 of file [RandomGeneration.cpp](#).

### 34.110.3 Member Function Documentation

#### 34.110.3.1 **RealNumber\_T** stdair::RandomGeneration::generateUniform01 ( )

Generate a randomised number following a uniform distribution between 0 (included) and 1 (excluded).

Definition at line 53 of file [RandomGeneration.cpp](#).

References [\\_generator](#).

Referenced by [generateNormal\(\)](#), [generateUniform\(\)](#), and [operator\(\)](#).

#### 34.110.3.2 **RealNumber\_T** stdair::RandomGeneration::operator() ( ) *[inline]*

Same as [generateUniform01\(\)](#). That operator is provided for convenient reasons.

Definition at line 30 of file [RandomGeneration.hpp](#).

References [generateUniform01\(\)](#).

#### 34.110.3.3 **RealNumber\_T** stdair::RandomGeneration::generateUniform ( const **RealNumber\_T** & *iMinValue*, const **RealNumber\_T** & *iMaxValue* )

Generate a randomized number following a uniform distribution between a minimum (included) and a maximum (excluded) value.

Definition at line 59 of file [RandomGeneration.cpp](#).

References [generateUniform01\(\)](#).

#### 34.110.3.4 **RealNumber\_T** stdair::RandomGeneration::generateNormal ( const **RealNumber\_T** & *mu*, const **RealNumber\_T** & *sigma* )

Generate a randomized number following a normal distribution specified by a mean and a standard deviation.

Definition at line 68 of file [RandomGeneration.cpp](#).

References [generateUniform01\(\)](#).

Referenced by [stdair::BookingClass::generateDemandSamples\(\)](#).

#### 34.110.3.5 **RealNumber\_T** stdair::RandomGeneration::generateExponential ( const **RealNumber\_T** & *lambda* )

Generate a randomized number following an exponential distribution specified by a mean and a lambda parameter.

Definition at line 86 of file [RandomGeneration.cpp](#).

References [\\_generator](#).

#### 34.110.3.6 **BaseGenerator\_T** & stdair::RandomGeneration::getBaseGenerator ( ) *[inline]*

Retrieve the base generator for initialising other random generators.

Definition at line 56 of file [RandomGeneration.hpp](#).

References [\\_generator](#).

34.110.3.7 `const std::string stdair::RandomGeneration::describe ( ) const` `[virtual]`

Give a description of the structure (for display purposes).

Implements [stdair::StructAbstract](#).

Definition at line 46 of file [RandomGeneration.cpp](#).

References [\\_generator](#).

34.110.3.8 `void stdair::RandomGeneration::init ( const RandomSeed_T & iSeed )`

Initialise the random generator.

A uniform random number distribution is defined, which produces "real" values between 0 and 1 (0 inclusive, 1 exclusive).

Definition at line 41 of file [RandomGeneration.cpp](#).

References [\\_generator](#).

34.110.3.9 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const` `[inline, inherited]`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.110.3.10 `virtual void stdair::StructAbstract::fromStream ( std::istream & ioIn )` `[inline, virtual, inherited]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#),

and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

#### 34.110.4 Member Data Documentation

##### 34.110.4.1 BaseGenerator\_T stdair::RandomGeneration::\_generator

Random number generator engine.

The random number generator is currently based on `boost::minstd_rand`. Alternates are `boost::mt19937`, `boost::ecuyer1988`.

Definition at line 112 of file [RandomGeneration.hpp](#).

Referenced by [describe\(\)](#), [generateExponential\(\)](#), [generateUniform01\(\)](#), [getBaseGenerator\(\)](#), and [init\(\)](#).

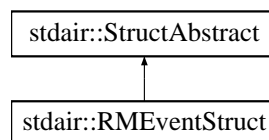
The documentation for this struct was generated from the following files:

- [stdair/basic/RandomGeneration.hpp](#)
- [stdair/basic/RandomGeneration.cpp](#)

#### 34.111 stdair::RMEventStruct Struct Reference

```
#include <stdair/bom/RMEventStruct.hpp>
```

Inheritance diagram for `stdair::RMEventStruct`:



#### Public Member Functions

- `const AirlineCode\_T & getAirlineCode () const`
- `const KeyDescription\_T & getFlightDateDescription () const`
- `const DateTime\_T & getRMEventTime () const`
- `void toStream (std::ostream &ioOut) const`
- `void fromStream (std::istream &ioIn)`
- `const std::string describe () const`
- `RMEventStruct (const AirlineCode\_T &, const KeyDescription\_T &, const DateTime\_T &)`
- `RMEventStruct (const RMEventStruct &)`
- `RMEventStruct ()`
- `~RMEventStruct ()`

#### 34.111.1 Detailed Description

Structure holding the elements of a snapshot .

Definition at line 19 of file [RMEventStruct.hpp](#).

#### 34.111.2 Constructor & Destructor Documentation

34.111.2.1 `stdair::RMEventStruct::RMEventStruct ( const AirlineCode_T & iAirlineCode, const KeyDescription_T & iFlightDateDescription, const DateTime_T & iRMEventTime )`

Constructor.

Definition at line 27 of file [RMEventStruct.cpp](#).

34.111.2.2 `stdair::RMEventStruct::RMEventStruct ( const RMEventStruct & iRMEvent )`

Copy constructor.

Definition at line 19 of file [RMEventStruct.cpp](#).

34.111.2.3 `stdair::RMEventStruct::RMEventStruct ( )`

Default constructor.

It is private so that it can not be used.

Definition at line 13 of file [RMEventStruct.cpp](#).

34.111.2.4 `stdair::RMEventStruct::~~RMEventStruct ( )`

Destructor.

Definition at line 36 of file [RMEventStruct.cpp](#).

#### 34.111.3 Member Function Documentation

34.111.3.1 `const AirlineCode_T& stdair::RMEventStruct::getAirlineCode ( ) const [inline]`

Get the airline code.

Definition at line 23 of file [RMEventStruct.hpp](#).

34.111.3.2 `const KeyDescription_T& stdair::RMEventStruct::getFlightDateDescription ( ) const [inline]`

Get the string describing the flight-date key.

Definition at line 28 of file [RMEventStruct.hpp](#).

34.111.3.3 `const DateTime_T& stdair::RMEventStruct::getRMEventTime ( ) const`  
[inline]

Get the snapshot action time.

Definition at line 33 of file [RMEventStruct.hpp](#).

34.111.3.4 `void stdair::RMEventStruct::toStream ( std::ostream & ioOut ) const`

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 40 of file [RMEventStruct.cpp](#).

References [describe\(\)](#).

34.111.3.5 `void stdair::RMEventStruct::fromStream ( std::istream & ioIn )` [virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 45 of file [RMEventStruct.cpp](#).

34.111.3.6 `const std::string stdair::RMEventStruct::describe ( ) const` [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 49 of file [RMEventStruct.cpp](#).

Referenced by [toStream\(\)](#).

The documentation for this struct was generated from the following files:

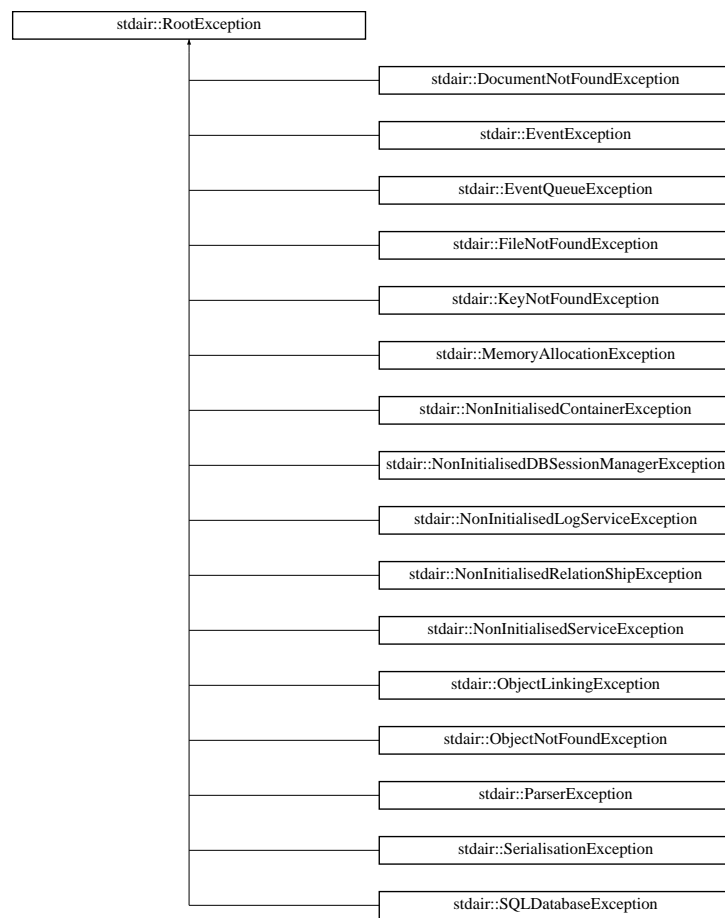
- [stdair/bom/RMEventStruct.hpp](#)
- [stdair/bom/RMEventStruct.cpp](#)

## 34.112 stdair::RootException Class Reference

Root of the stdair exceptions.

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::RootException:



### Public Member Functions

- [RootException](#) (const std::string &iWhat)
- [RootException](#) ()
- virtual [~RootException](#) () throw ()
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

#### 34.112.1 Detailed Description

Root of the stdair exceptions.

All the stdair exceptions inherit from that root, allowing to catch them and to spot them easily when arising in code wrapping the stdair library.

Definition at line 19 of file [stdair\\_exceptions.hpp](#).

#### 34.112.2 Constructor & Destructor Documentation

##### 34.112.2.1 stdair::RootException::RootException ( const std::string & *iWhat* ) [inline]

Main Constructor.

Definition at line 24 of file [stdair\\_exceptions.hpp](#).

##### 34.112.2.2 stdair::RootException::RootException ( ) [inline]

Default constructor.

Definition at line 28 of file [stdair\\_exceptions.hpp](#).

##### 34.112.2.3 virtual stdair::RootException::~RootException ( ) throw () [inline, virtual]

Destructor.

Definition at line 33 of file [stdair\\_exceptions.hpp](#).

#### 34.112.3 Member Function Documentation

##### 34.112.3.1 const char\* stdair::RootException::what ( ) const throw () [inline]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [\\_what](#).

#### 34.112.4 Member Data Documentation

##### 34.112.4.1 std::string stdair::RootException::\_what [protected]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [what\(\)](#).

The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

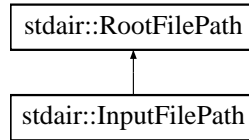
### 34.113 stdair::RootFilePath Class Reference

Root of the input and output files.

```
#include <stdair/stdair_file.hpp>
```



Inheritance diagram for stdair::RootFilePath:



#### Public Member Functions

- [RootFilePath](#) (const [Filename\\_T](#) &iFilename)
- [RootFilePath](#) ()
- virtual [~RootFilePath](#) ()
- const char \* [name](#) () const

#### Protected Attributes

- const [Filename\\_T](#) \_filename

#### 34.113.1 Detailed Description

Root of the input and output files.

All the files inherit from that root.

Definition at line 22 of file [stdair\\_file.hpp](#).

#### 34.113.2 Constructor & Destructor Documentation

**34.113.2.1** `stdair::RootFilePath::RootFilePath ( const Filename\_T & iFilename )`  
`[inline]`

Main Constructor.

Definition at line 27 of file [stdair\\_file.hpp](#).

**34.113.2.2** `stdair::RootFilePath::RootFilePath ( )` `[inline]`

Default constructor.

Definition at line 32 of file [stdair\\_file.hpp](#).

**34.113.2.3** `virtual stdair::RootFilePath::~~RootFilePath ( )` `[inline, virtual]`

Destructor.

Definition at line 37 of file [stdair\\_file.hpp](#).

## 34.113.3 Member Function Documentation

34.113.3.1 `const char* stdair::RootFilePath::name ( ) const` `[inline]`

Give the details of the exception.

Definition at line 42 of file [stdair\\_file.hpp](#).

References [\\_filename](#).

## 34.113.4 Member Data Documentation

34.113.4.1 `const Filename_T stdair::RootFilePath::_filename` `[protected]`

Name of the file.

Definition at line 50 of file [stdair\\_file.hpp](#).

Referenced by [name\(\)](#).

The documentation for this class was generated from the following file:

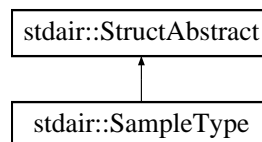
- [stdair/stdair\\_file.hpp](#)

## 34.114 stdair::SampleType Struct Reference

Enumeration of BOM sample types.

```
#include <stdair/basic/SampleType.hpp>
```

Inheritance diagram for `stdair::SampleType`:



## Public Types

- `enum EN_SampleType {`  
`ALL = 0, A4P, RMS, INV,`  
`SCH, RAC, FQT, CRS,`  
`DEM, EVT, CCM, LAST_VALUE }`

## Public Member Functions

- `EN_SampleType getType ( ) const`
- `std::string getTypeAsString ( ) const`

- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_SampleType](#) &) const
- [SampleType](#) (const [EN\\_SampleType](#) &)
- [SampleType](#) (const char iType)
- [SampleType](#) (const [SampleType](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_SampleType](#) &)
- static char [getTypeLabel](#) (const [EN\\_SampleType](#) &)
- static std::string [getTypeLabelAsString](#) (const [EN\\_SampleType](#) &)
- static std::string [describeLabels](#) ()

#### 34.114.1 Detailed Description

Enumeration of BOM sample types.

In order to test some components, it is often easier to fill the BOM tree with hard-coded structures than set up CSV input files and parsing them. That enumeration structure tells for which component(s) the sample BOM tree should be built. By default, a BOM sample tree is built for all the components, i.e., it contains StdAir objects for all the other components (AirInv, AirSched, etc).

Definition at line 25 of file [SampleType.hpp](#).

#### 34.114.2 Member Enumeration Documentation

##### 34.114.2.1 enum stdair::SampleType::EN\_SampleType

Enumerator:

***ALL***  
***A4P***  
***RMS***  
***INV***  
***SCH***  
***RAC***  
***FQT***  
***CRS***  
***DEM***  
***EVT***  
***CCM***  
***LAST\_VALUE***

Definition at line 27 of file [SampleType.hpp](#).

### 34.114.3 Constructor & Destructor Documentation

#### 34.114.3.1 stdair::SampleType::SampleType ( const EN\_SampleType & *iSampleType* )

Constructor.

Definition at line 36 of file [SampleType.cpp](#).

#### 34.114.3.2 stdair::SampleType::SampleType ( const char *iType* )

Constructor.

Definition at line 41 of file [SampleType.cpp](#).

References [A4P](#), [ALL](#), [CCM](#), [CRS](#), [DEM](#), [describeLabels\(\)](#), [EVT](#), [FQT](#), [INV](#), [LAST\\_VALUE](#), [RAC](#), [RMS](#), and [SCH](#).

#### 34.114.3.3 stdair::SampleType::SampleType ( const SampleType & *iSampleType* )

Default copy constructor.

Definition at line 31 of file [SampleType.cpp](#).

### 34.114.4 Member Function Documentation

#### 34.114.4.1 const std::string & stdair::SampleType::getLabel ( const EN\_SampleType & *iType* ) [static]

Get the label as a string (e.g., "Inventory" or "Schedule").

Definition at line 67 of file [SampleType.cpp](#).

#### 34.114.4.2 char stdair::SampleType::getTypeLabel ( const EN\_SampleType & *iType* ) [static]

Get the label as a single char (e.g., 'I' or 'S').

Definition at line 72 of file [SampleType.cpp](#).

#### 34.114.4.3 std::string stdair::SampleType::getTypeLabelAsString ( const EN\_SampleType & *iType* ) [static]

Get the label as a string of a single char (e.g., "I" or "S").

Definition at line 77 of file [SampleType.cpp](#).

#### 34.114.4.4 std::string stdair::SampleType::describeLabels ( ) [static]

List the labels.

Definition at line 84 of file [SampleType.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [SampleType\(\)](#).

#### 34.114.4.5 SampleType::EN\_SampleType stdair::SampleType::getType ( ) const

Get the enumerated value.

Definition at line 96 of file [SampleType.cpp](#).

#### 34.114.4.6 std::string stdair::SampleType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., "I" or "S").

Definition at line 101 of file [SampleType.cpp](#).

#### 34.114.4.7 const std::string stdair::SampleType::describe ( ) const [virtual]

Give a description of the structure (e.g., "Inventory" or "Schedule").

Implements [stdair::StructAbstract](#).

Definition at line 108 of file [SampleType.cpp](#).

#### 34.114.4.8 bool stdair::SampleType::operator== ( const EN\_SampleType & iType ) const

Comparison operator.

Definition at line 115 of file [SampleType.cpp](#).

#### 34.114.4.9 void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline, inherited]

Dump a Business Object into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

#### 34.114.4.10 virtual void stdair::StructAbstract::fromStream ( std::istream & ioIn ) [inline, virtual, inherited]

Read a Business Object from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#),

[stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this struct was generated from the following files:

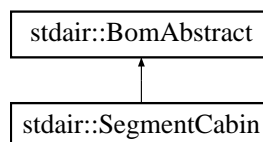
- [stdair/basic/SampleType.hpp](#)
- [stdair/basic/SampleType.cpp](#)

### 34.115 stdair::SegmentCabin Class Reference

Class representing the actual attributes for an airline segment-cabin.

```
#include <stdair/bom/SegmentCabin.hpp>
```

Inheritance diagram for `stdair::SegmentCabin`:



#### Public Types

- typedef [SegmentCabinKey](#) `Key_T`

#### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [CabinCode\\_T](#) & [getCabinCode](#) () const
- const [MapKey\\_T](#) [getFullerKey](#) () const
- const [GuillotineBlock](#) & [getGuillotineBlock](#) () const
- const [CabinCapacity\\_T](#) & [getCapacity](#) () const
- const [BlockSpace\\_T](#) & [getBlockSpace](#) () const
- const [BlockSpace\\_T](#) & [getMIN](#) () const
- const [UPR\\_T](#) & [getUPR](#) () const
- const [NbOfBookings\\_T](#) & [getBookingCounter](#) () const
- const [CommittedSpace\\_T](#) & [getCommittedSpace](#) () const
- const [Availability\\_T](#) & [getAvailabilityPool](#) () const
- const [BidPrice\\_T](#) & [getCurrentBidPrice](#) () const
- const [BidPriceVector\\_T](#) & [getBidPriceVector](#) () const
- const bool [getFareFamilyStatus](#) () const

- void [setGuillotineBlock](#) ([GuillotineBlock](#) &ioGuillotine)
- void [setCapacity](#) (const [CabinCapacity\\_T](#) &iCapacity)
- void [setBlockSpace](#) (const [BlockSpace\\_T](#) &iBlockSpace)
- void [setMIN](#) (const [BlockSpace\\_T](#) &iMIN)
- void [setUPR](#) (const [UPR\\_T](#) &iUPR)
- void [setBookingCounter](#) (const [NbOfBookings\\_T](#) &iBookingCounter)
- void [setCommittedSpace](#) (const [CommittedSpace\\_T](#) &iCommittedSpace)
- void [setAvailabilityPool](#) (const [Availability\\_T](#) &iAvailabilityPool)
- void [setBidPriceVector](#) (const [BidPriceVector\\_T](#) &iBPV)
- void [activateFareFamily](#) ()
- void [updateFromReservation](#) (const [NbOfBookings\\_T](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

#### Protected Member Functions

- [SegmentCabin](#) (const [Key\\_T](#) &)
- virtual [~SegmentCabin](#) ()

#### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract \\* \\_parent](#)
- [HolderMap\\_T \\_holderMap](#)
- [GuillotineBlock \\* \\_guillotineBlock](#)
- [CabinCapacity\\_T \\_capacity](#)
- [BlockSpace\\_T \\_blockSpace](#)
- [BlockSpace\\_T \\_min](#)
- [UPR\\_T \\_upr](#)
- [NbOfBookings\\_T \\_bookingCounter](#)
- [CommittedSpace\\_T \\_committedSpace](#)
- [Availability\\_T \\_availabilityPool](#)
- [BidPriceVector\\_T \\_bidPriceVector](#)
- [BidPrice\\_T \\_currentBidPrice](#)
- [bool \\_fareFamilyActivation](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

### 34.115.1 Detailed Description

Class representing the actual attributes for an airline segment-cabin.

Definition at line 31 of file [SegmentCabin.hpp](#).

### 34.115.2 Member Typedef Documentation

#### 34.115.2.1 typedef SegmentCabinKey stdair::SegmentCabin::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 41 of file [SegmentCabin.hpp](#).

### 34.115.3 Constructor & Destructor Documentation

#### 34.115.3.1 stdair::SegmentCabin::SegmentCabin ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 29 of file [SegmentCabin.cpp](#).

#### 34.115.3.2 stdair::SegmentCabin::~~SegmentCabin ( ) [protected, virtual]

Destructor.

Definition at line 42 of file [SegmentCabin.cpp](#).

### 34.115.4 Member Function Documentation

#### 34.115.4.1 const Key\_T& stdair::SegmentCabin::getKey ( ) const [inline]

Get the segment-cabin key (cabin code).

Definition at line 49 of file [SegmentCabin.hpp](#).

References [\\_key](#).

#### 34.115.4.2 BomAbstract\* const stdair::SegmentCabin::getParent ( ) const [inline]

Get the parent object.

Definition at line 56 of file [SegmentCabin.hpp](#).

References [\\_parent](#).

#### 34.115.4.3 const HolderMap\_T& stdair::SegmentCabin::getHolderMap ( ) const [inline]

Get the map of children holders.

Definition at line 63 of file [SegmentCabin.hpp](#).

References [\\_holderMap](#).



34.115.4.4 **const CabinCode\_T& stdair::SegmentCabin::getCabinCode ( ) const**  
[inline]

Get the cabin code (primary key).

Definition at line 70 of file [SegmentCabin.hpp](#).

References [\\_key](#), and [stdair::SegmentCabinKey::getCabinCode\(\)](#).

Referenced by [getFullerKey\(\)](#).

34.115.4.5 **const MapKey\_T stdair::SegmentCabin::getFullerKey ( ) const**

Get the (segment-date, segment-cabin) key (board point, off point and cabin code).

#### Note

That method assumes that the parent object derives from the [SegmentDate](#) class, as it needs to have access to the [describeKey\(\)](#) method.

Definition at line 46 of file [SegmentCabin.cpp](#).

References [stdair::DEFAULT\\_KEY\\_FLD\\_DELIMITER](#), [stdair::SegmentDate::describeKey\(\)](#), and [getCabinCode\(\)](#).

34.115.4.6 **const GuillotineBlock& stdair::SegmentCabin::getGuillotineBlock ( ) const**  
[inline]

Get the guillotine block.

Definition at line 85 of file [SegmentCabin.hpp](#).

References [\\_guillotineBlock](#).

34.115.4.7 **const CabinCapacity\_T& stdair::SegmentCabin::getCapacity ( ) const**  
[inline]

Get the cabin capacity.

Definition at line 91 of file [SegmentCabin.hpp](#).

References [\\_capacity](#).

34.115.4.8 **const BlockSpace\_T& stdair::SegmentCabin::getBlockSpace ( ) const**  
[inline]

Get the blocked number of bookings.

Definition at line 96 of file [SegmentCabin.hpp](#).

References [\\_blockSpace](#).

34.115.4.9 **const BlockSpace\_T& stdair::SegmentCabin::getMIN ( ) const** [inline]

Get the blocked number of bookings.

Definition at line 101 of file [SegmentCabin.hpp](#).

References [\\_min](#).

34.115.4.10 `const UPR_T& stdair::SegmentCabin::getUPR ( ) const` `[inline]`

Unsold Protection (UPR).

Definition at line 106 of file [SegmentCabin.hpp](#).

References [\\_upr](#).

34.115.4.11 `const NbOfBookings_T& stdair::SegmentCabin::getBookingCounter ( ) const`  
`[inline]`

Get the booking counter.

Definition at line 111 of file [SegmentCabin.hpp](#).

References [\\_bookingCounter](#).

34.115.4.12 `const CommittedSpace_T& stdair::SegmentCabin::getCommittedSpace ( )`  
`const` `[inline]`

Get the committed Space value.

Definition at line 116 of file [SegmentCabin.hpp](#).

References [\\_committedSpace](#).

34.115.4.13 `const Availability_T& stdair::SegmentCabin::getAvailabilityPool ( ) const`  
`[inline]`

Get the availability pool value.

Definition at line 121 of file [SegmentCabin.hpp](#).

References [\\_availabilityPool](#).

34.115.4.14 `const BidPrice_T& stdair::SegmentCabin::getCurrentBidPrice ( ) const`  
`[inline]`

Retrieve the current Bid-Price.

Definition at line 126 of file [SegmentCabin.hpp](#).

References [\\_currentBidPrice](#).

34.115.4.15 `const BidPriceVector_T& stdair::SegmentCabin::getBidPriceVector ( ) const`  
`[inline]`

Retrieve the Bid-Price Vector.

Definition at line 131 of file [SegmentCabin.hpp](#).

References [\\_bidPriceVector](#).

34.115.4.16 `const bool stdair::SegmentCabin::getFareFamilyStatus ( ) const` `[inline]`

Retrieve the status of fare family.

Definition at line 136 of file [SegmentCabin.hpp](#).

References [\\_fareFamilyActivation](#).

```
34.115.4.17 void stdair::SegmentCabin::setGuillotineBlock ( GuillotineBlock & ioGuillotine )  
           [inline]
```

Set the guillotine block.

Definition at line 143 of file [SegmentCabin.hpp](#).

References [\\_guillotineBlock](#).

```
34.115.4.18 void stdair::SegmentCabin::setCapacity ( const CabinCapacity_T & iCapacity )  
           [inline]
```

Set the cabin capacity.

Definition at line 148 of file [SegmentCabin.hpp](#).

References [\\_capacity](#).

```
34.115.4.19 void stdair::SegmentCabin::setBlockSpace ( const BlockSpace_T & iBlockSpace  
           ) [inline]
```

Set the blocked number of seats.

Definition at line 153 of file [SegmentCabin.hpp](#).

References [\\_blockSpace](#).

```
34.115.4.20 void stdair::SegmentCabin::setMIN ( const BlockSpace_T & iMIN )  
           [inline]
```

Set the blocked number of seats.

Definition at line 158 of file [SegmentCabin.hpp](#).

References [\\_min](#).

```
34.115.4.21 void stdair::SegmentCabin::setUPR ( const UPR_T & iUPR ) [inline]
```

Set the Unsold Protection (UPR).

Definition at line 163 of file [SegmentCabin.hpp](#).

References [\\_upr](#).

```
34.115.4.22 void stdair::SegmentCabin::setBookingCounter ( const NbOfBookings_T &  
           iBookingCounter ) [inline]
```

Set the total number of bookings.

Definition at line 168 of file [SegmentCabin.hpp](#).

References [\\_bookingCounter](#).

34.115.4.23 void stdair::SegmentCabin::setCommittedSpace ( const CommittedSpace\_T & *iCommittedSpace* ) [inline]

Set the value of committed space.

Definition at line 173 of file [SegmentCabin.hpp](#).

References [\\_committedSpace](#).

34.115.4.24 void stdair::SegmentCabin::setAvailabilityPool ( const Availability\_T & *iAvailabilityPool* ) [inline]

Set the value of availability pool.

Definition at line 178 of file [SegmentCabin.hpp](#).

References [\\_availabilityPool](#).

34.115.4.25 void stdair::SegmentCabin::setBidPriceVector ( const BidPriceVector\_T & *iBPV* ) [inline]

Set the Bid-Price Vector.

Definition at line 183 of file [SegmentCabin.hpp](#).

References [\\_bidPriceVector](#).

34.115.4.26 void stdair::SegmentCabin::activateFareFamily ( ) [inline]

Activate fare family.

Definition at line 188 of file [SegmentCabin.hpp](#).

References [\\_fareFamilyActivation](#).

34.115.4.27 void stdair::SegmentCabin::updateFromReservation ( const NbOfBookings\_T & *iNbOfBookings* )

Register a sale.

Definition at line 63 of file [SegmentCabin.cpp](#).

References [\\_committedSpace](#).

34.115.4.28 void stdair::SegmentCabin::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 205 of file [SegmentCabin.hpp](#).

References [toString\(\)](#).

34.115.4.29 `void stdair::SegmentCabin::fromStream ( std::istream & ioIn )` `[inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 214 of file [SegmentCabin.hpp](#).

34.115.4.30 `std::string stdair::SegmentCabin::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 55 of file [SegmentCabin.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.115.4.31 `const std::string stdair::SegmentCabin::describeKey ( ) const` `[inline]`

Get a string describing the key.

Definition at line 225 of file [SegmentCabin.hpp](#).

References [\\_key](#), and [stdair::SegmentCabinKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.115.4.32 `template<class Archive > void stdair::SegmentCabin::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 229 of file [CmdBomSerialiser.cpp](#).

References [\\_key](#).

#### 34.115.5 Friends And Related Function Documentation

34.115.5.1 `friend class FacBom` `[friend]`

Definition at line 32 of file [SegmentCabin.hpp](#).

34.115.5.2 `friend class FacBomManager` `[friend]`

Definition at line 33 of file [SegmentCabin.hpp](#).

34.115.5.3 friend class boost::serialization::access [friend]

Definition at line 34 of file [SegmentCabin.hpp](#).

#### 34.115.6 Member Data Documentation

34.115.6.1 Key\_T stdair::SegmentCabin::\_key [protected]

Primary key (cabin code).

Definition at line 279 of file [SegmentCabin.hpp](#).

Referenced by [describeKey\(\)](#), [getCabinCode\(\)](#), [getKey\(\)](#), and [serialize\(\)](#).

34.115.6.2 BomAbstract\* stdair::SegmentCabin::\_parent [protected]

Pointer on the parent class ([SegmentDate](#)).

Definition at line 284 of file [SegmentCabin.hpp](#).

Referenced by [getParent\(\)](#).

34.115.6.3 HolderMap\_T stdair::SegmentCabin::\_holderMap [protected]

Map holding the children ([FareFamily](#) or [BookingClass](#) objects).

Definition at line 289 of file [SegmentCabin.hpp](#).

Referenced by [getHolderMap\(\)](#).

34.115.6.4 GuillotineBlock\* stdair::SegmentCabin::\_guillotineBlock  
[protected]

The guillotine block used for Revenue Management activities.

Definition at line 294 of file [SegmentCabin.hpp](#).

Referenced by [getGuillotineBlock\(\)](#), and [setGuillotineBlock\(\)](#).

34.115.6.5 CabinCapacity\_T stdair::SegmentCabin::\_capacity [protected]

Capacity of the cabin.

Definition at line 297 of file [SegmentCabin.hpp](#).

Referenced by [getCapacity\(\)](#), and [setCapacity\(\)](#).

34.115.6.6 BlockSpace\_T stdair::SegmentCabin::\_blockSpace [protected]

Blocked capacity.

Definition at line 300 of file [SegmentCabin.hpp](#).

Referenced by [getBlockSpace\(\)](#), and [setBlockSpace\(\)](#).

**34.115.6.7 BlockSpace\_T stdair::SegmentCabin::\_min** [protected]

Blocked number of seats.

Definition at line 303 of file [SegmentCabin.hpp](#).

Referenced by [getMIN\(\)](#), and [setMIN\(\)](#).

**34.115.6.8 UPR\_T stdair::SegmentCabin::\_upr** [protected]

Unsold Protection (UPR).

Definition at line 306 of file [SegmentCabin.hpp](#).

Referenced by [getUPR\(\)](#), and [setUPR\(\)](#).

**34.115.6.9 NbOfBookings\_T stdair::SegmentCabin::\_bookingCounter**  
[protected]

Aggregated number of bookings.

Definition at line 309 of file [SegmentCabin.hpp](#).

Referenced by [getBookingCounter\(\)](#), and [setBookingCounter\(\)](#).

**34.115.6.10 CommittedSpace\_T stdair::SegmentCabin::\_committedSpace**  
[protected]

Aggregated committed space.

Definition at line 312 of file [SegmentCabin.hpp](#).

Referenced by [getCommittedSpace\(\)](#), [setCommittedSpace\(\)](#), and [updateFromReservation\(\)](#).

**34.115.6.11 Availability\_T stdair::SegmentCabin::\_availabilityPool**  
[protected]

Aggregated availability pool.

Definition at line 315 of file [SegmentCabin.hpp](#).

Referenced by [getAvailabilityPool\(\)](#), and [setAvailabilityPool\(\)](#).

**34.115.6.12 BidPriceVector\_T stdair::SegmentCabin::\_bidPriceVector**  
[protected]

Bid-Price Vector (BPV).

Definition at line 318 of file [SegmentCabin.hpp](#).

Referenced by [getBidPriceVector\(\)](#), and [setBidPriceVector\(\)](#).

**34.115.6.13 BidPrice\_T stdair::SegmentCabin::\_currentBidPrice** [protected]

Current Bid-Price (BP).

Definition at line 321 of file [SegmentCabin.hpp](#).

Referenced by [getCurrentBidPrice\(\)](#).

34.115.6.14 `bool stdair::SegmentCabin::_fareFamilyActivation` `[protected]`

Indicate if fare family is in use.

Definition at line 324 of file [SegmentCabin.hpp](#).

Referenced by [activateFareFamily\(\)](#), and [getFareFamilyStatus\(\)](#).

The documentation for this class was generated from the following files:

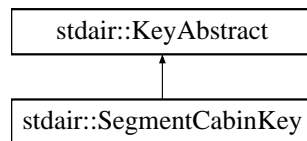
- [stdair/bom/SegmentCabin.hpp](#)
- [stdair/bom/SegmentCabin.cpp](#)
- [stdair/command/CmdBomSerialiser.cpp](#)

## 34.116 stdair::SegmentCabinKey Struct Reference

Key of a given segment-cabin, made of a cabin code (only).

```
#include <stdair/bom/SegmentCabinKey.hpp>
```

Inheritance diagram for `stdair::SegmentCabinKey`:



### Public Member Functions

- [SegmentCabinKey](#) (const [CabinCode\\_T](#) &iCabinCode)
- [SegmentCabinKey](#) (const [SegmentCabinKey](#) &)
- [~SegmentCabinKey](#) ()
- const [CabinCode\\_T](#) & [getCabinCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

### Friends

- class [boost::serialization::access](#)



### 34.116.1 Detailed Description

Key of a given segment-cabin, made of a cabin code (only).

Definition at line 26 of file [SegmentCabinKey.hpp](#).

### 34.116.2 Constructor & Destructor Documentation

#### 34.116.2.1 `stdair::SegmentCabinKey::SegmentCabinKey ( const CabinCode_T & iCabinCode )`

Constructor.

Definition at line 23 of file [SegmentCabinKey.cpp](#).

#### 34.116.2.2 `stdair::SegmentCabinKey::SegmentCabinKey ( const SegmentCabinKey & iKey )`

Copy constructor.

Definition at line 28 of file [SegmentCabinKey.cpp](#).

#### 34.116.2.3 `stdair::SegmentCabinKey::~~SegmentCabinKey ( )`

Destructor.

Definition at line 33 of file [SegmentCabinKey.cpp](#).

### 34.116.3 Member Function Documentation

#### 34.116.3.1 `const CabinCode_T& stdair::SegmentCabinKey::getCabinCode ( ) const` [inline]

Get the cabin code.

Definition at line 56 of file [SegmentCabinKey.hpp](#).

Referenced by [stdair::SegmentCabin::getCabinCode\(\)](#).

#### 34.116.3.2 `void stdair::SegmentCabinKey::toStream ( std::ostream & ioOut ) const` [virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 37 of file [SegmentCabinKey.cpp](#).

References [toString\(\)](#).

34.116.3.3 void stdair::SegmentCabinKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 42 of file [SegmentCabinKey.cpp](#).

34.116.3.4 const std::string stdair::SegmentCabinKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 46 of file [SegmentCabinKey.cpp](#).

Referenced by [stdair::SegmentCabin::describeKey\(\)](#), [stdair::BomRetriever::retrieveDummySegmentCabin\(\)](#), and [toString\(\)](#).

34.116.3.5 template<class Archive > void stdair::SegmentCabinKey::serialize ( Archive & *ar*, const unsigned int *iFileVersion* )

Serialisation.

Definition at line 68 of file [SegmentCabinKey.cpp](#).

#### 34.116.4 Friends And Related Function Documentation

34.116.4.1 friend class boost::serialization::access [friend]

Definition at line 27 of file [SegmentCabinKey.hpp](#).

The documentation for this struct was generated from the following files:

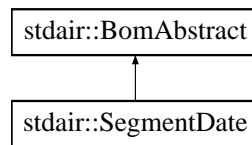
- [stdair/bom/SegmentCabinKey.hpp](#)
- [stdair/bom/SegmentCabinKey.cpp](#)

#### 34.117 stdair::SegmentDate Class Reference

Class representing the actual attributes for an airline segment-date.

```
#include <stdair/bom/SegmentDate.hpp>
```

Inheritance diagram for stdair::SegmentDate:



### Public Types

- typedef [SegmentDateKey](#) [Key\\_T](#)

### Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [AirportCode\\_T](#) & [getOffPoint](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [Date\\_T](#) & [getBoardingDate](#) () const
- const [Duration\\_T](#) & [getBoardingTime](#) () const
- const [Date\\_T](#) & [getOffDate](#) () const
- const [Duration\\_T](#) & [getOffTime](#) () const
- const [Duration\\_T](#) & [getElapsedTime](#) () const
- const [Distance\\_T](#) & [getDistance](#) () const
- const [DateOffset\\_T](#) [getDateOffset](#) () const
- const [Duration\\_T](#) [getTimeOffset](#) () const
- [SegmentDate](#) \* [getOperatingSegmentDate](#) () const
- const [SegmentDateList\\_T](#) & [getMarketingSegmentDateList](#) () const
- void [setBoardingDate](#) (const [Date\\_T](#) & iBoardingDate)
- void [setBoardingTime](#) (const [Duration\\_T](#) & iBoardingTime)
- void [setOffDate](#) (const [Date\\_T](#) & iOffDate)
- void [setOffTime](#) (const [Duration\\_T](#) & iOffTime)
- void [setElapsedTime](#) (const [Duration\\_T](#) & iElapsedTime)
- void [setDistance](#) (const [Distance\\_T](#) & iDistance)
- void [linkWithOperating](#) ([SegmentDate](#) & iSegmentDate)
- void [toStream](#) (std::ostream & ioOut) const
- void [fromStream](#) (std::istream & ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- template<class Archive >  
void [serialize](#) (Archive & ar, const unsigned int iFileVersion)

### Protected Member Functions

- [SegmentDate](#) (const [Key\\_T](#) &)
- virtual [~SegmentDate](#) ()

### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract \\* \\_parent](#)
- [HolderMap\\_T \\_holderMap](#)
- [SegmentDate \\* \\_operatingSegmentDate](#)
- [SegmentDateList\\_T \\_marketingSegmentDateList](#)
- [Date\\_T \\_boardingDate](#)
- [Duration\\_T \\_boardingTime](#)
- [Date\\_T \\_offDate](#)
- [Duration\\_T \\_offTime](#)
- [Duration\\_T \\_elapsedTime](#)
- [Distance\\_T \\_distance](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)
- class [boost::serialization::access](#)

#### 34.117.1 Detailed Description

Class representing the actual attributes for an airline segment-date.

Definition at line 33 of file [SegmentDate.hpp](#).

#### 34.117.2 Member Typedef Documentation

##### 34.117.2.1 typedef SegmentDateKey stdair::SegmentDate::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 43 of file [SegmentDate.hpp](#).

#### 34.117.3 Constructor & Destructor Documentation

##### 34.117.3.1 stdair::SegmentDate::SegmentDate ( const Key\_T & iKey ) [protected]

Constructor.

Definition at line 31 of file [SegmentDate.cpp](#).

##### 34.117.3.2 stdair::SegmentDate::~~SegmentDate ( ) [protected, virtual]

Destructor.

Definition at line 37 of file [SegmentDate.cpp](#).

## 34.117.4 Member Function Documentation

34.117.4.1 `const Key_T& stdair::SegmentDate::getKey ( ) const` `[inline]`

Get the segment-date key.

Definition at line 49 of file [SegmentDate.hpp](#).

References [\\_key](#).

34.117.4.2 `BomAbstract* const stdair::SegmentDate::getParent ( ) const` `[inline]`

Get the parent object.

Definition at line 54 of file [SegmentDate.hpp](#).

References [\\_parent](#).

34.117.4.3 `const AirportCode_T& stdair::SegmentDate::getBoardingPoint ( ) const`  
`[inline]`

Get the boarding point (part of the primary key).

Definition at line 59 of file [SegmentDate.hpp](#).

References [\\_key](#), and [stdair::SegmentDateKey::getBoardingPoint\(\)](#).

34.117.4.4 `const AirportCode_T& stdair::SegmentDate::getOffPoint ( ) const` `[inline]`

Get the off point (part of the primary key).

Definition at line 64 of file [SegmentDate.hpp](#).

References [\\_key](#), and [stdair::SegmentDateKey::getOffPoint\(\)](#).

34.117.4.5 `const HolderMap_T& stdair::SegmentDate::getHolderMap ( ) const`  
`[inline]`

Get the map of children holders.

Definition at line 69 of file [SegmentDate.hpp](#).

References [\\_holderMap](#).

34.117.4.6 `const Date_T& stdair::SegmentDate::getBoardingDate ( ) const` `[inline]`

Get the boarding date.

Definition at line 74 of file [SegmentDate.hpp](#).

References [\\_boardingDate](#).

34.117.4.7 `const Duration_T& stdair::SegmentDate::getBoardingTime ( ) const`  
`[inline]`

Get the boarding time.

Definition at line 79 of file [SegmentDate.hpp](#).

References [\\_boardingTime](#).

34.117.4.8 `const Date_T& stdair::SegmentDate::getOffDate ( ) const [inline]`

Get the off date.

Definition at line 84 of file [SegmentDate.hpp](#).

References [\\_offDate](#).

34.117.4.9 `const Duration_T& stdair::SegmentDate::getOffTime ( ) const [inline]`

Get the off time.

Definition at line 89 of file [SegmentDate.hpp](#).

References [\\_offTime](#).

34.117.4.10 `const Duration_T& stdair::SegmentDate::getElapsedTime ( ) const [inline]`

Get the elapsed time.

Definition at line 94 of file [SegmentDate.hpp](#).

References [\\_elapsedTime](#).

34.117.4.11 `const Distance_T& stdair::SegmentDate::getDistance ( ) const [inline]`

Get the distance.

Definition at line 99 of file [SegmentDate.hpp](#).

References [\\_distance](#).

34.117.4.12 `const DateOffset_T stdair::SegmentDate::getDateOffset ( ) const [inline]`

Get the date offset (off date - boarding date).

Definition at line 104 of file [SegmentDate.hpp](#).

References [\\_boardingDate](#), and [\\_offDate](#).

Referenced by [getTimeOffset\(\)](#).

34.117.4.13 `const Duration_T stdair::SegmentDate::getTimeOffset ( ) const`

Get the time offset between boarding and off points.

It is defined as being:

$$\text{TimeOffset} = (\text{OffTime} - \text{BoardingTime}) + (\text{OffDate} - \text{BoardingDate}) * 24$$

- [ElapsedTime](#).

Definition at line 48 of file [SegmentDate.cpp](#).

References [\\_boardingTime](#), [\\_elapsedTime](#), [\\_offTime](#), and [getDateOffset\(\)](#).

34.117.4.14 **SegmentDate\*** stdair::SegmentDate::getOperatingSegmentDate ( ) const  
[inline]

Get the "operating" segment date.

Definition at line 121 of file [SegmentDate.hpp](#).

References [\\_operatingSegmentDate](#).

34.117.4.15 **const SegmentDateList\_T&** stdair::SegmentDate::getMarketingSegmentDateList  
( ) const [inline]

Get the list of marketing segment dates.

Definition at line 128 of file [SegmentDate.hpp](#).

References [\\_marketingSegmentDateList](#).

34.117.4.16 **void** stdair::SegmentDate::setBoardingDate ( const Date\_T & *iBoardingDate* )  
[inline]

Set the boarding date.

Definition at line 135 of file [SegmentDate.hpp](#).

References [\\_boardingDate](#).

34.117.4.17 **void** stdair::SegmentDate::setBoardingTime ( const Duration\_T & *iBoardingTime*  
) [inline]

Set the boarding time.

Definition at line 140 of file [SegmentDate.hpp](#).

References [\\_boardingTime](#).

34.117.4.18 **void** stdair::SegmentDate::setOffDate ( const Date\_T & *iOffDate* ) [inline]

Set the off date.

Definition at line 145 of file [SegmentDate.hpp](#).

References [\\_offDate](#).

34.117.4.19 **void** stdair::SegmentDate::setOffTime ( const Duration\_T & *iOffTime* )  
[inline]

Set the off time.

Definition at line 150 of file [SegmentDate.hpp](#).

References [\\_offTime](#).

34.117.4.20 **void** stdair::SegmentDate::setElapsedTime ( const Duration\_T & *iElapsedTime* )  
[inline]

Set the elapsed time.

Definition at line 155 of file [SegmentDate.hpp](#).

References [\\_elapsedTime](#).

```
34.117.4.21 void stdair::SegmentDate::setDistance ( const Distance_T & iDistance )
           [inline]
```

Set the distance.

Definition at line 160 of file [SegmentDate.hpp](#).

References [\\_distance](#).

```
34.117.4.22 void stdair::SegmentDate::linkWithOperating ( SegmentDate & iSegmentDate )
           [inline]
```

Set operating segment date.

Definition at line 165 of file [SegmentDate.hpp](#).

References [\\_operatingSegmentDate](#).

```
34.117.4.23 void stdair::SegmentDate::toStream ( std::ostream & ioOut ) const [inline,
           virtual]
```

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i>	the output stream.
---------------------	--------------------

Implements [stdair::BomAbstract](#).

Definition at line 176 of file [SegmentDate.hpp](#).

References [toString\(\)](#).

```
34.117.4.24 void stdair::SegmentDate::fromStream ( std::istream & ioIn ) [inline,
           virtual]
```

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i>	the input stream.
---------------------	-------------------

Implements [stdair::BomAbstract](#).

Definition at line 185 of file [SegmentDate.hpp](#).

```
34.117.4.25 std::string stdair::SegmentDate::toString ( ) const [virtual]
```

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 41 of file [SegmentDate.cpp](#).



References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.117.4.26 `const std::string stdair::SegmentDate::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 196 of file [SegmentDate.hpp](#).

References [\\_key](#), and [stdair::SegmentDateKey::toString\(\)](#).

Referenced by [stdair::SegmentCabin::getFullerKey\(\)](#), and [toString\(\)](#).

34.117.4.27 `template<class Archive > void stdair::SegmentDate::serialize ( Archive & ar, const unsigned int iFileVersion )`

Serialisation.

Definition at line 208 of file [CmdBomSerialiser.cpp](#).

References [\\_key](#).

#### 34.117.5 Friends And Related Function Documentation

34.117.5.1 `friend class FacBom [friend]`

Definition at line 34 of file [SegmentDate.hpp](#).

34.117.5.2 `friend class FacBomManager [friend]`

Definition at line 35 of file [SegmentDate.hpp](#).

34.117.5.3 `friend class boost::serialization::access [friend]`

Definition at line 36 of file [SegmentDate.hpp](#).

#### 34.117.6 Member Data Documentation

34.117.6.1 `Key_T stdair::SegmentDate::_key [protected]`

Primary key (origin and destination).

Definition at line 250 of file [SegmentDate.hpp](#).

Referenced by [describeKey\(\)](#), [getBoardingPoint\(\)](#), [getKey\(\)](#), [getOffPoint\(\)](#), and [serialize\(\)](#).

34.117.6.2 `BomAbstract* stdair::SegmentDate::_parent [protected]`

Pointer on the parent class ([FlightDate](#)).

Definition at line 255 of file [SegmentDate.hpp](#).

Referenced by [getParent\(\)](#).

**34.117.6.3 HolderMap\_T stdair::SegmentDate::\_holderMap** [protected]

Map holding the children ([SegmentCabin](#) objects).

Definition at line 260 of file [SegmentDate.hpp](#).

Referenced by [getHolderMap\(\)](#).

**34.117.6.4 SegmentDate\* stdair::SegmentDate::\_operatingSegmentDate**  
[protected]

Pointer on the operating [SegmentDate](#). Nota: 1. "operating" refers to the codeshare contract seller. 2. the pointer will be NULL if the segment date is itself the "operating" one.

Definition at line 268 of file [SegmentDate.hpp](#).

Referenced by [getOperatingSegmentDate\(\)](#), and [linkWithOperating\(\)](#).

**34.117.6.5 SegmentDateList\_T stdair::SegmentDate::\_marketingSegmentDateList**  
[protected]

List holding the marketing segment dates. Nota: 1. "marketing" refers to the codeshare contract seller. 2. the list will be empty if the segment date is itself the "marketing" one.

Definition at line 276 of file [SegmentDate.hpp](#).

Referenced by [getMarketingSegmentDateList\(\)](#).

**34.117.6.6 Date\_T stdair::SegmentDate::\_boardingDate** [protected]

Boarding date.

Definition at line 281 of file [SegmentDate.hpp](#).

Referenced by [getBoardingDate\(\)](#), [getDateOffset\(\)](#), and [setBoardingDate\(\)](#).

**34.117.6.7 Duration\_T stdair::SegmentDate::\_boardingTime** [protected]

Boarding time.

Definition at line 286 of file [SegmentDate.hpp](#).

Referenced by [getBoardingTime\(\)](#), [getTimeOffset\(\)](#), and [setBoardingTime\(\)](#).

**34.117.6.8 Date\_T stdair::SegmentDate::\_offDate** [protected]

Landing date.

Definition at line 291 of file [SegmentDate.hpp](#).

Referenced by [getDateOffset\(\)](#), [getOffDate\(\)](#), and [setOffDate\(\)](#).

**34.117.6.9 Duration\_T stdair::SegmentDate::\_offTime** [protected]

Landing time.

Definition at line 296 of file [SegmentDate.hpp](#).

Referenced by [getOffTime\(\)](#), [getTimeOffset\(\)](#), and [setOffTime\(\)](#).

#### 34.117.6.10 Duration\_T stdair::SegmentDate::\_elapsedTime [protected]

Trip elapsed time.

Definition at line 301 of file [SegmentDate.hpp](#).

Referenced by [getElapsedTime\(\)](#), [getTimeOffset\(\)](#), and [setElapsedTime\(\)](#).

#### 34.117.6.11 Distance\_T stdair::SegmentDate::\_distance [protected]

Trip distance.

Definition at line 306 of file [SegmentDate.hpp](#).

Referenced by [getDistance\(\)](#), and [setDistance\(\)](#).

The documentation for this class was generated from the following files:

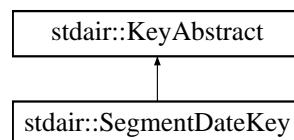
- [stdair/bom/SegmentDate.hpp](#)
- [stdair/bom/SegmentDate.cpp](#)
- [stdair/command/CmdBomSerialiser.cpp](#)

## 34.118 stdair::SegmentDateKey Struct Reference

Key of a given segment-date, made of an origin and a destination airports.

```
#include <stdair/bom/SegmentDateKey.hpp>
```

Inheritance diagram for stdair::SegmentDateKey:



### Public Member Functions

- [SegmentDateKey](#) (const [AirportCode\\_T](#) &, const [AirportCode\\_T](#) &)
- [SegmentDateKey](#) (const [SegmentDateKey](#) &)
- [~SegmentDateKey](#) ()
- const [AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [AirportCode\\_T](#) & [getOffPoint](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const
- template<class Archive >  
void [serialize](#) (Archive &ar, const unsigned int iFileVersion)

## Friends

- class [boost::serialization::access](#)

## 34.118.1 Detailed Description

Key of a given segment-date, made of an origin and a destination airports.

Definition at line 24 of file [SegmentDateKey.hpp](#).

## 34.118.2 Constructor &amp; Destructor Documentation

34.118.2.1 stdair::SegmentDateKey::SegmentDateKey ( const AirportCode\_T & *iBoardingPoint*, const AirportCode\_T & *iOffPoint* )

Main constructor.

Definition at line 25 of file [SegmentDateKey.cpp](#).

34.118.2.2 stdair::SegmentDateKey::SegmentDateKey ( const SegmentDateKey & *iKey* )

Copy constructor.

Definition at line 31 of file [SegmentDateKey.cpp](#).

## 34.118.2.3 stdair::SegmentDateKey::~~SegmentDateKey ( )

Destructor.

Definition at line 36 of file [SegmentDateKey.cpp](#).

## 34.118.3 Member Function Documentation

34.118.3.1 const AirportCode\_T& stdair::SegmentDateKey::getBoardingPoint ( ) const  
[inline]

Get the boarding point.

Definition at line 51 of file [SegmentDateKey.hpp](#).

Referenced by [stdair::SegmentDate::getBoardingPoint\(\)](#), and [stdair::OnDDateKey::getOrigin\(\)](#).

34.118.3.2 const AirportCode\_T& stdair::SegmentDateKey::getOffPoint ( ) const  
[inline]

Get the arrival point.

Definition at line 56 of file [SegmentDateKey.hpp](#).

Referenced by [stdair::OnDDateKey::getDestination\(\)](#), and [stdair::SegmentDate::getOffPoint\(\)](#).

34.118.3.3 void stdair::SegmentDateKey::toStream ( std::ostream & *ioOut* ) const  
[virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 40 of file [SegmentDateKey.cpp](#).

References [toString\(\)](#).

34.118.3.4 void stdair::SegmentDateKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 45 of file [SegmentDateKey.cpp](#).

34.118.3.5 const std::string stdair::SegmentDateKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 49 of file [SegmentDateKey.cpp](#).

References [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#).

Referenced by [stdair::SegmentDate::describeKey\(\)](#), [stdair::FlightDate::getSegmentDate\(\)](#), [stdair::BomRetriever::retrieveSegmentDateFromLongKey\(\)](#), and [toStream\(\)](#).

34.118.3.6 template<class Archive > void stdair::SegmentDateKey::serialize ( Archive & *ar*,  
const unsigned int *iFileVersion* )

Serialisation.

Definition at line 72 of file [SegmentDateKey.cpp](#).

#### 34.118.4 Friends And Related Function Documentation

## 34.118.4.1 friend class boost::serialization::access [friend]

Definition at line 25 of file [SegmentDateKey.hpp](#).

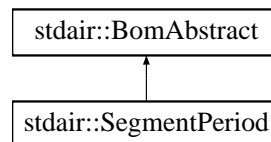
The documentation for this struct was generated from the following files:

- [stdair/bom/SegmentDateKey.hpp](#)
- [stdair/bom/SegmentDateKey.cpp](#)

## 34.119 stdair::SegmentPeriod Class Reference

```
#include <stdair/bom/SegmentPeriod.hpp>
```

Inheritance diagram for stdair::SegmentPeriod:



## Public Types

- typedef [SegmentPeriodKey](#) Key\_T

## Public Member Functions

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [AirportCode\\_T](#) & [getOffPoint](#) () const
- const [Duration\\_T](#) & [getBoardingTime](#) () const
- const [Duration\\_T](#) & [getOffTime](#) () const
- const [DateOffset\\_T](#) & [getBoardingDateOffset](#) () const
- const [DateOffset\\_T](#) & [getOffDateOffset](#) () const
- const [Duration\\_T](#) & [getElapsedTime](#) () const
- const [CabinBookingClassMap\\_T](#) & [getCabinBookingClassMap](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- void [setBoardingTime](#) (const [Duration\\_T](#) &iBoardingTime)
- void [setOffTime](#) (const [Duration\\_T](#) &iOffTime)
- void [setBoardingDateOffset](#) (const [DateOffset\\_T](#) &iDateOffset)
- void [setOffDateOffset](#) (const [DateOffset\\_T](#) &iDateOffset)
- void [setElapsedTime](#) (const [Duration\\_T](#) &iElapsedTime)
- void [addCabinBookingClassList](#) (const [CabinCode\\_T](#) &, const [ClassList\\_String\\_T](#) &)
- void [toStream](#) (std::ostream &ioOut) const

- void [fromStream](#) (std::istream &ioln)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const

#### Protected Member Functions

- [SegmentPeriod](#) (const [Key\\_T](#) &)
- [SegmentPeriod](#) (const [SegmentPeriod](#) &)
- [~SegmentPeriod](#) ()

#### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [Duration\\_T \\_boardingTime](#)
- [Duration\\_T \\_offTime](#)
- [DateOffset\\_T \\_boardingDateOffset](#)
- [DateOffset\\_T \\_offDateOffset](#)
- [Duration\\_T \\_elapsedTime](#)
- [CabinBookingClassMap\\_T \\_cabinBookingClassMap](#)
- [HolderMap\\_T \\_holderMap](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.119.1 Detailed Description

Class representing the actual attributes for an airline segment-period.

Definition at line 15 of file [SegmentPeriod.hpp](#).

#### 34.119.2 Member Typedef Documentation

##### 34.119.2.1 typedef SegmentPeriodKey stdair::SegmentPeriod::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 22 of file [SegmentPeriod.hpp](#).

#### 34.119.3 Constructor & Destructor Documentation

##### 34.119.3.1 stdair::SegmentPeriod::SegmentPeriod ( const Key\_T & iKey ) [protected]

Default constructors.

Definition at line 13 of file [SegmentPeriod.cpp](#).

34.119.3.2 **stdair::SegmentPeriod::SegmentPeriod** ( const **SegmentPeriod** & )  
[protected]

34.119.3.3 **stdair::SegmentPeriod::~~SegmentPeriod** ( ) [protected]

Destructor.

Definition at line 18 of file [SegmentPeriod.cpp](#).

#### 34.119.4 Member Function Documentation

34.119.4.1 **const Key\_T& stdair::SegmentPeriod::getKey** ( ) const [inline]

Get the segment-period key.

Definition at line 27 of file [SegmentPeriod.hpp](#).

References [\\_key](#).

34.119.4.2 **BomAbstract\* const stdair::SegmentPeriod::getParent** ( ) const [inline]

Get the parent object.

Definition at line 30 of file [SegmentPeriod.hpp](#).

References [\\_parent](#).

34.119.4.3 **const AirportCode\_T& stdair::SegmentPeriod::getBoardingPoint** ( ) const  
[inline]

Get the boarding point (part of the primary key).

Definition at line 33 of file [SegmentPeriod.hpp](#).

References [\\_key](#), and [stdair::SegmentPeriodKey::getBoardingPoint\(\)](#).

34.119.4.4 **const AirportCode\_T& stdair::SegmentPeriod::getOffPoint** ( ) const  
[inline]

Get the off point (part of the primary key).

Definition at line 38 of file [SegmentPeriod.hpp](#).

References [\\_key](#), and [stdair::SegmentPeriodKey::getOffPoint\(\)](#).

34.119.4.5 **const Duration\_T& stdair::SegmentPeriod::getBoardingTime** ( ) const  
[inline]

Get the boarding time.

Definition at line 41 of file [SegmentPeriod.hpp](#).

References [\\_boardingTime](#).



34.119.4.6 `const Duration_T& stdair::SegmentPeriod::getOffTime ( ) const` `[inline]`

Get the off time.

Definition at line 44 of file [SegmentPeriod.hpp](#).

References [\\_offTime](#).

34.119.4.7 `const DateOffset_T& stdair::SegmentPeriod::getBoardingDateOffset ( ) const`  
`[inline]`

Get the boarding date offset.

Definition at line 47 of file [SegmentPeriod.hpp](#).

References [\\_boardingDateOffset](#).

34.119.4.8 `const DateOffset_T& stdair::SegmentPeriod::getOffDateOffset ( ) const`  
`[inline]`

Get the off date offset.

Definition at line 52 of file [SegmentPeriod.hpp](#).

References [\\_offDateOffset](#).

34.119.4.9 `const Duration_T& stdair::SegmentPeriod::getElapsedTime ( ) const`  
`[inline]`

Get the elapsed time.

Definition at line 55 of file [SegmentPeriod.hpp](#).

References [\\_elapsedTime](#).

34.119.4.10 `const CabinBookingClassMap_T& stdair::SegmentPeriod::getCabinBookingClassMap ( ) const`  
`[inline]`

Get the cabin booking class map.

Definition at line 58 of file [SegmentPeriod.hpp](#).

References [\\_cabinBookingClassMap](#).

34.119.4.11 `const HolderMap_T& stdair::SegmentPeriod::getHolderMap ( ) const`  
`[inline]`

Get the map of children holders.

Definition at line 63 of file [SegmentPeriod.hpp](#).

References [\\_holderMap](#).

34.119.4.12 `void stdair::SegmentPeriod::setBoardingTime ( const Duration_T & iBoardingTime )` `[inline]`

Set the boarding time.

Definition at line 68 of file [SegmentPeriod.hpp](#).

References [\\_boardingTime](#).

```
34.119.4.13 void stdair::SegmentPeriod::setOffTime ( const Duration_T & iOffTime )
           [inline]
```

Set the off time.

Definition at line 73 of file [SegmentPeriod.hpp](#).

References [\\_offTime](#).

```
34.119.4.14 void stdair::SegmentPeriod::setBoardingDateOffset ( const DateOffset_T &
           iDateOffset ) [inline]
```

Set the boarding date offset.

Definition at line 76 of file [SegmentPeriod.hpp](#).

References [\\_boardingDateOffset](#).

```
34.119.4.15 void stdair::SegmentPeriod::setOffDateOffset ( const DateOffset_T & iDateOffset
           ) [inline]
```

Set the off date offset.

Definition at line 81 of file [SegmentPeriod.hpp](#).

References [\\_offDateOffset](#).

```
34.119.4.16 void stdair::SegmentPeriod::setElapsedTime ( const Duration_T & iElapsedTime
           ) [inline]
```

Set the elapsed time.

Definition at line 86 of file [SegmentPeriod.hpp](#).

References [\\_elapsedTime](#).

```
34.119.4.17 void stdair::SegmentPeriod::addCabinBookingClassList ( const CabinCode_T &
           iCabinCode, const ClassList_String_T & iClassCodeList )
```

Add a pair cabin code and list of class codes within the cabin to the cabin booking class map.

Definition at line 30 of file [SegmentPeriod.cpp](#).

References [\\_cabinBookingClassMap](#).

```
34.119.4.18 void stdair::SegmentPeriod::toStream ( std::ostream & ioOut ) const
           [inline, virtual]
```

Dump a Business Object into an output stream.

### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 99 of file [SegmentPeriod.hpp](#).

References [toString\(\)](#).

34.119.4.19 `void stdair::SegmentPeriod::fromStream ( std::istream & ioIn ) [inline, virtual]`

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 103 of file [SegmentPeriod.hpp](#).

34.119.4.20 `std::string stdair::SegmentPeriod::toString ( ) const [virtual]`

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 22 of file [SegmentPeriod.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.119.4.21 `const std::string stdair::SegmentPeriod::describeKey ( ) const [inline]`

Get a string describing the key.

Definition at line 109 of file [SegmentPeriod.hpp](#).

References [\\_key](#), and [stdair::SegmentPeriodKey::toString\(\)](#).

Referenced by [toString\(\)](#).

#### 34.119.5 Friends And Related Function Documentation

34.119.5.1 `friend class FacBom [friend]`

Definition at line 16 of file [SegmentPeriod.hpp](#).

34.119.5.2 `friend class FacBomManager [friend]`

Definition at line 17 of file [SegmentPeriod.hpp](#).

#### 34.119.6 Member Data Documentation

**34.119.6.1 Key\_T stdair::SegmentPeriod::\_key** [protected]

Definition at line 120 of file [SegmentPeriod.hpp](#).

Referenced by [describeKey\(\)](#), [getBoardingPoint\(\)](#), [getKey\(\)](#), and [getOffPoint\(\)](#).

**34.119.6.2 BomAbstract\* stdair::SegmentPeriod::\_parent** [protected]

Definition at line 121 of file [SegmentPeriod.hpp](#).

Referenced by [getParent\(\)](#).

**34.119.6.3 Duration\_T stdair::SegmentPeriod::\_boardingTime** [protected]

Definition at line 122 of file [SegmentPeriod.hpp](#).

Referenced by [getBoardingTime\(\)](#), and [setBoardingTime\(\)](#).

**34.119.6.4 Duration\_T stdair::SegmentPeriod::\_offTime** [protected]

Definition at line 123 of file [SegmentPeriod.hpp](#).

Referenced by [getOffTime\(\)](#), and [setOffTime\(\)](#).

**34.119.6.5 DateOffset\_T stdair::SegmentPeriod::\_boardingDateOffset**  
[protected]

Definition at line 124 of file [SegmentPeriod.hpp](#).

Referenced by [getBoardingDateOffset\(\)](#), and [setBoardingDateOffset\(\)](#).

**34.119.6.6 DateOffset\_T stdair::SegmentPeriod::\_offDateOffset** [protected]

Definition at line 125 of file [SegmentPeriod.hpp](#).

Referenced by [getOffDateOffset\(\)](#), and [setOffDateOffset\(\)](#).

**34.119.6.7 Duration\_T stdair::SegmentPeriod::\_elapsedTime** [protected]

Definition at line 126 of file [SegmentPeriod.hpp](#).

Referenced by [getElapsedTime\(\)](#), and [setElapsedTime\(\)](#).

**34.119.6.8 CabinBookingClassMap\_T stdair::SegmentPeriod::\_cabinBookingClassMap** [protected]

Definition at line 127 of file [SegmentPeriod.hpp](#).

Referenced by [addCabinBookingClassList\(\)](#), and [getCabinBookingClassMap\(\)](#).

**34.119.6.9 HolderMap\_T stdair::SegmentPeriod::\_holderMap** [protected]

Definition at line 128 of file [SegmentPeriod.hpp](#).

Referenced by [getHolderMap\(\)](#).

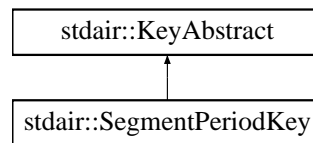
The documentation for this class was generated from the following files:

- [stdair/bom/SegmentPeriod.hpp](#)
- [stdair/bom/SegmentPeriod.cpp](#)

### 34.120 stdair::SegmentPeriodKey Struct Reference

```
#include <stdair/bom/SegmentPeriodKey.hpp>
```

Inheritance diagram for stdair::SegmentPeriodKey:



#### Public Member Functions

- [SegmentPeriodKey](#) (const [AirportCode\\_T](#) &, const [AirportCode\\_T](#) &)
- [SegmentPeriodKey](#) (const [SegmentPeriodKey](#) &)
- [~SegmentPeriodKey](#) ()
- const [AirportCode\\_T](#) & [getBoardingPoint](#) () const
- const [AirportCode\\_T](#) & [getOffPoint](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.120.1 Detailed Description

Key of segment-period.

Definition at line 14 of file [SegmentPeriodKey.hpp](#).

#### 34.120.2 Constructor & Destructor Documentation

34.120.2.1 `stdair::SegmentPeriodKey::SegmentPeriodKey ( const AirportCode\_T & iBoardingPoint, const AirportCode\_T & iOffPoint )`

Constructors.

Definition at line 12 of file [SegmentPeriodKey.cpp](#).

34.120.2.2 `stdair::SegmentPeriodKey::SegmentPeriodKey ( const SegmentPeriodKey & iKey )`

Definition at line 18 of file [SegmentPeriodKey.cpp](#).

**34.120.2.3 stdair::SegmentPeriodKey::~~SegmentPeriodKey ( )**

Destructor.

Definition at line 23 of file [SegmentPeriodKey.cpp](#).

**34.120.3 Member Function Documentation****34.120.3.1 const AirportCode\_T& stdair::SegmentPeriodKey::getBoardingPoint ( ) const**  
[inline]

Get the boarding point.

Definition at line 29 of file [SegmentPeriodKey.hpp](#).

Referenced by [stdair::SegmentPeriod::getBoardingPoint\(\)](#).

**34.120.3.2 const AirportCode\_T& stdair::SegmentPeriodKey::getOffPoint ( ) const**  
[inline]

Get the arrival point.

Definition at line 34 of file [SegmentPeriodKey.hpp](#).

Referenced by [stdair::SegmentPeriod::getOffPoint\(\)](#).

**34.120.3.3 void stdair::SegmentPeriodKey::toStream ( std::ostream & ioOut ) const**  
[virtual]

Dump a Business Object Key into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 27 of file [SegmentPeriodKey.cpp](#).

References [toString\(\)](#).

**34.120.3.4 void stdair::SegmentPeriodKey::fromStream ( std::istream & ioIn )** [virtual]

Read a Business Object Key from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 32 of file [SegmentPeriodKey.cpp](#).

34.120.3.5 `const std::string stdair::SegmentPeriodKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-period.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 36 of file [SegmentPeriodKey.cpp](#).

Referenced by [stdair::SegmentPeriod::describeKey\(\)](#), and [toStream\(\)](#).

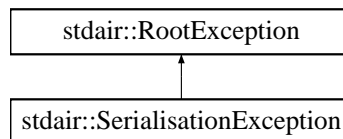
The documentation for this struct was generated from the following files:

- [stdair/bom/SegmentPeriodKey.hpp](#)
- [stdair/bom/SegmentPeriodKey.cpp](#)

## 34.121 stdair::SerialisationException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::SerialisationException:



### Public Member Functions

- [SerialisationException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

#### 34.121.1 Detailed Description

Serialisation.

Definition at line 119 of file [stdair\\_exceptions.hpp](#).

### 34.121.2 Constructor & Destructor Documentation

#### 34.121.2.1 stdair::SerialisationException::SerialisationException ( const std::string & *iWhat* ) [inline]

Constructor.

Definition at line 122 of file [stdair\\_exceptions.hpp](#).

### 34.121.3 Member Function Documentation

#### 34.121.3.1 const char\* stdair::RootException::what ( ) const throw () [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.121.4 Member Data Documentation

#### 34.121.4.1 std::string stdair::RootException::\_what [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

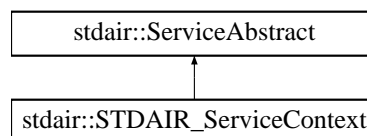
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.122 stdair::ServiceAbstract Class Reference

```
#include <stdair/service/ServiceAbstract.hpp>
```

Inheritance diagram for stdair::ServiceAbstract:



### Public Member Functions

- virtual [~ServiceAbstract](#) ()



- virtual void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioln)

#### Protected Member Functions

- [ServiceAbstract](#) ()

#### 34.122.1 Detailed Description

Base class for the Service layer.

Definition at line 15 of file [ServiceAbstract.hpp](#).

#### 34.122.2 Constructor & Destructor Documentation

34.122.2.1 virtual stdair::ServiceAbstract::~ServiceAbstract ( ) [inline, virtual]

Destructor.

Definition at line 21 of file [ServiceAbstract.hpp](#).

34.122.2.2 stdair::ServiceAbstract::ServiceAbstract ( ) [inline, protected]

Display of the structure. Protected Default Constructor to ensure this class is abstract.

Definition at line 46 of file [ServiceAbstract.hpp](#).

#### 34.122.3 Member Function Documentation

34.122.3.1 virtual void stdair::ServiceAbstract::toStream ( std::ostream & *ioOut* ) const  
[inline, virtual]

Dump a Business Object into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Definition at line 28 of file [ServiceAbstract.hpp](#).

Referenced by [operator<<\(\)](#).

34.122.3.2 virtual void stdair::ServiceAbstract::fromStream ( std::istream & *ioln* )  
[inline, virtual]

Read a Business Object from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Definition at line 35 of file [ServiceAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this class was generated from the following file:

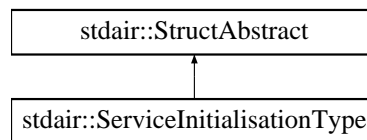
- [stdair/service/ServiceAbstract.hpp](#)

### 34.123 stdair::ServiceInitialisationType Struct Reference

Enumeration of service initialisation types.

```
#include <stdair/basic/ServiceInitialisationType.hpp>
```

Inheritance diagram for stdair::ServiceInitialisationType:



#### Public Types

- enum [EN\\_ServiceInitialisationType](#) { [NOT\\_YET\\_INITIALISED](#) = 0, [FILE\\_PARSING](#), [BUILTIN\\_SAMPLE](#), [LAST\\_VALUE](#) }

#### Public Member Functions

- [EN\\_ServiceInitialisationType](#) [getType](#) () const
- char [getTypeAsChar](#) () const
- std::string [getTypeAsString](#) () const
- const std::string [describe](#) () const
- bool [operator==](#) (const [EN\\_ServiceInitialisationType](#) &) const
- [ServiceInitialisationType](#) (const [EN\\_ServiceInitialisationType](#) &)
- [ServiceInitialisationType](#) (const char iType)
- [ServiceInitialisationType](#) (const std::string &iType)
- [ServiceInitialisationType](#) (const [ServiceInitialisationType](#) &)
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

#### Static Public Member Functions

- static const std::string & [getLabel](#) (const [EN\\_ServiceInitialisationType](#) &)
- static [EN\\_ServiceInitialisationType](#) [getType](#) (const char)
- static char [getTypeLabel](#) (const [EN\\_ServiceInitialisationType](#) &)
- static std::string [getTypeLabelAsString](#) (const [EN\\_ServiceInitialisationType](#) &)
- static std::string [describeLabels](#) ()

## 34.123.1 Detailed Description

Enumeration of service initialisation types.

Definition at line 17 of file [ServiceInitialisationType.hpp](#).

## 34.123.2 Member Enumeration Documentation

## 34.123.2.1 enum stdair::ServiceInitialisationType::EN\_ServiceInitialisationType

**Enumerator:**

***NOT\_YET\_INITIALISED***

***FILE\_PARSING***

***BUILTIN\_SAMPLE***

***LAST\_VALUE***

Definition at line 19 of file [ServiceInitialisationType.hpp](#).

## 34.123.3 Constructor &amp; Destructor Documentation

## 34.123.3.1 stdair::ServiceInitialisationType::ServiceInitialisationType ( const EN\_ServiceInitialisationType &amp; iServiceInitialisationType )

Main constructor.

Definition at line 36 of file [ServiceInitialisationType.cpp](#).

## 34.123.3.2 stdair::ServiceInitialisationType::ServiceInitialisationType ( const char iType )

Alternative constructor.

Definition at line 65 of file [ServiceInitialisationType.cpp](#).

## 34.123.3.3 stdair::ServiceInitialisationType::ServiceInitialisationType ( const std::string &amp; iType )

Alternative constructor.

Definition at line 71 of file [ServiceInitialisationType.cpp](#).

References [getType\(\)](#).

## 34.123.3.4 stdair::ServiceInitialisationType::ServiceInitialisationType ( const ServiceInitialisationType &amp; iServiceInitialisationType )

Default copy constructor.

Definition at line 30 of file [ServiceInitialisationType.cpp](#).

## 34.123.4 Member Function Documentation

34.123.4.1 `const std::string & stdair::ServiceInitialisationType::getLabel ( const EN_ServiceInitialisationType & iType ) [static]`

Get the label as a string (e.g., "Not yet initialised", "File parsing" or "Built-in sample BOM").

Definition at line 81 of file [ServiceInitialisationType.cpp](#).

34.123.4.2 `ServiceInitialisationType::EN_ServiceInitialisationType stdair::ServiceInitialisationType::getType ( const char iTypeChar ) [static]`

Get the type value from parsing a single char (e.g., 'N', 'F', 'B').

Definition at line 42 of file [ServiceInitialisationType.cpp](#).

References [BUILTIN\\_SAMPLE](#), [describeLabels\(\)](#), [FILE\\_PARSING](#), [LAST\\_VALUE](#), and [NOT\\_YET\\_INITIALISED](#).

34.123.4.3 `char stdair::ServiceInitialisationType::getTypeLabel ( const EN_ServiceInitialisationType & iType ) [static]`

Get the label as a single char (e.g., 'N', 'F', 'B').

Definition at line 87 of file [ServiceInitialisationType.cpp](#).

34.123.4.4 `std::string stdair::ServiceInitialisationType::getTypeLabelAsString ( const EN_ServiceInitialisationType & iType ) [static]`

Get the label as a string of a single char (e.g., "N", "F", "B").

Definition at line 93 of file [ServiceInitialisationType.cpp](#).

34.123.4.5 `std::string stdair::ServiceInitialisationType::describeLabels ( ) [static]`

List the labels.

Definition at line 100 of file [ServiceInitialisationType.cpp](#).

References [LAST\\_VALUE](#).

Referenced by [getType\(\)](#).

34.123.4.6 `ServiceInitialisationType::EN_ServiceInitialisationType stdair::ServiceInitialisationType::getType ( ) const`

Get the enumerated value.

Definition at line 113 of file [ServiceInitialisationType.cpp](#).

Referenced by [ServiceInitialisationType\(\)](#).

34.123.4.7 `char stdair::ServiceInitialisationType::getTypeAsChar ( ) const`

Get the enumerated value as a short string (e.g., 'N', 'F', 'B').

Definition at line 118 of file [ServiceInitialisationType.cpp](#).

## 34.123.4.8 std::string stdair::ServiceInitialisationType::getTypeAsString ( ) const

Get the enumerated value as a short string (e.g., "N", "F", "B").

Definition at line 124 of file [ServiceInitialisationType.cpp](#).

34.123.4.9 const std::string stdair::ServiceInitialisationType::describe ( ) const  
[virtual]

Give a description of the structure (e.g., "Not yet initialised", "File parsing" or "Built-in sample BOM").

Implements [stdair::StructAbstract](#).

Definition at line 131 of file [ServiceInitialisationType.cpp](#).

34.123.4.10 bool stdair::ServiceInitialisationType::operator== ( const  
EN\_ServiceInitialisationType & iType ) const

Comparison operator.

Definition at line 139 of file [ServiceInitialisationType.cpp](#).

34.123.4.11 void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline,  
inherited]

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.123.4.12 virtual void stdair::StructAbstract::fromStream ( std::istream & ioIn )  
[inline, virtual, inherited]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/basic/ServiceInitialisationType.hpp](#)
- [stdair/basic/ServiceInitialisationType.cpp](#)

## 34.124 swift::SKeymap Class Reference

The readline keymap wrapper.

```
#include <stdair/ui/cmdline/SReadline.hpp>
```

### Public Member Functions

- [SKeymap](#) (bool PrintableBound=false)  
*Creates a new keymap.*
- [SKeymap](#) (Keymap Pattern)  
*Creates a new keymap which is a copy of Pattern.*
- [~SKeymap](#) ()  
*Frees the allocated keymap.*
- void [Bind](#) (int Key, KeyCallback Callback)  
*Binds the given key to a function.*
- void [Unbind](#) (int Key)  
*Unbinds the given key.*
- [SKeymap](#) (const [SKeymap](#) &rhs)  
*Copy constructor.*
- [SKeymap](#) & [operator=](#) (const [SKeymap](#) &rhs)  
*operator=*

### Friends

- class [SReadline](#)

#### 34.124.1 Detailed Description

The readline keymap wrapper.

Attention: It is not thread safe! Supports: key binding, key unbinding

Definition at line 307 of file [SReadline.hpp](#).

## 34.124.2 Constructor &amp; Destructor Documentation

34.124.2.1 `swift::SKeymap::SKeymap ( bool PrintableBound = false ) [inline, explicit]`

Creates a new keymap.

**Parameters**

<i>Printable-Bound</i>	if true - the printable characters are bound if false - the keymap is empty
------------------------	---

Definition at line 319 of file [SReadline.hpp](#).

34.124.2.2 `swift::SKeymap::SKeymap ( Keymap Pattern ) [inline, explicit]`

Creates a new keymap which is a copy of Pattern.

**Parameters**

<i>Pattern</i>	A keymap to be copied.
----------------	------------------------

Definition at line 342 of file [SReadline.hpp](#).

34.124.2.3 `swift::SKeymap::~~SKeymap ( ) [inline]`

Frees the allocated keymap.

Definition at line 354 of file [SReadline.hpp](#).

34.124.2.4 `swift::SKeymap::SKeymap ( const SKeymap & rhs ) [inline]`

Copy constructor.

**Parameters**

<i>rhs</i>	Right hand side object of <a href="#">SKeymap</a>
------------	---

Definition at line 395 of file [SReadline.hpp](#).

## 34.124.3 Member Function Documentation

34.124.3.1 `void swift::SKeymap::Bind ( int Key, KeyCallback Callback ) [inline]`

Binds the given key to a function.

**Parameters**

<i>Key</i>	A key to be bound
<i>Callback</i>	A function to be called when the Key is pressed

Definition at line 366 of file [SReadline.hpp](#).

34.124.3.2 void swift::SKeymap::Unbind ( int Key ) [inline]

Unbinds the given key.

#### Parameters

<i>Key</i> A key to be unbound
--------------------------------

Definition at line 381 of file [SReadline.hpp](#).

34.124.3.3 SKeymap& swift::SKeymap::operator= ( const SKeymap & rhs ) [inline]

operator=

#### Parameters

<i>rhs</i> Right hand side object of <a href="#">SKeymap</a>
--

Definition at line 407 of file [SReadline.hpp](#).

### 34.124.4 Friends And Related Function Documentation

34.124.4.1 friend class SReadline [friend]

Definition at line 415 of file [SReadline.hpp](#).

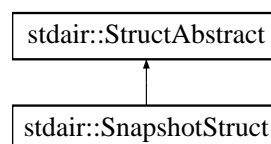
The documentation for this class was generated from the following file:

- [stdair/ui/cmdline/SReadline.hpp](#)

### 34.125 stdair::SnapshotStruct Struct Reference

```
#include <stdair/bom/SnapshotStruct.hpp>
```

Inheritance diagram for stdair::SnapshotStruct:



#### Public Member Functions

- const [AirlineCode\\_T](#) & getAirlineCode () const
- const [DateTime\\_T](#) & getSnapshotTime () const



- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [describe](#) () const
- [SnapshotStruct](#) (const [AirlineCode\\_T](#) &, const [DateTime\\_T](#) &)
- [SnapshotStruct](#) (const [SnapshotStruct](#) &)
- [~SnapshotStruct](#) ()

#### 34.125.1 Detailed Description

Structure holding the elements of a snapshot .

Definition at line 19 of file [SnapshotStruct.hpp](#).

#### 34.125.2 Constructor & Destructor Documentation

##### 34.125.2.1 stdair::SnapshotStruct::SnapshotStruct ( const [AirlineCode\\_T](#) & *iAirlineCode*, const [DateTime\\_T](#) & *iSnapshotTime* )

Constructor.

Definition at line 26 of file [SnapshotStruct.cpp](#).

##### 34.125.2.2 stdair::SnapshotStruct::SnapshotStruct ( const [SnapshotStruct](#) & *iSnapshot* )

Copy constructor.

Definition at line 19 of file [SnapshotStruct.cpp](#).

##### 34.125.2.3 stdair::SnapshotStruct::~~SnapshotStruct ( )

Destructor.

Definition at line 32 of file [SnapshotStruct.cpp](#).

#### 34.125.3 Member Function Documentation

##### 34.125.3.1 const [AirlineCode\\_T](#)& stdair::SnapshotStruct::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 23 of file [SnapshotStruct.hpp](#).

##### 34.125.3.2 const [DateTime\\_T](#)& stdair::SnapshotStruct::getSnapshotTime ( ) const [inline]

Get the snapshot action time.

Definition at line 28 of file [SnapshotStruct.hpp](#).

## 34.126 stdair::SQLDatabaseConnectionImpossibleException Class Reference

34.125.3.3 void stdair::SnapshotStruct::toStream ( std::ostream & *ioOut* ) const

Dump a Business Object into an output stream.

### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 36 of file [SnapshotStruct.cpp](#).

References [describe\(\)](#).

34.125.3.4 void stdair::SnapshotStruct::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object from an input stream.

### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 41 of file [SnapshotStruct.cpp](#).

34.125.3.5 const std::string stdair::SnapshotStruct::describe ( ) const [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 45 of file [SnapshotStruct.cpp](#).

Referenced by [toStream\(\)](#).

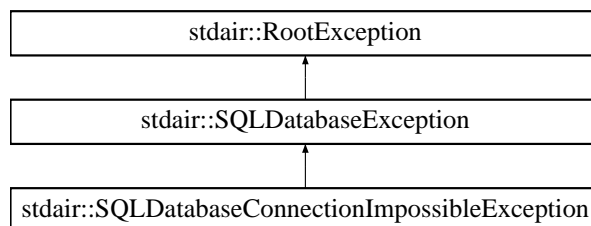
The documentation for this struct was generated from the following files:

- [stdair/bom/SnapshotStruct.hpp](#)
- [stdair/bom/SnapshotStruct.cpp](#)

## 34.126 stdair::SQLDatabaseConnectionImpossibleException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::SQLDatabaseConnectionImpossibleException:



## 34.126 `stdair::SQLDatabaseConnectionImpossibleException` Class Reference 327

### Public Member Functions

- [SQLDatabaseConnectionImpossibleException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

### Protected Attributes

- std::string [\\_what](#)

### 34.126.1 Detailed Description

Database connection.

Definition at line 188 of file [stdair\\_exceptions.hpp](#).

### 34.126.2 Constructor & Destructor Documentation

34.126.2.1 `stdair::SQLDatabaseConnectionImpossibleException::SQLDatabaseConnectionImpossibleException ( const std::string & iWhat ) [inline]`

Constructor.

Definition at line 191 of file [stdair\\_exceptions.hpp](#).

### 34.126.3 Member Function Documentation

34.126.3.1 `const char* stdair::RootException::what ( ) const throw () [inline, inherited]`

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

### 34.126.4 Member Data Documentation

34.126.4.1 `std::string stdair::RootException::_what [protected, inherited]`

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

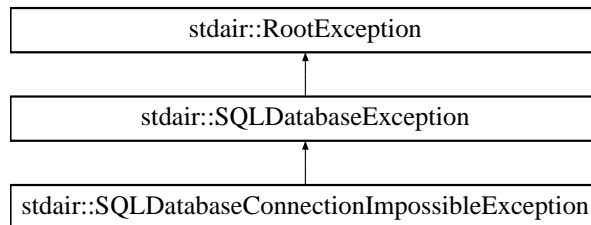
The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.127 stdair::SQLDatabaseException Class Reference

```
#include <stdair/stdair_exceptions.hpp>
```

Inheritance diagram for stdair::SQLDatabaseException:



## Public Member Functions

- [SQLDatabaseException](#) (const std::string &iWhat)
- const char \* [what](#) () const throw ()

## Protected Attributes

- std::string [\\_what](#)

## 34.127.1 Detailed Description

Database.

Definition at line 173 of file [stdair\\_exceptions.hpp](#).

## 34.127.2 Constructor &amp; Destructor Documentation

34.127.2.1 [stdair::SQLDatabaseException::SQLDatabaseException \( const std::string &iWhat \)](#)  
[inline]

Constructor.

Definition at line 176 of file [stdair\\_exceptions.hpp](#).

## 34.127.3 Member Function Documentation

34.127.3.1 [const char\\* stdair::RootException::what \( \) const throw \(\)](#) [inline, inherited]

Give the details of the exception.

Definition at line 38 of file [stdair\\_exceptions.hpp](#).

References [stdair::RootException::\\_what](#).

## 34.127.4 Member Data Documentation

## 34.127.4.1 std::string stdair::RootException::\_what [protected, inherited]

Details for the exception.

Definition at line 46 of file [stdair\\_exceptions.hpp](#).

Referenced by [stdair::RootException::what\(\)](#).

The documentation for this class was generated from the following file:

- [stdair/stdair\\_exceptions.hpp](#)

## 34.128 swift::SReadline Class Reference

The readline library wrapper.

```
#include <stdair/ui/cmdline/SReadline.hpp>
```

## Public Member Functions

- [SReadline](#) (const size\_t Limit=DefaultHistoryLimit)  
*Constructs the object, sets the completion function.*
- [SReadline](#) (const std::string &historyFileName, const size\_t Limit=DefaultHistoryLimit)  
*Constructs the object, sets the completion function, loads history.*
- [~SReadline](#) ()  
*Saves the session history (if the file name was provided) and destroys the object.*
- std::string [GetLine](#) (const std::string &Prompt)  
*Gets a single line from a user.*
- template<typename Container >  
std::string [GetLine](#) (const std::string &Prompt, Container &ReadTokens)  
*Gets a single line from a user.*
- template<typename Container >  
std::string [GetLine](#) (const std::string &Prompt, Container &ReadTokens, bool &BreakOut)  
*Gets a single line from a user.*
- std::string [GetLine](#) (const std::string &Prompt, bool &BreakOut)  
*Gets a single line from a user.*
- template<typename ContainerType >  
void [GetHistory](#) (ContainerType &Container)  
*Fills the given container with the current history list.*
- bool [SaveHistory](#) (std::ostream &OS)  
*Saves the history to the given file stream.*
- bool [SaveHistory](#) (const std::string &FileName)

*Saves the history to the given file.*

- void [ClearHistory](#) ()

*Clears the history. Does not affect the file where the previous session history is saved.*

- bool [LoadHistory](#) (std::istream &IS)

*Loads a history from a file stream.*

- bool [LoadHistory](#) (const std::string &FileName)

*Loads a history from the given file.*

- template<typename ContainerType >  
void [RegisterCompletions](#) (const ContainerType &Container)

*Allows to register custom completers.*

- void [SetKeymap](#) (SKeymap &NewKeymap)

*Sets the given keymap.*

### 34.128.1 Detailed Description

The readline library wrapper.

Attention: It is not thread safe! Supports: editing, history, custom completers

Definition at line 424 of file [SReadline.hpp](#).

### 34.128.2 Constructor & Destructor Documentation

**34.128.2.1** `swift::SReadline::SReadline ( const size_t Limit = DefaultHistoryLimit )  
[inline]`

Constructs the object, sets the completion function.

#### Parameters

<i>Limit</i>	History size
--------------	--------------

Definition at line 431 of file [SReadline.hpp](#).

**34.128.2.2** `swift::SReadline::SReadline ( const std::string & historyFileName, const size_t Limit = DefaultHistoryLimit ) [inline]`

Constructs the object, sets the completion function, loads history.

#### Parameters

<i>historyFile- Name</i>	File name to load history from
<i>Limit</i>	History size

Definition at line 446 of file [SReadline.hpp](#).

References [LoadHistory\(\)](#).

### 34.128.2.3 swift::SReadline::~~SReadline ( ) [inline]

Saves the session history (if the file name was provided) and destroys the object.

Definition at line 462 of file [SReadline.hpp](#).

References [SaveHistory\(\)](#).

## 34.128.3 Member Function Documentation

### 34.128.3.1 std::string swift::SReadline::GetLine ( const std::string & *Prompt* ) [inline]

Gets a single line from a user.

#### Parameters

<i>Prompt</i>	A printed prompt
---------------	------------------

#### Returns

A string which was actually inputed

Definition at line 473 of file [SReadline.hpp](#).

Referenced by [GetLine\(\)](#).

### 34.128.3.2 template<typename Container > std::string swift::SReadline::GetLine ( const std::string & *Prompt*, Container & *ReadTokens* ) [inline]

Gets a single line from a user.

#### Parameters

<i>Prompt</i>	A printed prompt
<i>ReadTokens</i>	A user inputed string splitted into tokens. The container is cleared first

#### Returns

A string which was actually inputed

Definition at line 487 of file [SReadline.hpp](#).

References [GetLine\(\)](#).

### 34.128.3.3 template<typename Container > std::string swift::SReadline::GetLine ( const std::string & *Prompt*, Container & *ReadTokens*, bool & *BreakOut* ) [inline]

Gets a single line from a user.

#### Parameters

<i>Prompt</i>	A printed prompt
<i>BreakOut</i>	it is set to true if the EOF found
<i>ReadTokens</i>	A user inputed string splitted into tokens. The container is cleared first

### Returns

A string which was actually inputed

Definition at line 502 of file [SReadline.hpp](#).

References [GetLine\(\)](#).

34.128.3.4 `std::string swift::SReadline::GetLine ( const std::string & Prompt, bool & BreakOut )`  
`[inline]`

Gets a single line from a user.

### Parameters

<i>Prompt</i>	A printed prompt
<i>BreakOut</i>	it is set to true if the EOF found

### Returns

A string which was actually inputed

Definition at line 517 of file [SReadline.hpp](#).

34.128.3.5 `template<typename ContainerType > void swift::SReadline::GetHistory (`  
`ContainerType & Container )` `[inline]`

Fills the given container with the current history list.

Does not clear the given container

Definition at line 552 of file [SReadline.hpp](#).

34.128.3.6 `bool swift::SReadline::SaveHistory ( std::ostream & OS )` `[inline]`

Saves the history to the given file stream.

### Parameters

<i>OS</i>	output file stream
-----------	--------------------

### Returns

true if success

Definition at line 564 of file [SReadline.hpp](#).

Referenced by [SaveHistory\(\)](#), and [~SReadline\(\)](#).

34.128.3.7 `bool swift::SReadline::SaveHistory ( const std::string & FileName )` `[inline]`

Saves the history to the given file.

### Parameters

<i>FileName</i>	File name to save the history to
-----------------	----------------------------------



**Returns**

true if success

Definition at line 581 of file [SReadline.hpp](#).

References [SaveHistory\(\)](#).

**34.128.3.8 void swift::SReadline::ClearHistory ( ) [inline]**

Clears the history. Does not affect the file where the previous session history is saved.

Definition at line 594 of file [SReadline.hpp](#).

Referenced by [LoadHistory\(\)](#).

**34.128.3.9 bool swift::SReadline::LoadHistory ( std::istream & *IS* ) [inline]**

Loads a history from a file stream.

**Parameters**

<i>IS</i> Input file stream
-----------------------------

**Returns**

true if success

Definition at line 604 of file [SReadline.hpp](#).

References [ClearHistory\(\)](#).

Referenced by [LoadHistory\(\)](#), and [SReadline\(\)](#).

**34.128.3.10 bool swift::SReadline::LoadHistory ( const std::string & *FileName* ) [inline]**

Loads a history from the given file.

**Parameters**

<i>FileName</i> File name to be load from
---

**Returns**

true if success

Definition at line 629 of file [SReadline.hpp](#).

References [LoadHistory\(\)](#).

**34.128.3.11 template<typename ContainerType > void swift::SReadline::RegisterCompletions ( const ContainerType & *Container* ) [inline]**

Allows to register custom completers.

Supports a special keyword: file. It means to use the standard file name completer.

For example the given container elements could be as follows:

- command1 opt1
- command1 opt2 file
- command2
- command2 opt1

Each container element must describe a single possible command line. The container element must have a conversion to std::string operator.

#### Parameters

<i>Container</i>	A container which has all the user possible commands.
------------------	---

Definition at line 658 of file [SReadline.hpp](#).

34.128.3.12 void swift::SReadline::SetKeymap ( SKeymap & NewKeymap ) [inline]

Sets the given keymap.

#### Parameters

<i>NewKeymap</i>	The keymap that should be used from now.
------------------	--

Definition at line 675 of file [SReadline.hpp](#).

The documentation for this class was generated from the following file:

- stdair/ui/cmdline/[SReadline.hpp](#)

## 34.129 stdair::STDAIR\_Service Class Reference

Interface for the STDAIR Services.

```
#include <stdair/STDAIR_Service.hpp>
```

#### Public Member Functions

- [STDAIR\\_Service](#) ()  
*Default constructor.*
- [STDAIR\\_Service](#) (const [BasLogParams](#) &)  
*Constructor.*
- [STDAIR\\_Service](#) (const [BasLogParams](#) &, const [BasDBParams](#) &)  
*Constructor.*
- [~STDAIR\\_Service](#) ()  
*Destructor.*

- void [buildSampleBom](#) ()
- void [buildDummyInventory](#) (const [CabinCapacity\\_T](#) &iCabinCapacity)
- void [buildSampleTravelSolutionForPricing](#) ([TravelSolutionList\\_T](#) &)
- void [buildSampleTravelSolutions](#) ([TravelSolutionList\\_T](#) &)
- [BookingRequestStruct](#) [buildSampleBookingRequest](#) (const bool isForCRS=false)
- const [Count\\_T](#) & [getExpectedTotalNumberOfEventsToBeGenerated](#) () const
- const [Count\\_T](#) & [getExpectedTotalNumberOfEventsToBeGenerated](#) (const [EventType::EN\\_](#) - [EventType](#) &) const
- const [Count\\_T](#) & [getActualTotalNumberOfEventsToBeGenerated](#) () const
- const [Count\\_T](#) & [getActualTotalNumberOfEventsToBeGenerated](#) (const [EventType::EN\\_](#) - [EventType](#) &) const
- [ProgressStatusSet](#) [popEvent](#) ([EventStruct](#) &) const
- bool [isQueueDone](#) () const
- void [reset](#) () const
- std::string [jsonExport](#) (const [AirlineCode\\_T](#) &, const [FlightNumber\\_T](#) &, const [Date\\_T](#) &iDepartureDate) const
- std::string [list](#) (const [AirlineCode\\_T](#) &iAirlineCode="all", const [FlightNumber\\_T](#) &iFlightNumber=0) const
- std::string [listAirportPairDateRange](#) () const
- bool [check](#) (const [AirlineCode\\_T](#) &, const [FlightNumber\\_T](#) &, const [Date\\_T](#) &iDepartureDate) const
- bool [check](#) (const [AirportCode\\_T](#) &, const [AirportCode\\_T](#) &, const [Date\\_T](#) &iDepartureDate) const
- std::string [csvDisplay](#) () const
- std::string [csvDisplay](#) (const [AirlineCode\\_T](#) &, const [FlightNumber\\_T](#) &, const [Date\\_T](#) &iDepartureDate) const
- std::string [csvDisplay](#) (const [TravelSolutionList\\_T](#) &) const
- std::string [csvDisplay](#) (const [AirportCode\\_T](#) &, const [AirportCode\\_T](#) &, const [Date\\_T](#) &iDepartureDate) const
- [BomRoot](#) & [getBomRoot](#) () const  
*Get a reference on the [BomRoot](#) object.*
- [EventQueue](#) & [getEventQueue](#) () const  
*Get a reference on the [EventQueue](#) object.*
- [BasLogParams](#) [getLogParams](#) () const
- const [BasDBParams](#) & [getDBParams](#) () const
- const [ServiceInitialisationType](#) & [getServiceInitialisationType](#) () const

#### 34.129.1 Detailed Description

Interface for the STDAIR Services.

Definition at line 43 of file [STDAIR\\_Service.hpp](#).

### 34.129.2 Constructor & Destructor Documentation

#### 34.129.2.1 stdair::STDAIR\_Service::STDAIR\_Service ( )

Default constructor.

Definition at line 43 of file [STDAIR\\_Service.cpp](#).

#### 34.129.2.2 stdair::STDAIR\_Service::STDAIR\_Service ( const BasLogParams & iLogParams )

Constructor.

The init() method is called; see the corresponding documentation for more details.

Moreover, a reference on an output stream is given, so that log outputs can be directed onto that stream.

##### Parameters

in	const	<a href="#">BasLogParams</a> & Parameters for the output log stream.
----	-------	--

Definition at line 59 of file [STDAIR\\_Service.cpp](#).

#### 34.129.2.3 stdair::STDAIR\_Service::STDAIR\_Service ( const BasLogParams & iLogParams, const BasDBParams & iDBParams )

Constructor.

The init() method is called; see the corresponding documentation for more details.

A reference on an output stream is given, so that log outputs can be directed onto that stream.

Moreover, database connection parameters are given, so that database events can use the corresponding access.

##### Parameters

in	const	<a href="#">BasLogParams</a> & Parameters for the output log stream.
in	const	<a href="#">BasDBParams</a> & Parameters for the database session.

Definition at line 73 of file [STDAIR\\_Service.cpp](#).

#### 34.129.2.4 stdair::STDAIR\_Service::~~STDAIR\_Service ( )

Destructor.

Definition at line 91 of file [STDAIR\\_Service.cpp](#).

### 34.129.3 Member Function Documentation

#### 34.129.3.1 void stdair::STDAIR\_Service::buildSampleBom ( )

Build a sample BOM tree, and attach it to the [BomRoot](#) instance.

As for now, a single sample BOM tree is built, with objects for all the simulator-related components, i.e.:

- schedule (e.g., AirSched),
- inventory (e.g., AirInv),
- revenue management (e.g., RMOL),
- pricing (e.g., SimFQT),
- revenue accounting (e.g., AirRAC),
- demand generation (e.g., TraDemGen),
- customer choice (e.g., TravelCCM),
- event manager (e.g., SEvMgr)

Most of the inventories just contain one flight. One of those flights has two legs (and therefore three segments).

Definition at line 164 of file [STDAIR\\_Service.cpp](#).

#### 34.129.3.2 void stdair::STDAIR\_Service::buildDummyInventory ( const CabinCapacity\_T & iCabinCapacity )

Build a dummy inventory, containing a dummy flight-date with a single leg-cabin and some virtual booking classes. That structure is the bare minimum required to perform an optimisation on a leg-cabin.

As for now, that method is called only by RMOL. Indeed, the revenue management component (RMOL) needs very basic set up in order to perform optimisation at leg-level. Hence, there are:

- a dedicated inventory ('XX'),
- the corresponding flight-date (#9999, departing 01/01/1900),
- a leg-date (departing and arriving from/to 'XXX' airport),
- 
- a leg-cabin ('X').
- 

Most of the data is dummy because RMOL uses only the cabin capacity from that part of the BOM tree.

#### Parameters

<i>const</i> CabinCapacity_T& Cabin capacity for revenue management optimisation.
---

Definition at line 178 of file [STDAIR\\_Service.cpp](#).

34.129.3.3 void stdair::STDAIR\_Service::buildSampleTravelSolutionForPricing (   
 TravelSolutionList\_T & ioTravelSolutionList )

Build a sample list of travel solutions.

As of now (March 2011), that list is made of the following travel solutions:

- BA9
- LHR-SYD
- 2011-06-10

#### Parameters

<i>TravelSolutionList_T</i> &	Sample list of travel solution structures. It should be given empty. It is altered with the returned sample.
-------------------------------	--

Definition at line 192 of file [STDAIR\\_Service.cpp](#).

34.129.3.4 void stdair::STDAIR\_Service::buildSampleTravelSolutions ( TravelSolutionList\_T  
& ioTravelSolutionList )

Build a sample list of travel solutions.

As of now (March 2011), that list is made of the following travel solutions:

- BA9
- LHR-SYD
- 2011-06-10
- Q
- WTP: 900
- Change fee: 20; Non refundable; Saturday night stay

#### Parameters

<i>TravelSolutionList_T</i> &	Sample list of travel solution structures. It should be given empty. It is altered with the returned sample.
-------------------------------	--

Definition at line 199 of file [STDAIR\\_Service.cpp](#).

34.129.3.5 BookingRequestStruct stdair::STDAIR\_Service::buildSampleBookingRequest (   
 const bool isForCRS = false )

Build a sample booking request structure.

As of now (March 2011), the sample booking request is made of the following parameters:

- Return trip (inbound): LHR-SYD (POS: LHR, Channel: DN),
- Departing 10-JUN-2011 around 8:00, staying 7 days
- Requested on 15-MAY-2011 at 10:00
- Economy cabin, 3 persons, FF member
- WTP: 1000.0 EUR
- Dis-utility: 100.0 EUR/hour

As of now (March 2011), the CRS-related booking request is made of the following parameters:

- Return trip (inbound): SIN-BKK (POS: SIN, Channel: IN),
- Departing 30-JAN-2010 around 10:00, staying 7 days
- Requested on 22-JAN-2010 at 10:00
- Economy cabin, 3 persons, FF member
- WTP: 1000.0 EUR
- Dis-utility: 100.0 EUR/hour

#### Parameters

<code>const</code> bool isForCRS Whether the sample booking request is for CRS.
---

#### Returns

[BookingRequestStruct](#)& Sample booking request structure.

Definition at line 206 of file [STDAIR\\_Service.cpp](#).

```
34.129.3.6  const Count_T & stdair::STDAIR_
            Service::getExpectedTotalNumberOfEventsToBeGenerated ( )
            const
```

Get the expected number of events to be generated.

The `getExpectedTotalNbOfEvents()` method is called on the underlying [EventQueue](#) object, which keeps track of that number.

#### Note

That number usually corresponds to an expectation (i.e., the mean value of a random distribution), and may not be accurate. The actual number will be known after calling the `generateFirstEvents()` method for each event type (e.g., booking request, optimisation notification, etc).

#### Returns

`const Count_T` Expected number of events to be generated.

Definition at line 442 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::getExpectedTotalNbOfEvents\(\)](#).

```
34.129.3.7  const Count_T & stdair::STDAIR_-
            Service::getExpectedTotalNumberOfEventsToBeGenerated (
            const EventType::EN_EventType & iType ) const
```

Get the expected number of events to be generated for the given event type.

The `getExpectedTotalNbOfEvents()` method is called on the underlying [EventQueue](#) object, which keeps track of that number.

#### Note

That number usually corresponds to an expectation (i.e., the mean value of a random distribution), and may not be accurate. The actual number will be known after calling the `generateFirstEvents()` method for each event type (e.g., booking request, optimisation notification, etc).

#### Parameters

<i>const</i> EventType_T& Event type for which the number is calculated.
--

#### Returns

*const* Count\_T& Expected number of events to be generated.

Definition at line 461 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::getExpectedTotalNbOfEvents\(\)](#).

```
34.129.3.8  const Count_T & stdair::STDAIR_-
            Service::getActualTotalNumberOfEventsToBeGenerated ( )
            const
```

Get the actual number of events to be generated for all the demand streams.

The `getActualTotalNbOfEvents()` method is called on the underlying [EventQueue](#) object, which keeps track of that number.

#### Note

That number is being known after calling the `generateFirstEvents()` method.

#### Returns

*const* Count\_T& Expected number of events to be generated.

Definition at line 480 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::getActualTotalNbOfEvents\(\)](#).



34.129.3.9 **const Count\_T & stdair::STDAIR\_Service::getActualTotalNumberOfEventsToBeGenerated ( const EventType::EN\_EventType & *iType* ) const**

Get the actual number of events to be generated for the given event type.

The `getActualTotalNbOfEvents()` method is called on the underlying [EventQueue](#) object, which keeps track of that number.

#### Note

That number is being known after calling the `generateFirstEvents()` method.

#### Parameters

<i>const</i> EventType_T& Event type for which the number is calculated.
--

#### Returns

const Count\_T& Expected number of events to be generated.

Definition at line 499 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::getActualTotalNbOfEvents\(\)](#).

34.129.3.10 **ProgressStatusSet stdair::STDAIR\_Service::popEvent ( EventStruct & ioEventStruct ) const**

Pop the next coming (in time) event, and remove it from the event queue.

- The next coming (in time) event corresponds to the event having the earliest date-time stamp. In other words, it is the first/front element of the event queue.
- That (first) event/element is then removed from the event queue
- The progress status is updated for the corresponding event type.

#### Returns

[EventStruct](#) A copy of the event structure, which comes first in time from within the event queue.

Definition at line 517 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::popEvent\(\)](#).

34.129.3.11 **bool stdair::STDAIR\_Service::isQueueDone ( ) const**

States whether the event queue has reached the end.

For now, that method states whether or not the event queue is empty.

Definition at line 531 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::isQueueDone\(\)](#).

## 34.129.3.12 void stdair::STDAIR\_Service::reset ( ) const

Reset the context of the demand streams for another demand generation without having to reparse the demand input file.

Definition at line 548 of file [STDAIR\\_Service.cpp](#).

References [stdair::EventQueue::reset\(\)](#).

## 34.129.3.13 std::string stdair::STDAIR\_Service::jsonExport ( const AirlineCode\_T &amp; iAirlineCode, const FlightNumber\_T &amp; iFlightNumber, const Date\_T &amp; iDepartureDate ) const

Recursively dump, in the returned string and in JSON format, the flight-date corresponding to the parameters given as input.

**Parameters**

<i>const</i>	AirlineCode_T& Airline code of the flight to dump.
<i>const</i>	FlightNumber_T& Flight number of the flight to dump.
<i>const</i>	Date_T& Departure date of the flight to dump.

**Returns**

std::string Output string in which the BOM tree is JSON-ified.

Definition at line 218 of file [STDAIR\\_Service.cpp](#).

References [stdair::BomRetriever::retrieveFlightDateFromKeySet\(\)](#).

## 34.129.3.14 std::string stdair::STDAIR\_Service::list ( const AirlineCode\_T &amp; iAirlineCode = "all", const FlightNumber\_T &amp; iFlightNumber = 0 ) const

Display the list of flight-dates (contained within the BOM tree) corresponding to the parameters given as input.

**Parameters**

<i>const</i>	AirlineCode& Airline for which the flight-dates should be displayed. If set to "all" (the default), all the inventories will be displayed.
<i>const</i>	FlightNumber_T& Flight number for which all the departure dates should be displayed. If set to 0 (the default), all the flight numbers will be displayed.

**Returns**

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 265 of file [STDAIR\\_Service.cpp](#).

## 34.129.3.15 std::string stdair::STDAIR\_Service::listAirportPairDateRange ( ) const

Display the list of airports pairs and date ranges (contained within the BOM tree)

**Parameters**

<code>std::ostream&amp;</code>	Output stream in which the airport pairs and date ranges are logged/dumped.
--------------------------------	---

Definition at line 283 of file [STDAIR\\_Service.cpp](#).

34.129.3.16 `bool stdair::STDAIR_Service::check ( const AirlineCode_T & iAirlineCode, const FlightNumber_T & iFlightNumber, const Date_T & iDepartureDate ) const`

Check whether the given flight-date is a valid one.

**Parameters**

<code>const stdair::AirlineCode_T</code>	& Airline code of the flight to check.
<code>const stdair::FlightNumber_T</code>	& Flight number of the flight to check.
<code>const stdair::Date_T</code>	& Departure date of the flight to check.

**Returns**

`bool` Whether or not the given flight date is valid.

Definition at line 300 of file [STDAIR\\_Service.cpp](#).

References [stdair::BomRetriever::retrieveFlightDateFromKeySet\(\)](#).

34.129.3.17 `bool stdair::STDAIR_Service::check ( const AirportCode_T & ioOrigin, const AirportCode_T & ioDestination, const Date_T & iDepartureDate ) const`

Check whether the given couple airportpair-date is a valid one.

**Parameters**

<code>const stdair::AirportCode_T</code>	& Origin airport of the fare rule to check.
<code>const stdair::AirportCode_T</code>	& Destination airport of the fare rule to check.
<code>const stdair::Date_T</code>	& Departure date of the fare rule to check.

**Returns**

`bool` Whether or not the given airportpair-date couple is a valid one.

Definition at line 322 of file [STDAIR\\_Service.cpp](#).

References [stdair::BomRetriever::retrieveDatePeriodListFromKeySet\(\)](#).

34.129.3.18 `std::string stdair::STDAIR_Service::csvDisplay ( ) const`

Recursively display (dump in the returned string) the objects of the BOM tree.

**Returns**

`std::string` Output string in which the BOM tree is logged/dumped.

Definition at line 345 of file [STDAIR\\_Service.cpp](#).

Referenced by [csvDisplay\(\)](#).

34.129.3.19 `std::string stdair::STDAIR_Service::csvDisplay ( const AirlineCode_T & iAirlineCode, const FlightNumber_T & iFlightNumber, const Date_T & iDepartureDate ) const`

Recursively display (dump in the returned string) the flight-date corresponding to the parameters given as input.

#### Parameters

<i>const</i>	AirlineCode_T& Airline code of the flight to display.
<i>const</i>	FlightNumber_T& Flight number of the flight to display.
<i>const</i>	Date_T& Departure date of the flight to display.

#### Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 363 of file [STDAIR\\_Service.cpp](#).

References [csvDisplay\(\)](#), and [stdair::BomRetriever::retrieveFlightDateFromKeySet\(\)](#).

34.129.3.20 `std::string stdair::STDAIR_Service::csvDisplay ( const TravelSolutionList_T & iTravelSolutionList ) const`

Display (dump in the returned string) the full list of travel solution structures.

#### Returns

std::string Output string in which the list of travel solutions is logged/dumped.

Definition at line 394 of file [STDAIR\\_Service.cpp](#).

References [csvDisplay\(\)](#).

34.129.3.21 `std::string stdair::STDAIR_Service::csvDisplay ( const AirportCode_T & iOrigin, const AirportCode_T & iDestination, const Date_T & iDepartureDate ) const`

Recursively display (dump in the returned string) the fare-rules corresponding to the parameters given as input.

#### Parameters

<i>const</i>	AirportCode_T& Origin airport of the fare-rules to display
<i>const</i>	AirportCode_T& Destination airport of the fare-rules to display.
<i>const</i>	Date_T& Departure date of the fare-rules to display.

#### Returns

std::string Output string in which the BOM tree is logged/dumped.

Definition at line 405 of file [STDAIR\\_Service.cpp](#).

References [csvDisplay\(\)](#), and [stdair::BomRetriever::retrieveDatePeriodListFromKeySet\(\)](#).

#### 34.129.3.22 BomRoot & stdair::STDAIR\_Service::getBomRoot ( ) const

Get a reference on the [BomRoot](#) object.

If the service context has not been initialised, that method throws an exception (failing assertion).

##### Returns

[BomRoot](#)& Reference on the [BomRoot](#).

Definition at line 126 of file [STDAIR\\_Service.cpp](#).

#### 34.129.3.23 EventQueue & stdair::STDAIR\_Service::getEventQueue ( ) const

Get a reference on the [EventQueue](#) object.

If the service context has not been initialised, that method throws an exception (failing assertion).

##### Returns

[EventQueue](#)& Reference on the [EventQueue](#).

Definition at line 134 of file [STDAIR\\_Service.cpp](#).

#### 34.129.3.24 BasLogParams stdair::STDAIR\_Service::getLogParams ( ) const

Get the log parameters.

##### Returns

[BasLogParams](#) Copy of the structure holding the log parameters.

Definition at line 142 of file [STDAIR\\_Service.cpp](#).

#### 34.129.3.25 const BasDBParams & stdair::STDAIR\_Service::getDBParams ( ) const

Get the database parameters.

##### Returns

const [BasDBParams](#)& Reference on the structure holding the database parameters.

Definition at line 147 of file [STDAIR\\_Service.cpp](#).

#### 34.129.3.26 const ServiceInitialisationType & stdair::STDAIR\_Service::getServiceInitialisationType ( ) const

Get the type of initialisation (e.g., not yet, file parsing, sample BOM) which the component (owner of the current [STDAIR\\_Service](#) instance) has gone through.

**Returns**

const [ServiceInitialisationType](#)& Reference on the type of initialisation (enumeration structure).

Definition at line 156 of file [STDAIR\\_Service.cpp](#).

The documentation for this class was generated from the following files:

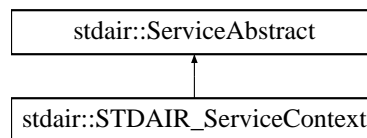
- [stdair/STDAIR\\_Service.hpp](#)
- [stdair/service/STDAIR\\_Service.cpp](#)

**34.130 stdair::STDAIR\_ServiceContext Class Reference**

Class holding the context of the Stdair services.

```
#include <stdair/service/STDAIR_ServiceContext.hpp>
```

Inheritance diagram for stdair::STDAIR\_ServiceContext:

**Public Member Functions**

- virtual void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)

**Friends**

- class [STDAIR\\_Service](#)
- class [FacSTDAIRServiceContext](#)

**34.130.1 Detailed Description**

Class holding the context of the Stdair services.

Definition at line 25 of file [STDAIR\\_ServiceContext.hpp](#).

**34.130.2 Member Function Documentation**

**34.130.2.1** virtual void stdair::ServiceAbstract::toStream ( std::ostream & *ioOut* ) const  
[inline, virtual, inherited]

Dump a Business Object into an output stream.

**Parameters**

<i>ostream</i> & the output stream.
-------------------------------------

Definition at line 28 of file [ServiceAbstract.hpp](#).

Referenced by [operator<<\(\)](#).

34.130.2.2 virtual void stdair::ServiceAbstract::fromStream ( std::istream & *ioIn* )  
[inline, virtual, inherited]

Read a Business Object from an input stream.

**Parameters**

<i>istream</i> & the input stream.
------------------------------------

Definition at line 35 of file [ServiceAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

**34.130.3 Friends And Related Function Documentation**

34.130.3.1 friend class **STDAIR\_Service** [friend]

The [STDAIR\\_Service](#) class should be the sole class to get access to ServiceContext content: general users do not want to bother with a context interface.

Definition at line 29 of file [STDAIR\\_ServiceContext.hpp](#).

34.130.3.2 friend class **FacSTDAIRServiceContext** [friend]

Definition at line 30 of file [STDAIR\\_ServiceContext.hpp](#).

The documentation for this class was generated from the following file:

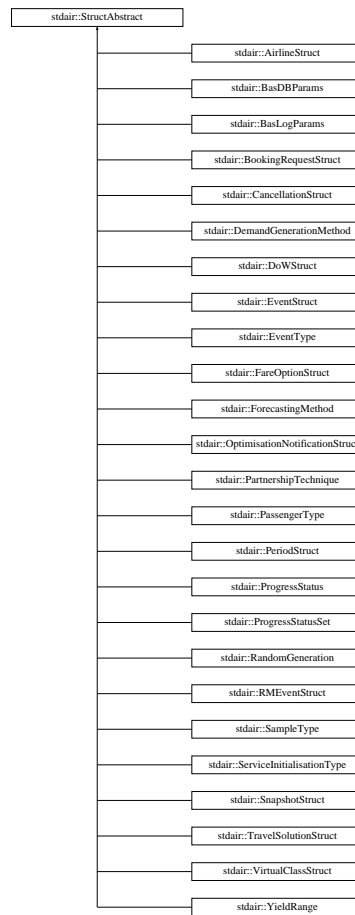
- stdair/service/[STDAIR\\_ServiceContext.hpp](#)

**34.131 stdair::StructAbstract Struct Reference**

Base class for the light structures.

```
#include <stdair/basic/StructAbstract.hpp>
```

Inheritance diagram for stdair::StructAbstract:



### Public Member Functions

- virtual [~StructAbstract](#) ()
- void [toStream](#) (std::ostream &ioOut) const
- virtual void [fromStream](#) (std::istream &ioIn)
- virtual const std::string [describe](#) () const =0

### Protected Member Functions

- [StructAbstract](#) ()

### 34.131.1 Detailed Description

Base class for the light structures.

Definition at line 16 of file [StructAbstract.hpp](#).



## 34.131.2 Constructor &amp; Destructor Documentation

34.131.2.1 `virtual stdair::StructAbstract::~~StructAbstract ( ) [inline, virtual]`

Destructor.

Definition at line 22 of file [StructAbstract.hpp](#).

34.131.2.2 `stdair::StructAbstract::StructAbstract ( ) [inline, protected]`

Protected Default Constructor to ensure this class is abstract.

Definition at line 49 of file [StructAbstract.hpp](#).

## 34.131.3 Member Function Documentation

34.131.3.1 `void stdair::StructAbstract::toStream ( std::ostream & ioOut ) const [inline]`

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Reimplemented in [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 29 of file [StructAbstract.hpp](#).

References [describe\(\)](#).

Referenced by [operator<<\(\)](#).

34.131.3.2 `virtual void stdair::StructAbstract::fromStream ( std::istream & ioln ) [inline, virtual]`

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented in [stdair::ProgressStatusSet](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Definition at line 38 of file [StructAbstract.hpp](#).

Referenced by [operator>>\(\)](#).

34.131.3.3 `virtual const std::string stdair::StructAbstract::describe ( ) const [pure virtual]`

Display of the structure.

Implemented in [stdair::BasDBParams](#), [stdair::BasLogParams](#), [stdair::DemandGenerationMethod](#), [stdair::EventType](#), [stdair::ForecastingMethod](#), [stdair::PartnershipTechnique](#), [stdair::PassengerType](#), [stdair::ProgressStatus](#), [stdair::ProgressStatusSet](#), [stdair::RandomGeneration](#), [stdair::SampleType](#), [stdair::ServiceInitialisationType](#), [stdair::YieldRange](#), [stdair::AirlineStruct](#), [stdair::BookingRequestStruct](#), [stdair::CancellationStruct](#), [stdair::DoWStruct](#), [stdair::EventStruct](#), [stdair::FareOptionStruct](#), [stdair::OptimisationNotificationStruct](#), [stdair::PeriodStruct](#), [stdair::RMEventStruct](#), [stdair::SnapshotStruct](#), [stdair::TravelSolutionStruct](#), and [stdair::VirtualClassStruct](#).

Referenced by [toStream\(\)](#).

The documentation for this struct was generated from the following file:

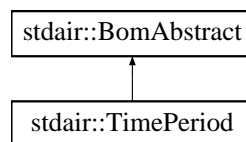
- [stdair/basic/StructAbstract.hpp](#)

## 34.132 stdair::TimePeriod Class Reference

Class representing the actual attributes for a fare time-period.

```
#include <stdair/bom/TimePeriod.hpp>
```

Inheritance diagram for `stdair::TimePeriod`:



### Public Types

- typedef [TimePeriodKey](#) [Key\\_T](#)

### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [Time\\_T](#) & [getTimeRangeStart](#) () const
- const [Time\\_T](#) & [getTimeRangeEnd](#) () const
- bool [isDepartureTimeValid](#) (const [Time\\_T](#) &) const

### Protected Member Functions

- [TimePeriod](#) (const [Key\\_T](#) &)
- virtual [~TimePeriod](#) ()

### Protected Attributes

- [Key\\_T\\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T\\_holderMap](#)

### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.132.1 Detailed Description

Class representing the actual attributes for a fare time-period.

Definition at line 18 of file [TimePeriod.hpp](#).

#### 34.132.2 Member Typedef Documentation

##### 34.132.2.1 typedef TimePeriodKey stdair::TimePeriod::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 27 of file [TimePeriod.hpp](#).

#### 34.132.3 Constructor & Destructor Documentation

##### 34.132.3.1 stdair::TimePeriod::TimePeriod ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 28 of file [TimePeriod.cpp](#).

##### 34.132.3.2 stdair::TimePeriod::~~TimePeriod ( ) [protected, virtual]

Destructor.

Definition at line 33 of file [TimePeriod.cpp](#).

#### 34.132.4 Member Function Documentation

34.132.4.1 void stdair::TimePeriod::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [TimePeriod.hpp](#).

References [toString\(\)](#).

34.132.4.2 void stdair::TimePeriod::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 46 of file [TimePeriod.hpp](#).

34.132.4.3 std::string stdair::TimePeriod::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [TimePeriod.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

34.132.4.4 const std::string stdair::TimePeriod::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 57 of file [TimePeriod.hpp](#).

References [\\_key](#), and [stdair::TimePeriodKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.132.4.5 const Key\_T& stdair::TimePeriod::getKey ( ) const [inline]

Get the primary key (time range start, time range end).

Definition at line 66 of file [TimePeriod.hpp](#).

References [\\_key](#).

**34.132.4.6 BomAbstract\* const stdair::TimePeriod::getParent ( ) const** [inline]

Get a reference on the parent object instance.

Definition at line 73 of file [TimePeriod.hpp](#).

References [\\_parent](#).

**34.132.4.7 const HolderMap\_T& stdair::TimePeriod::getHolderMap ( ) const** [inline]

Get a reference on the children holder.

Definition at line 80 of file [TimePeriod.hpp](#).

References [\\_holderMap](#).

**34.132.4.8 const Time\_T& stdair::TimePeriod::getTimeRangeStart ( ) const** [inline]

Get the time range start.

Definition at line 87 of file [TimePeriod.hpp](#).

References [\\_key](#), and [stdair::TimePeriodKey::getTimeRangeStart\(\)](#).

Referenced by [isDepartureTimeValid\(\)](#).

**34.132.4.9 const Time\_T& stdair::TimePeriod::getTimeRangeEnd ( ) const** [inline]

Get the time range end

Definition at line 94 of file [TimePeriod.hpp](#).

References [\\_key](#), and [stdair::TimePeriodKey::getTimeRangeEnd\(\)](#).

Referenced by [isDepartureTimeValid\(\)](#).

**34.132.4.10 bool stdair::TimePeriod::isDepartureTimeValid ( const Time\_T & *iFlightTime* ) const**

Check if the given departure time is included in the departure period of the segment path.

Definition at line 45 of file [TimePeriod.cpp](#).

References [getTimeRangeEnd\(\)](#), [getTimeRangeStart\(\)](#), and [STDAIR\\_LOG\\_DEBUG](#).

**34.132.5 Friends And Related Function Documentation****34.132.5.1 friend class FacBom** [friend]

Definition at line 19 of file [TimePeriod.hpp](#).

**34.132.5.2 friend class FacBomManager** [friend]

Definition at line 20 of file [TimePeriod.hpp](#).

## 34.132.6 Member Data Documentation

## 34.132.6.1 Key\_T stdair::TimePeriod::\_key [protected]

Primary key (flight number and departure date).

Definition at line 132 of file [TimePeriod.hpp](#).

Referenced by [describeKey\(\)](#), [getKey\(\)](#), [getTimeRangeEnd\(\)](#), and [getTimeRangeStart\(\)](#).

## 34.132.6.2 BomAbstract\* stdair::TimePeriod::\_parent [protected]

Pointer on the parent class ([Inventory](#)).

Definition at line 137 of file [TimePeriod.hpp](#).

Referenced by [getParent\(\)](#).

## 34.132.6.3 HolderMap\_T stdair::TimePeriod::\_holderMap [protected]

Map holding the children.

Definition at line 142 of file [TimePeriod.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

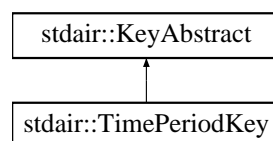
- [stdair/bom/TimePeriod.hpp](#)
- [stdair/bom/TimePeriod.cpp](#)

## 34.133 stdair::TimePeriodKey Struct Reference

Key of time-period.

```
#include <stdair/bom/TimePeriodKey.hpp>
```

Inheritance diagram for stdair::TimePeriodKey:



## Public Member Functions

- [TimePeriodKey](#) (const [Time\\_T](#) &, const [Time\\_T](#) &)
- [TimePeriodKey](#) (const [TimePeriodKey](#) &)
- [~TimePeriodKey](#) ()
- const [Time\\_T](#) & [getTimeRangeStart](#) () const
- const [Time\\_T](#) & [getTimeRangeEnd](#) () const

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.133.1 Detailed Description

Key of time-period.

Definition at line 15 of file [TimePeriodKey.hpp](#).

#### 34.133.2 Constructor & Destructor Documentation

34.133.2.1 `stdair::TimePeriodKey::TimePeriodKey ( const Time_T & iTimeRangeStart, const Time_T & iTimeRangeEnd )`

Main constructor.

Definition at line 21 of file [TimePeriodKey.cpp](#).

34.133.2.2 `stdair::TimePeriodKey::TimePeriodKey ( const TimePeriodKey & iKey )`

Copy constructor.

Definition at line 28 of file [TimePeriodKey.cpp](#).

34.133.2.3 `stdair::TimePeriodKey::~~TimePeriodKey ( )`

Destructor.

Definition at line 34 of file [TimePeriodKey.cpp](#).

#### 34.133.3 Member Function Documentation

34.133.3.1 `const Time_T& stdair::TimePeriodKey::getTimeRangeStart ( ) const`  
[inline]

Get the time period start.

Definition at line 35 of file [TimePeriodKey.hpp](#).

Referenced by [stdair::TimePeriod::getTimeRangeStart\(\)](#).

34.133.3.2 `const Time_T& stdair::TimePeriodKey::getTimeRangeEnd ( ) const` [inline]

Get the time period end.

Definition at line 42 of file [TimePeriodKey.hpp](#).

Referenced by [stdair::TimePeriod::getTimeRangeEnd\(\)](#).

34.133.3.3 void stdair::TimePeriodKey::toStream ( std::ostream & *ioOut* ) const  
[virtual]

Dump a Business Object Key into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 38 of file [TimePeriodKey.cpp](#).

References [toString\(\)](#).

34.133.3.4 void stdair::TimePeriodKey::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object Key from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 43 of file [TimePeriodKey.cpp](#).

34.133.3.5 const std::string stdair::TimePeriodKey::toString ( ) const [virtual]

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 47 of file [TimePeriodKey.cpp](#).

Referenced by [stdair::TimePeriod::describeKey\(\)](#), and [toStream\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/TimePeriodKey.hpp](#)
- [stdair/bom/TimePeriodKey.cpp](#)

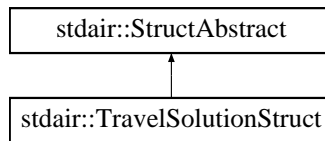
## 34.134 stdair::TravelSolutionStruct Struct Reference

Structure holding the elements of a travel solution.

```
#include <stdair/bom/TravelSolutionStruct.hpp>
```

Inheritance diagram for stdair::TravelSolutionStruct:





### Public Member Functions

- const [SegmentPath\\_T](#) & [getSegmentPath](#) () const
- const [ClassAvailabilityMapHolder\\_T](#) & [getClassAvailabilityMapHolder](#) () const
- const [ClassYieldMapHolder\\_T](#) & [getClassYieldMapHolder](#) () const
- const [BidPriceVectorHolder\\_T](#) & [getBidPriceVectorHolder](#) () const
- const [ClassBpvMapHolder\\_T](#) & [getClassBpvMapHolder](#) () const
- const [FareOptionList\\_T](#) & [getFareOptionList](#) () const
- [FareOptionList\\_T](#) & [getFareOptionListRef](#) ()
- const [FareOptionStruct](#) & [getChosenFareOption](#) () const
- void [addSegment](#) (const std::string &)
- void [addClassAvailabilityMap](#) (const [ClassAvailabilityMap\\_T](#) &)
- void [addClassYieldMap](#) (const [ClassYieldMap\\_T](#) &)
- void [addBidPriceVector](#) (const [BidPriceVector\\_T](#) &)
- void [addClassBpvMap](#) (const [ClassBpvMap\\_T](#) &)
- void [addFareOption](#) (const [FareOptionStruct](#) &)
- void [setChosenFareOption](#) (const [FareOptionStruct](#) & iChosenFO)
- void [toStream](#) (std::ostream & ioOut) const
- void [fromStream](#) (std::istream & ioIn)
- const std::string [describe](#) () const
- const std::string [display](#) () const
- [TravelSolutionStruct](#) ()
- [~TravelSolutionStruct](#) ()

#### 34.134.1 Detailed Description

Structure holding the elements of a travel solution.

Definition at line 24 of file [TravelSolutionStruct.hpp](#).

#### 34.134.2 Constructor & Destructor Documentation

##### 34.134.2.1 stdair::TravelSolutionStruct::TravelSolutionStruct ( )

Default constructor.

Definition at line 15 of file [TravelSolutionStruct.cpp](#).

#### 34.134.2.2 stdair::TravelSolutionStruct::~~TravelSolutionStruct ( )

Destructor.

Definition at line 19 of file [TravelSolutionStruct.cpp](#).

#### 34.134.3 Member Function Documentation

##### 34.134.3.1 const SegmentPath\_T& stdair::TravelSolutionStruct::getSegmentPath ( ) const [inline]

Get the segment path.

Definition at line 28 of file [TravelSolutionStruct.hpp](#).

##### 34.134.3.2 const ClassAvailabilityMapHolder\_T& stdair::TravelSolutionStruct::getClassAvailabilityMapHolder ( ) const [inline]

Get the holder of availabilities.

Definition at line 33 of file [TravelSolutionStruct.hpp](#).

##### 34.134.3.3 const ClassYieldMapHolder\_T& stdair::TravelSolutionStruct::getClassYieldMapHolder ( ) const [inline]

Get the holder of yields.

Definition at line 38 of file [TravelSolutionStruct.hpp](#).

##### 34.134.3.4 const BidPriceVectorHolder\_T& stdair::TravelSolutionStruct::getBidPriceVectorHolder ( ) const [inline]

Get the holder of bid price vectors.

Definition at line 43 of file [TravelSolutionStruct.hpp](#).

##### 34.134.3.5 const ClassBpvMapHolder\_T& stdair::TravelSolutionStruct::getClassBpvMapHolder ( ) const [inline]

Get the holder of class - bid price reference.

Definition at line 48 of file [TravelSolutionStruct.hpp](#).

##### 34.134.3.6 const FareOptionList\_T& stdair::TravelSolutionStruct::getFareOptionList ( ) const [inline]

Get the list of fare options.

Definition at line 53 of file [TravelSolutionStruct.hpp](#).

34.134.3.7 **FareOptionList\_T**& stdair::TravelSolutionStruct::getFareOptionListRef ( )  
[inline]

Get the non-const list of fare options.

Definition at line 58 of file [TravelSolutionStruct.hpp](#).

34.134.3.8 **const FareOptionStruct**& stdair::TravelSolutionStruct::getChosenFareOption ( )  
**const** [inline]

Get the chosen fare option.

Definition at line 63 of file [TravelSolutionStruct.hpp](#).

34.134.3.9 **void** stdair::TravelSolutionStruct::addSegment ( **const** std::string & *iKey* )

Add a segment key to the segment path.

Definition at line 133 of file [TravelSolutionStruct.cpp](#).

34.134.3.10 **void** stdair::TravelSolutionStruct::addClassAvailabilityMap ( **const**  
**ClassAvailabilityMap\_T** & *iMap* )

Add a class availability map.

Definition at line 139 of file [TravelSolutionStruct.cpp](#).

34.134.3.11 **void** stdair::TravelSolutionStruct::addClassYieldMap ( **const** **ClassYieldMap\_T** &  
*iMap* )

Add a class yield map.

Definition at line 145 of file [TravelSolutionStruct.cpp](#).

34.134.3.12 **void** stdair::TravelSolutionStruct::addBidPriceVector ( **const** **BidPriceVector\_T** &  
*iBpv* )

Add a bid price vector.

Definition at line 151 of file [TravelSolutionStruct.cpp](#).

34.134.3.13 **void** stdair::TravelSolutionStruct::addClassBpvMap ( **const** **ClassBpvMap\_T** &  
*iMap* )

Add a class bpv reference map.

Definition at line 157 of file [TravelSolutionStruct.cpp](#).

34.134.3.14 **void** stdair::TravelSolutionStruct::addFareOption ( **const** **FareOptionStruct** &  
*iFareOption* )

Add a fare option.

Definition at line 163 of file [TravelSolutionStruct.cpp](#).

34.134.3.15 void stdair::TravelSolutionStruct::setChosenFareOption ( const  
FareOptionStruct & iChosenFO ) [inline]

Set the chosen fare option.

Definition at line 89 of file [TravelSolutionStruct.hpp](#).

34.134.3.16 void stdair::TravelSolutionStruct::toStream ( std::ostream & ioOut ) const

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 23 of file [TravelSolutionStruct.cpp](#).

References [describe\(\)](#).

34.134.3.17 void stdair::TravelSolutionStruct::fromStream ( std::istream & ioIn )  
[virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 28 of file [TravelSolutionStruct.cpp](#).

34.134.3.18 const std::string stdair::TravelSolutionStruct::describe ( ) const [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 32 of file [TravelSolutionStruct.cpp](#).

References [stdair::FareOptionStruct::describe\(\)](#), [stdair::BomKeyManager::extractKeys\(\)](#),  
and [stdair::ParsedKey::toString\(\)](#).

Referenced by [toStream\(\)](#).

34.134.3.19 const std::string stdair::TravelSolutionStruct::display ( ) const

Display of the structure.

Definition at line 74 of file [TravelSolutionStruct.cpp](#).

References [stdair::FareOptionStruct::display\(\)](#), [stdair::BomKeyManager::extractKeys\(\)](#),  
and [stdair::ParsedKey::toString\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/TravelSolutionStruct.hpp](#)
- [stdair/bom/TravelSolutionStruct.cpp](#)

### 34.135 soci::type\_conversion< stdair::AirlineStruct > Struct Template Reference

```
#include <stdair/dbadaptor/DbAirline.hpp>
```

#### Public Types

- typedef values [base\\_type](#)

#### Static Public Member Functions

- static void [from\\_base](#) (values const &iAirlineValues, indicator, [stdair::AirlineStruct](#) &ioAirline)
- static void [to\\_base](#) (const [stdair::AirlineStruct](#) &iAirline, values &ioAirlineValues, indicator &ioIndicator)

#### 34.135.1 Detailed Description

```
template<>struct soci::type_conversion< stdair::AirlineStruct >
```

Specify how the AirlineStruct struct can be converted to (resp. from) values stored into (resp. retrieved from) database, using the SOCI framework.

Definition at line [25](#) of file [DbAirline.hpp](#).

#### 34.135.2 Member Typedef Documentation

##### 34.135.2.1 typedef values soci::type\_conversion< stdair::AirlineStruct >::base\_type

Definition at line [27](#) of file [DbAirline.hpp](#).

#### 34.135.3 Member Function Documentation

##### 34.135.3.1 void soci::type\_conversion< stdair::AirlineStruct >::from\_base ( values const & iAirlineValues, indicator , stdair::AirlineStruct & ioAirline ) [static]

Fill an Airline object from the database values.

Definition at line [17](#) of file [DbAirline.cpp](#).

References [stdair::AirlineStruct::setAirlineCode\(\)](#), and [stdair::AirlineStruct::setAirlineName\(\)](#).

34.135.3.2 `void soci::type_conversion< stdair::AirlineStruct >::to_base ( const  
stdair::AirlineStruct & iAirline, values & ioAirlineValues, indicator & ioIndicator )  
[static]`

Fill the database values from an Airline object.

Definition at line 30 of file [DbAirline.cpp](#).

References [stdair::AirlineStruct::getAirlineCode\(\)](#), and [stdair::AirlineStruct::getAirlineName\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/dbadaptor/DbAirline.hpp](#)
- [stdair/dbadaptor/DbAirline.cpp](#)

### 34.136 `TypeWithSize< size >` Class Template Reference

```
#include <stdair/basic/float_utils_google.hpp>
```

#### Public Types

- typedef void [UInt](#)

#### 34.136.1 Detailed Description

```
template<size_t size>class TypeWithSize< size >
```

Definition at line 54 of file [float\\_utils\\_google.hpp](#).

#### 34.136.2 Member Typedef Documentation

34.136.2.1 `template<size_t size> typedef void TypeWithSize< size >::UInt`

Definition at line 58 of file [float\\_utils\\_google.hpp](#).

The documentation for this class was generated from the following file:

- [stdair/basic/float\\_utils\\_google.hpp](#)

### 34.137 `TypeWithSize< 4 >` Class Template Reference

```
#include <stdair/basic/float_utils_google.hpp>
```

#### Public Types

- typedef int [Int](#)
- typedef unsigned int [UInt](#)

## 34.137.1 Detailed Description

`template<>class TypeWithSize< 4 >`

Definition at line 63 of file [float\\_utils\\_google.hpp](#).

## 34.137.2 Member Typedef Documentation

34.137.2.1 `typedef int TypeWithSize< 4 >::Int`

Definition at line 69 of file [float\\_utils\\_google.hpp](#).

34.137.2.2 `typedef unsigned int TypeWithSize< 4 >::UInt`

Definition at line 70 of file [float\\_utils\\_google.hpp](#).

The documentation for this class was generated from the following file:

- [stdair/basic/float\\_utils\\_google.hpp](#)

34.138 `TypeWithSize< 8 >` Class Template Reference

```
#include <stdair/basic/float_utils_google.hpp>
```

## Public Types

- `typedef long long` [Int](#)
- `typedef unsigned long long` [UInt](#)

## 34.138.1 Detailed Description

`template<>class TypeWithSize< 8 >`

Definition at line 75 of file [float\\_utils\\_google.hpp](#).

## 34.138.2 Member Typedef Documentation

34.138.2.1 `typedef long long TypeWithSize< 8 >::Int`

Definition at line 81 of file [float\\_utils\\_google.hpp](#).

34.138.2.2 `typedef unsigned long long TypeWithSize< 8 >::UInt`

Definition at line 82 of file [float\\_utils\\_google.hpp](#).

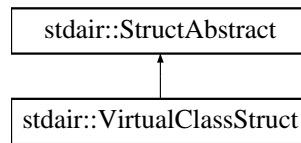
The documentation for this class was generated from the following file:

- [stdair/basic/float\\_utils\\_google.hpp](#)

## 34.139 stdair::VirtualClassStruct Struct Reference

```
#include <stdair/bom/VirtualClassStruct.hpp>
```

Inheritance diagram for stdair::VirtualClassStruct:



## Public Member Functions

- const [Yield\\_T](#) & [getYield](#) () const
- const [MeanValue\\_T](#) & [getMean](#) () const
- const [StdDevValue\\_T](#) & [getStdDev](#) () const
- const [BookingLimit\\_T](#) & [getCumulatedBookingLimit](#) () const
- const [ProtectionLevel\\_T](#) & [getCumulatedProtection](#) () const
- const [GeneratedDemandVector\\_T](#) & [getGeneratedDemandVector](#) () const
- void [setYield](#) (const [Yield\\_T](#) &iYield)
- void [setMean](#) (const [MeanValue\\_T](#) &iMean)
- void [setStdDev](#) (const [StdDevValue\\_T](#) &iStdDev)
- void [setCumulatedBookingLimit](#) (const [BookingLimit\\_T](#) &iBL)
- void [setCumulatedProtection](#) (const [ProtectionLevel\\_T](#) &iP)
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [describe](#) () const
- [VirtualClassStruct](#) (const [VirtualClassStruct](#) &)
- [VirtualClassStruct](#) ([BookingClass](#) &)
- [~VirtualClassStruct](#) ()

## 34.139.1 Detailed Description

Structure holding the elements of a virtual class.

Definition at line 23 of file [VirtualClassStruct.hpp](#).

## 34.139.2 Constructor &amp; Destructor Documentation

## 34.139.2.1 stdair::VirtualClassStruct::VirtualClassStruct ( const VirtualClassStruct &amp; iVC )

Constructor.

Definition at line 19 of file [VirtualClassStruct.cpp](#).



**34.139.2.2 stdair::VirtualClassStruct::VirtualClassStruct ( BookingClass & ioBookingClass )**

Default copy constructor.

Definition at line 25 of file [VirtualClassStruct.cpp](#).

**34.139.2.3 stdair::VirtualClassStruct::~~VirtualClassStruct ( )**

Destructor.

Definition at line 30 of file [VirtualClassStruct.cpp](#).

**34.139.3 Member Function Documentation****34.139.3.1 const Yield\_T& stdair::VirtualClassStruct::getYield ( ) const [inline]**

Get the yield (average price paid for that virtual class).

Definition at line 27 of file [VirtualClassStruct.hpp](#).

Referenced by [stdair::LegCabin::displayVirtualClassList\(\)](#).

**34.139.3.2 const MeanValue\_T& stdair::VirtualClassStruct::getMean ( ) const [inline]**

Get the mean value of the demand distribution.

Definition at line 32 of file [VirtualClassStruct.hpp](#).

**34.139.3.3 const StdDevValue\_T& stdair::VirtualClassStruct::getStdDev ( ) const [inline]**

Get the standard deviation of the demand distribution.

Definition at line 37 of file [VirtualClassStruct.hpp](#).

**34.139.3.4 const BookingLimit\_T& stdair::VirtualClassStruct::getCumulatedBookingLimit ( ) const [inline]**

Get the booking limit of the class.

Definition at line 42 of file [VirtualClassStruct.hpp](#).

Referenced by [stdair::LegCabin::displayVirtualClassList\(\)](#).

**34.139.3.5 const ProtectionLevel\_T& stdair::VirtualClassStruct::getCumulatedProtection ( ) const [inline]**

Get the protection level of the class.

Definition at line 47 of file [VirtualClassStruct.hpp](#).

Referenced by [stdair::LegCabin::displayVirtualClassList\(\)](#).

34.139.3.6 **const GeneratedDemandVector\_T &**  
**stdair::VirtualClassStruct::getGeneratedDemandVector ( )**  
**const**

Get the generated demand sample vector for Monte-Carlo method.

Definition at line 53 of file [VirtualClassStruct.cpp](#).

References [stdair::BookingClass::getGeneratedDemandVector\(\)](#).

34.139.3.7 **void stdair::VirtualClassStruct::setYield ( const Yield\_T & iYield )** **[inline]**

Set the yield (average price paid for that virtual class).

Definition at line 57 of file [VirtualClassStruct.hpp](#).

34.139.3.8 **void stdair::VirtualClassStruct::setMean ( const MeanValue\_T & iMean )**  
**[inline]**

Set the mean value of the demand distribution.

Definition at line 62 of file [VirtualClassStruct.hpp](#).

34.139.3.9 **void stdair::VirtualClassStruct::setStdDev ( const StdDevValue\_T & iStdDev )**  
**[inline]**

Set the standard deviation of the demand distribution.

Definition at line 67 of file [VirtualClassStruct.hpp](#).

34.139.3.10 **void stdair::VirtualClassStruct::setCumulatedBookingLimit ( const**  
**BookingLimit\_T & iBL )** **[inline]**

Set the booking limit of the class.

Definition at line 72 of file [VirtualClassStruct.hpp](#).

34.139.3.11 **void stdair::VirtualClassStruct::setCumulatedProtection ( const**  
**ProtectionLevel\_T & iP )** **[inline]**

Set the protection level of the class.

Definition at line 77 of file [VirtualClassStruct.hpp](#).

34.139.3.12 **void stdair::VirtualClassStruct::toStream ( std::ostream & ioOut ) const**

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 35 of file [VirtualClassStruct.cpp](#).

References [describe\(\)](#).

34.139.3.13 void stdair::VirtualClassStruct::fromStream ( std::istream & *ioIn* ) [virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream</i> & the input stream.
------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 40 of file [VirtualClassStruct.cpp](#).

34.139.3.14 const std::string stdair::VirtualClassStruct::describe ( ) const [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 44 of file [VirtualClassStruct.cpp](#).

Referenced by [toStream\(\)](#).

The documentation for this struct was generated from the following files:

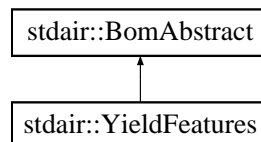
- [stdair/bom/VirtualClassStruct.hpp](#)
- [stdair/bom/VirtualClassStruct.cpp](#)

## 34.140 stdair::YieldFeatures Class Reference

Class representing the actual attributes for a yield date-period.

```
#include <stdair/bom/YieldFeatures.hpp>
```

Inheritance diagram for stdair::YieldFeatures:



#### Public Types

- typedef [YieldFeaturesKey](#) Key\_T

#### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const

- const [Key\\_T](#) & [getKey](#) () const
- [BomAbstract](#) \*const [getParent](#) () const
- const [HolderMap\\_T](#) & [getHolderMap](#) () const
- const [CabinCode\\_T](#) & [getCabinCode](#) () const
- const [TripType\\_T](#) & [getTripType](#) () const
- bool [isTripTypeValid](#) (const [TripType\\_T](#) &) const

#### Protected Member Functions

- [YieldFeatures](#) (const [Key\\_T](#) &)
- virtual [~YieldFeatures](#) ()

#### Protected Attributes

- [Key\\_T \\_key](#)
- [BomAbstract](#) \* [\\_parent](#)
- [HolderMap\\_T \\_holderMap](#)

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.140.1 Detailed Description

Class representing the actual attributes for a yield date-period.

Definition at line 19 of file [YieldFeatures.hpp](#).

#### 34.140.2 Member Typedef Documentation

##### 34.140.2.1 typedef YieldFeaturesKey stdair::YieldFeatures::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 28 of file [YieldFeatures.hpp](#).

#### 34.140.3 Constructor & Destructor Documentation

##### 34.140.3.1 stdair::YieldFeatures::YieldFeatures ( const Key\_T & iKey ) [protected]

Main constructor.

Definition at line 29 of file [YieldFeatures.cpp](#).

### 34.140.3.2 stdair::YieldFeatures::~~YieldFeatures ( ) [protected, virtual]

Destructor.

Definition at line 34 of file [YieldFeatures.cpp](#).

## 34.140.4 Member Function Documentation

### 34.140.4.1 void stdair::YieldFeatures::toStream ( std::ostream & *ioOut* ) const [inline, virtual]

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 37 of file [YieldFeatures.hpp](#).

References [toString\(\)](#).

### 34.140.4.2 void stdair::YieldFeatures::fromStream ( std::istream & *ioIn* ) [inline, virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 46 of file [YieldFeatures.hpp](#).

### 34.140.4.3 std::string stdair::YieldFeatures::toString ( ) const [virtual]

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 38 of file [YieldFeatures.cpp](#).

References [describeKey\(\)](#).

Referenced by [toStream\(\)](#).

### 34.140.4.4 const std::string stdair::YieldFeatures::describeKey ( ) const [inline]

Get a string describing the key.

Definition at line 57 of file [YieldFeatures.hpp](#).

References [\\_key](#), and [stdair::YieldFeaturesKey::toString\(\)](#).

Referenced by [toString\(\)](#).

34.140.4.5 **const Key\_T& stdair::YieldFeatures::getKey ( ) const** [\[inline\]](#)

Get the primary key (trip type, cabin code).

Definition at line 66 of file [YieldFeatures.hpp](#).

References [\\_key](#).

34.140.4.6 **BomAbstract\* const stdair::YieldFeatures::getParent ( ) const** [\[inline\]](#)

Get a reference on the parent object instance.

Definition at line 73 of file [YieldFeatures.hpp](#).

References [\\_parent](#).

34.140.4.7 **const HolderMap\_T& stdair::YieldFeatures::getHolderMap ( ) const**  
[\[inline\]](#)

Get a reference on the children holder.

Definition at line 80 of file [YieldFeatures.hpp](#).

References [\\_holderMap](#).

34.140.4.8 **const CabinCode\_T& stdair::YieldFeatures::getCabinCode ( ) const**  
[\[inline\]](#)

Get the cabin code.

Definition at line 87 of file [YieldFeatures.hpp](#).

References [\\_key](#), and [stdair::YieldFeaturesKey::getCabinCode\(\)](#).

34.140.4.9 **const TripType\_T& stdair::YieldFeatures::getTripType ( ) const** [\[inline\]](#)

Get the trip type.

Definition at line 94 of file [YieldFeatures.hpp](#).

References [\\_key](#), and [stdair::YieldFeaturesKey::getTripType\(\)](#).

Referenced by [isTripTypeValid\(\)](#).

34.140.4.10 **bool stdair::YieldFeatures::isTripTypeValid ( const TripType\_T &  
iBookingRequestTripType ) const**

Check whether the fare rule trip type corresponds to the booking request trip type.

Definition at line 46 of file [YieldFeatures.cpp](#).

References [getTripType\(\)](#), [stdair::TRIP\\_TYPE\\_INBOUND](#), [stdair::TRIP\\_TYPE\\_OUTBOUND](#), and [stdair::TRIP\\_TYPE\\_ROUND\\_TRIP](#).

#### 34.140.5 Friends And Related Function Documentation

#### 34.140.5.1 friend class FacBom [friend]

Definition at line 20 of file [YieldFeatures.hpp](#).

#### 34.140.5.2 friend class FacBomManager [friend]

Definition at line 21 of file [YieldFeatures.hpp](#).

### 34.140.6 Member Data Documentation

#### 34.140.6.1 Key\_T stdair::YieldFeatures::\_key [protected]

Primary key (flight number and departure date).

Definition at line 137 of file [YieldFeatures.hpp](#).

Referenced by [describeKey\(\)](#), [getCabinCode\(\)](#), [getKey\(\)](#), and [getTripType\(\)](#).

#### 34.140.6.2 BomAbstract\* stdair::YieldFeatures::\_parent [protected]

Pointer on the parent class.

Definition at line 142 of file [YieldFeatures.hpp](#).

Referenced by [getParent\(\)](#).

#### 34.140.6.3 HolderMap\_T stdair::YieldFeatures::\_holderMap [protected]

Map holding the children.

Definition at line 147 of file [YieldFeatures.hpp](#).

Referenced by [getHolderMap\(\)](#).

The documentation for this class was generated from the following files:

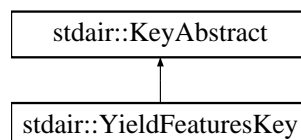
- [stdair/bom/YieldFeatures.hpp](#)
- [stdair/bom/YieldFeatures.cpp](#)

### 34.141 stdair::YieldFeaturesKey Struct Reference

Key of date-period.

```
#include <stdair/bom/YieldFeaturesKey.hpp>
```

Inheritance diagram for stdair::YieldFeaturesKey:



## Public Member Functions

- [YieldFeaturesKey](#) (const [TripType\\_T](#) &, const [CabinCode\\_T](#) &)
- [YieldFeaturesKey](#) (const [YieldFeaturesKey](#) &)
- [~YieldFeaturesKey](#) ()
- const [TripType\\_T](#) & [getTripType](#) () const
- const [CabinCode\\_T](#) & [getCabinCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

## 34.141.1 Detailed Description

Key of date-period.

Definition at line 18 of file [YieldFeaturesKey.hpp](#).

## 34.141.2 Constructor &amp; Destructor Documentation

**34.141.2.1 stdair::YieldFeaturesKey::YieldFeaturesKey ( const [TripType\\_T](#) & *iTripType*, const [CabinCode\\_T](#) & *iCabin* )**

Main constructor.

Definition at line 21 of file [YieldFeaturesKey.cpp](#).

**34.141.2.2 stdair::YieldFeaturesKey::YieldFeaturesKey ( const [YieldFeaturesKey](#) & *iKey* )**

Copy constructor.

Definition at line 27 of file [YieldFeaturesKey.cpp](#).

**34.141.2.3 stdair::YieldFeaturesKey::~~YieldFeaturesKey ( )**

Destructor.

Definition at line 32 of file [YieldFeaturesKey.cpp](#).

## 34.141.3 Member Function Documentation

**34.141.3.1 const [TripType\\_T](#) & stdair::YieldFeaturesKey::getTripType ( ) const** `[inline]`

Get the fare trip type.

Definition at line 44 of file [YieldFeaturesKey.hpp](#).

Referenced by [stdair::YieldFeatures::getTripType\(\)](#).



34.141.3.2 `const CabinCode_T& stdair::YieldFeaturesKey::getCabinCode ( ) const`  
`[inline]`

Get the cabin.

Definition at line 51 of file [YieldFeaturesKey.hpp](#).

Referenced by [stdair::YieldFeatures::getCabinCode\(\)](#).

34.141.3.3 `void stdair::YieldFeaturesKey::toStream ( std::ostream & ioOut ) const`  
`[virtual]`

Dump a Business Object Key into an output stream.

#### Parameters

<code>ostream&amp;</code> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 36 of file [YieldFeaturesKey.cpp](#).

References [toString\(\)](#).

34.141.3.4 `void stdair::YieldFeaturesKey::fromStream ( std::istream & ioIn )` `[virtual]`

Read a Business Object Key from an input stream.

#### Parameters

<code>istream&amp;</code> the input stream.
---

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 41 of file [YieldFeaturesKey.cpp](#).

34.141.3.5 `const std::string stdair::YieldFeaturesKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key. That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 45 of file [YieldFeaturesKey.cpp](#).

Referenced by [stdair::YieldFeatures::describeKey\(\)](#), and [toStream\(\)](#).

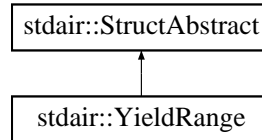
The documentation for this struct was generated from the following files:

- [stdair/bom/YieldFeaturesKey.hpp](#)
- [stdair/bom/YieldFeaturesKey.cpp](#)

## 34.142 stdair::YieldRange Class Reference

```
#include <stdair/basic/YieldRange.hpp>
```

Inheritance diagram for stdair::YieldRange:



#### Public Member Functions

- [YieldRange](#) ()
- [YieldRange](#) (const [YieldRange](#) &)
- [YieldRange](#) (const [Yield\\_T](#) iUpperYield)
- [YieldRange](#) (const [Yield\\_T](#) iUpperYield, const [Yield\\_T](#) iAverageYield)
- [YieldRange](#) (const [Yield\\_T](#) iUpperYield, const [Yield\\_T](#) iAverageYield, const [Yield\\_T](#) iLowerYield)
- virtual [~YieldRange](#) ()
- [Yield\\_T](#) [getUpperYield](#) () const
- [Yield\\_T](#) [getAverageYield](#) () const
- [Yield\\_T](#) [getLowerYield](#) () const
- void [setUpperYield](#) (const [Yield\\_T](#) iUpperYield)
- void [setAverageYield](#) (const [Yield\\_T](#) iAverageYield)
- void [setLowerYield](#) (const [Yield\\_T](#) iLowerYield)
- void [toStream](#) (std::ostream &) const
- void [fromStream](#) (std::istream &)
- const std::string [describe](#) () const

#### 34.142.1 Detailed Description

Class representing a range of yields.

Typically, bookings are priced according to rules (e.g., fare rules), leading to slight variations of revenues for a given product. The "yield range" captures the extent of revenues earned for a given product.

When no average and lower yields are defined, they are assumed to be equal to the upper yield.

Note that the lower yield is generally not defined, as it corresponds to the upper yield of the lower yield range.

Definition at line 23 of file [YieldRange.hpp](#).

#### 34.142.2 Constructor & Destructor Documentation

##### 34.142.2.1 stdair::YieldRange::YieldRange ( )

Constructors.

Definition at line 13 of file [YieldRange.cpp](#).

34.142.2.2 `stdair::YieldRange::YieldRange ( const YieldRange & iYieldRange )`

Definition at line 20 of file [YieldRange.cpp](#).

34.142.2.3 `stdair::YieldRange::YieldRange ( const Yield_T iUpperYield )`

Definition at line 27 of file [YieldRange.cpp](#).

34.142.2.4 `stdair::YieldRange::YieldRange ( const Yield_T iUpperYield, const Yield_T iAverageYield )`

Definition at line 33 of file [YieldRange.cpp](#).

34.142.2.5 `stdair::YieldRange::YieldRange ( const Yield_T iUpperYield, const Yield_T iAverageYield, const Yield_T iLowerYield )`

Definition at line 40 of file [YieldRange.cpp](#).

34.142.2.6 `stdair::YieldRange::~YieldRange ( ) [virtual]`

Constructors.

Definition at line 48 of file [YieldRange.cpp](#).

### 34.142.3 Member Function Documentation

34.142.3.1 `Yield_T stdair::YieldRange::getUpperYield ( ) const [inline]`

Getter for the upper yield of the range.

Definition at line 39 of file [YieldRange.hpp](#).

34.142.3.2 `Yield_T stdair::YieldRange::getAverageYield ( ) const [inline]`

Getter for the average yield of the range.

Definition at line 43 of file [YieldRange.hpp](#).

34.142.3.3 `Yield_T stdair::YieldRange::getLowerYield ( ) const [inline]`

Getter for the lower yield of the range.

Definition at line 47 of file [YieldRange.hpp](#).

34.142.3.4 `void stdair::YieldRange::setUpperYield ( const Yield_T iUpperYield ) [inline]`

Setter for the upper yield of the range.

Definition at line 53 of file [YieldRange.hpp](#).

34.142.3.5 void stdair::YieldRange::setAverageYield ( const Yield\_T iAverageYield )  
[inline]

Setter for the average yield of the range.

Definition at line 57 of file [YieldRange.hpp](#).

34.142.3.6 void stdair::YieldRange::setLowerYield ( const Yield\_T iLowerYield )  
[inline]

Setter for the lower yield of the range.

Definition at line 61 of file [YieldRange.hpp](#).

34.142.3.7 void stdair::YieldRange::toStream ( std::ostream & ioOut ) const

Dump a Business Object into an output stream.

#### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::StructAbstract](#).

Definition at line 52 of file [YieldRange.cpp](#).

34.142.3.8 void stdair::YieldRange::fromStream ( std::istream & ioin ) [virtual]

Read a Business Object from an input stream.

#### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::StructAbstract](#).

Definition at line 58 of file [YieldRange.cpp](#).

34.142.3.9 const std::string stdair::YieldRange::describe ( ) const [virtual]

Display of the structure.

Implements [stdair::StructAbstract](#).

Definition at line 62 of file [YieldRange.cpp](#).

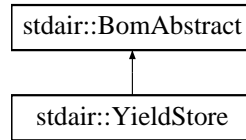
The documentation for this class was generated from the following files:

- [stdair/basic/YieldRange.hpp](#)
- [stdair/basic/YieldRange.cpp](#)

## 34.143 stdair::YieldStore Class Reference

```
#include <stdair/bom/YieldStore.hpp>
```

Inheritance diagram for stdair::YieldStore:



#### Public Types

- typedef [YieldStoreKey](#) [Key\\_T](#)

#### Public Member Functions

- void [toStream](#) (std::ostream &ioOut) const
- [BomAbstract](#) \*const [getParent](#) () const
- void [fromStream](#) (std::istream &ioIn)
- std::string [toString](#) () const
- const std::string [describeKey](#) () const
- const [Key\\_T](#) & [getKey](#) () const
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const

#### Protected Member Functions

- [YieldStore](#) (const [Key\\_T](#) &)
- [YieldStore](#) (const [YieldStore](#) &)
- [~YieldStore](#) ()

#### Protected Attributes

- [Key\\_T](#) \_key
- [BomAbstract](#) \* \_parent

#### Friends

- class [FacBom](#)
- class [FacBomManager](#)

#### 34.143.1 Detailed Description

Class representing the actual attributes for an airline [YieldStore](#).

Definition at line 18 of file [YieldStore.hpp](#).

## 34.143.2 Member Typedef Documentation

## 34.143.2.1 typedef YieldStoreKey stdair::YieldStore::Key\_T

Definition allowing to retrieve the associated BOM key type.

Definition at line 25 of file [YieldStore.hpp](#).

## 34.143.3 Constructor &amp; Destructor Documentation

## 34.143.3.1 stdair::YieldStore::YieldStore ( const Key\_T &amp; iKey ) [protected]

Default constructors.

Definition at line 13 of file [YieldStore.cpp](#).

## 34.143.3.2 stdair::YieldStore::YieldStore ( const YieldStore &amp; ) [protected]

## 34.143.3.3 stdair::YieldStore::~~YieldStore ( ) [protected]

Destructor.

Definition at line 17 of file [YieldStore.cpp](#).

## 34.143.4 Member Function Documentation

## 34.143.4.1 void stdair::YieldStore::toStream ( std::ostream &amp; ioOut ) const [inline, virtual]

Dump a Business Object into an output stream.

**Parameters**

<i>ostream&amp;</i> the output stream.
--

Implements [stdair::BomAbstract](#).

Definition at line 31 of file [YieldStore.hpp](#).

References [toString\(\)](#).

## 34.143.4.2 BomAbstract\* const stdair::YieldStore::getParent ( ) const [inline]

Get the parent object.

Definition at line 34 of file [YieldStore.hpp](#).

References [\\_parent](#).

## 34.143.4.3 void stdair::YieldStore::fromStream ( std::istream &amp; iIn ) [inline, virtual]

Read a Business Object from an input stream.

**Parameters**

<i>istream&amp;</i> the input stream.
---------------------------------------

Implements [stdair::BomAbstract](#).

Definition at line 38 of file [YieldStore.hpp](#).

**34.143.4.4 std::string stdair::YieldStore::toString ( ) const [virtual]**

Get the serialised version of the Business Object.

Implements [stdair::BomAbstract](#).

Definition at line 21 of file [YieldStore.cpp](#).

References [\\_key](#), and [stdair::YieldStoreKey::toString\(\)](#).

Referenced by [toStream\(\)](#).

**34.143.4.5 const std::string stdair::YieldStore::describeKey ( ) const [inline]**

Get a string describing the key.

Definition at line 44 of file [YieldStore.hpp](#).

References [\\_key](#), and [stdair::YieldStoreKey::toString\(\)](#).

**34.143.4.6 const Key\_T& stdair::YieldStore::getKey ( ) const [inline]**

Get the [YieldStore](#) key.

Definition at line 49 of file [YieldStore.hpp](#).

References [\\_key](#).

**34.143.4.7 const AirlineCode\_T& stdair::YieldStore::getAirlineCode ( ) const [inline]**

Get the airline code.

Definition at line 52 of file [YieldStore.hpp](#).

References [\\_key](#), and [stdair::YieldStoreKey::getAirlineCode\(\)](#).

**34.143.5 Friends And Related Function Documentation****34.143.5.1 friend class FacBom [friend]**

Definition at line 19 of file [YieldStore.hpp](#).

**34.143.5.2 friend class FacBomManager [friend]**

Definition at line 20 of file [YieldStore.hpp](#).

**34.143.6 Member Data Documentation**

#### 34.143.6.1 Key\_T stdair::YieldStore::\_key [protected]

The key of both structure and objects.

Definition at line 66 of file [YieldStore.hpp](#).

Referenced by [describeKey\(\)](#), [getAirlineCode\(\)](#), [getKey\(\)](#), and [toString\(\)](#).

#### 34.143.6.2 BomAbstract\* stdair::YieldStore::\_parent [protected]

Definition at line 67 of file [YieldStore.hpp](#).

Referenced by [getParent\(\)](#).

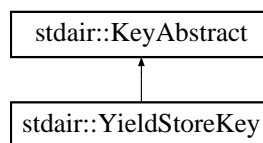
The documentation for this class was generated from the following files:

- [stdair/bom/YieldStore.hpp](#)
- [stdair/bom/YieldStore.cpp](#)

### 34.144 stdair::YieldStoreKey Struct Reference

```
#include <stdair/bom/YieldStoreKey.hpp>
```

Inheritance diagram for stdair::YieldStoreKey:



#### Public Member Functions

- [YieldStoreKey](#) (const [AirlineCode\\_T](#) &iAirlineCode)
- [YieldStoreKey](#) (const [YieldStoreKey](#) &)
- [~YieldStoreKey](#) ()
- const [AirlineCode\\_T](#) & [getAirlineCode](#) () const
- void [toStream](#) (std::ostream &ioOut) const
- void [fromStream](#) (std::istream &ioIn)
- const std::string [toString](#) () const

#### 34.144.1 Detailed Description

Key of [YieldStore](#).

Definition at line 14 of file [YieldStoreKey.hpp](#).



### 34.144.2 Constructor & Destructor Documentation

#### 34.144.2.1 stdair::YieldStoreKey::YieldStoreKey ( const AirlineCode\_T & iAirlineCode )

Constructors.

Definition at line 10 of file [YieldStoreKey.cpp](#).

#### 34.144.2.2 stdair::YieldStoreKey::YieldStoreKey ( const YieldStoreKey & iKey )

Definition at line 14 of file [YieldStoreKey.cpp](#).

#### 34.144.2.3 stdair::YieldStoreKey::~YieldStoreKey ( )

Destructor.

Definition at line 19 of file [YieldStoreKey.cpp](#).

### 34.144.3 Member Function Documentation

#### 34.144.3.1 const AirlineCode\_T& stdair::YieldStoreKey::getAirlineCode ( ) const [inline]

Get the airline code.

Definition at line 30 of file [YieldStoreKey.hpp](#).

Referenced by [stdair::YieldStore::getAirlineCode\(\)](#).

#### 34.144.3.2 void stdair::YieldStoreKey::toStream ( std::ostream & ioOut ) const [virtual]

Dump a Business Object Key into an output stream.

##### Parameters

<i>ostream&amp;</i> the output stream.
--

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 23 of file [YieldStoreKey.cpp](#).

References [toString\(\)](#).

#### 34.144.3.3 void stdair::YieldStoreKey::fromStream ( std::istream & ioIn ) [virtual]

Read a Business Object Key from an input stream.

##### Parameters

<i>istream&amp;</i> the input stream.
---------------------------------------

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 28 of file [YieldStoreKey.cpp](#).

#### 34.144.3.4 `const std::string stdair::YieldStoreKey::toString ( ) const` `[virtual]`

Get the serialised version of the Business Object Key.

That string is unique, at the level of a given Business Object, when among children of a given parent Business Object.

For instance, "H" and "K" allow to differentiate among two marketing classes for the same segment-date.

Reimplemented from [stdair::KeyAbstract](#).

Definition at line 32 of file [YieldStoreKey.cpp](#).

Referenced by [stdair::YieldStore::describeKey\(\)](#), [toStream\(\)](#), and [stdair::YieldStore::toString\(\)](#).

The documentation for this struct was generated from the following files:

- [stdair/bom/YieldStoreKey.hpp](#)
- [stdair/bom/YieldStoreKey.cpp](#)

## 35 File Documentation

### 35.1 `batches/stdair.cpp` File Reference

#### 35.2 `stdair.cpp`

```

00001
00005 // STL
00006 #include <cassert>
00007 #include <iostream>
00008 #include <sstream>
00009 #include <fstream>
00010 #include <string>
00011 // Boost (Extended STL)
00012 #include <boost/date_time/posix_time/posix_time.hpp>
00013 #include <boost/date_time/gregorian/gregorian.hpp>
00014 #include <boost/program_options.hpp>
00015 #include <boost/tokenizer.hpp>
00016 #include <boost/lexical_cast.hpp>
00017 // StdAir
00018 #include <stdair/stdair_types.hpp>
00019 #include <stdair/bom/BomArchive.hpp>
00020 #include <stdair/bom/BookingRequestStruct.hpp>
00021 #include <stdair/bom/TravelSolutionStruct.hpp>
00022 #include <stdair/service/Logger.hpp>
00023 #include <stdair/STDAIR_Service.hpp>
00024 #include <stdair/config/stdair-paths.hpp>
00025
00026 // ////////// Constants //////////
00030 const std::string K_STDAIR_DEFAULT_LOG_FILENAME ("stdair.log");
00031
00035 const std::string K_STDAIR_DEFAULT_INPUT_FILENAME (STDAIR_SAMPLE_DIR
00036                                                    "/schedule01.csv");
00037
00042 const bool K_STDAIR_DEFAULT_BUILT_IN_INPUT = false;
00043

```

```

00049 const bool K_STDAIR_DEFAULT_BUILT_FOR_RMOl = false;
00050
00056 const bool K_STDAIR_DEFAULT_BUILT_FOR_CRS = false;
00057
00062 const int K_STDAIR_EARLY_RETURN_STATUS = 99;
00063
00064 // ////////// Parsing of Options & Configuration //////////
00065 // A helper function to simplify the main part.
00066 template<class T> std::ostream& operator<< (std::ostream& os,
00067                                           const std::vector<T>& v) {
00068     std::copy (v.begin(), v.end(), std::ostream_iterator<T> (std::cout, " "));
00069     return os;
00070 }
00071
00073 int readConfiguration (int argc, char* argv[], bool& ioIsBuiltin,
00074                       bool& ioIsForRMOl, bool& ioIsForCRS,
00075                       stdair::Filename_T& ioInputFilename,
00076                       std::string& ioLogFilename) {
00077     // Default for the built-in input
00078     ioIsBuiltin = K_STDAIR_DEFAULT_BUILT_IN_INPUT;
00079
00080     // Default for the RMOl input
00081     ioIsForRMOl = K_STDAIR_DEFAULT_BUILT_FOR_RMOl;
00082
00083     // Default for the CRS input
00084     ioIsForCRS = K_STDAIR_DEFAULT_BUILT_FOR_CRS;
00085
00086     // Declare a group of options that will be allowed only on command line
00087     boost::program_options::options_description generic ("Generic options");
00088     generic.add_options()
00089         ("prefix", "print installation prefix")
00090         ("version,v", "print version string")
00091         ("help,h", "produce help message");
00092
00093     // Declare a group of options that will be allowed both on command
00094     // line and in config file
00095
00096     boost::program_options::options_description config ("Configuration");
00097     config.add_options()
00098         ("builtin,b",
00099          "The sample BOM tree can be either built-in or parsed from an input file. Th
00100          at latter must then be given with the -i/--input option")
00101         ("rmol,r",
00102          "Build a sample BOM tree for RMOl (i.e., a dummy flight-date with a single l
00103          eg-cabin)")
00104         ("crs,c",
00105          "Build a sample BOM tree for CRS")
00106         ("input,i",
00107          boost::program_options::value< std::string >(&ioInputFilename)->default_valu
00108          e(K_STDAIR_DEFAULT_INPUT_FILENAME),
00109          "(CVS) input file for the demand distributions")
00110         ("log,l",
00111          boost::program_options::value< std::string >(&ioLogFilename)->default_value(
00112          K_STDAIR_DEFAULT_LOG_FILENAME),
00113          "Filename for the logs")
00114         ;
00115
00116     // Hidden options, will be allowed both on command line and
00117     // in config file, but will not be shown to the user.
00118     boost::program_options::options_description hidden ("Hidden options");
00119     hidden.add_options()
00120         ("copyright",

```

```

00117     boost::program_options::value< std::vector<std::string> >(),
00118     "Show the copyright (license)");
00119
00120     boost::program_options::options_description cmdline_options;
00121     cmdline_options.add(generic).add(config).add(hidden);
00122
00123     boost::program_options::options_description config_file_options;
00124     config_file_options.add(config).add(hidden);
00125     boost::program_options::options_description visible ("Allowed options");
00126     visible.add(generic).add(config);
00127
00128     boost::program_options::positional_options_description p;
00129     p.add ("copyright", -1);
00130
00131     boost::program_options::variables_map vm;
00132     boost::program_options::
00133     store (boost::program_options::command_line_parser (argc, argv).
00134     options (cmdline_options).positional(p).run(), vm);
00135
00136     std::ifstream ifs ("stdair.cfg");
00137     boost::program_options::store (parse_config_file (ifs, config_file_options),
00138     vm);
00139     boost::program_options::notify (vm);
00140
00141     if (vm.count ("help")) {
00142         std::cout << visible << std::endl;
00143         return K_STDAIR_EARLY_RETURN_STATUS;
00144     }
00145
00146     if (vm.count ("version")) {
00147         std::cout << PACKAGE_NAME << ", version " << PACKAGE_VERSION << std::endl;
00148         return K_STDAIR_EARLY_RETURN_STATUS;
00149     }
00150
00151     if (vm.count ("prefix")) {
00152         std::cout << "Installation prefix: " << PREFIXDIR << std::endl;
00153         return K_STDAIR_EARLY_RETURN_STATUS;
00154     }
00155
00156     if (vm.count ("builtin")) {
00157         ioIsBuiltin = true;
00158     }
00159
00160     if (vm.count ("rmol")) {
00161         ioIsForRMOL = true;
00162
00163         // The RMOL sample tree takes precedence over the default built-in BOM tree
00164         ioIsBuiltin = false;
00165     }
00166
00167     if (vm.count ("crs")) {
00168         ioIsForCRS = true;
00169
00170         // The RMOL sample tree takes precedence over the default built-in BOM tree
00171         ioIsBuiltin = false;
00172     }
00173
00174     const std::string isBuiltinStr = (ioIsBuiltin == true)?"yes":"no";
00175     std::cout << "The BOM should be built-in? " << isBuiltinStr << std::endl;
00176
00177     const std::string isForRMOLStr = (ioIsForRMOL == true)?"yes":"no";
00178     std::cout << "The BOM should be built-in for RMOL? " << isForRMOLStr

```

```

00179         << std::endl;
00180
00181     const std::string isForCRSStr = (ioIsForCRS == true)?"yes":"no";
00182     std::cout << "The BOM should be built-in for CRS? " << isForCRSStr
00183         << std::endl;
00184
00185     if (ioIsBuiltin == false && ioIsForRMOL == false && ioIsForCRS == false) {
00186         if (vm.count ("input")) {
00187             ioInputFilename = vm["input"].as< std::string >();
00188             std::cout << "Input filename is: " << ioInputFilename << std::endl;
00189         } else {
00190             std::cerr << "Either one among the -b/--builtin, -r/--rmol, -c/--crs "
00191                 << "or -i/--input options must be specified" << std::endl;
00192         }
00193     }
00194 }
00195
00196 if (vm.count ("log")) {
00197     ioLogFilename = vm["log"].as< std::string >();
00198     std::cout << "Log filename is: " << ioLogFilename << std::endl;
00199 }
00200
00201 return 0;
00202 }
00203
00204
00205 // ////////////////////////////////// M A I N //////////////////////////////////
00206 int main (int argc, char* argv[]) {
00207
00208     // State whether the BOM tree should be built-in or parsed from an
00209     // input file
00210     bool isBuiltin;
00211
00212     // State whether a sample BOM tree should be built for RMOL.
00213     bool isForRMOL;
00214
00215     // State whether a sample BOM tree should be built for the CRS.
00216     bool isForCRS;
00217
00218     // Input file name
00219     stdair::Filename_T lInputFilename;
00220
00221     // Output log File
00222     std::string lLogFilename;
00223
00224     // Call the command-line option parser
00225     const int lOptionParserStatus =
00226         readConfiguration (argc, argv, isBuiltin, isForRMOL, isForCRS,
00227             lInputFilename, lLogFilename);
00228
00229     if (lOptionParserStatus == K_STDAIR_EARLY_RETURN_STATUS) {
00230         return 0;
00231     }
00232
00233     // Set the log parameters
00234     std::ofstream logOutputFile;
00235     // Open and clean the log outputfile
00236     logOutputFile.open (lLogFilename.c_str());
00237     logOutputFile.clear();
00238
00239     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00240     stdair::STDAIR_Service stdairService (lLogParams);

```

```
00241
00242 // DEBUG
00243 STDAIR_LOG_DEBUG ("Welcome to stdair");
00244
00245 // Check whether or not a (CSV) input file should be read
00246 if (isBuiltin == true || isForRMOL == true || isForCRS == true) {
00247
00248     if (isForRMOL == true) {
00249         // Build the sample BOM tree for RMOL
00250         stdairService.buildDummyInventory (300);
00251
00252     } else if (isForCRS == true) {
00253         //
00254         stdair::TravelSolutionList_T lTravelSolutionList;
00255         stdairService.buildSampleTravelSolutions (lTravelSolutionList);
00256
00257         // Build the sample BOM tree for CRS
00258         const stdair::BookingRequestStruct& lBookingRequest =
00259             stdairService.buildSampleBookingRequest();
00260
00261         // DEBUG: Display the travel solution and booking request
00262         STDAIR_LOG_DEBUG ("Booking request: " << lBookingRequest.display());
00263
00264         const std::string& lCSVDump =
00265             stdairService.csvDisplay (lTravelSolutionList);
00266         STDAIR_LOG_DEBUG (lCSVDump);
00267
00268     } else {
00269         assert (isBuiltin == true);
00270
00271         // Build a sample BOM tree
00272         stdairService.buildSampleBom();
00273     }
00274
00275 } else {
00276     // Read the input file
00277     //stdairService.readFromInputFile (lInputFilename);
00278
00279     // DEBUG
00280     STDAIR_LOG_DEBUG ("StdAir will parse " << lInputFilename
00281         << " and build the corresponding BOM tree.");
00282 }
00283
00284 // DEBUG: Display the whole BOM tree
00285 const std::string& lCSVDump = stdairService.csvDisplay();
00286 STDAIR_LOG_DEBUG (lCSVDump);
00287
00288 // Close the Log outputFile
00289 logOutputFile.close();
00290
00291 /*
00292 Note: as that program is not intended to be run on a server in
00293 production, it is better not to catch the exceptions. When it
00294 happens (that an exception is throwned), that way we get the
00295 call stack.
00296 */
00297
00298 return 0;
00299 }
00300
```

35.3 doc/local/authors.doc File Reference

35.4 doc/local/codingrules.doc File Reference

35.5 doc/local/copyright.doc File Reference

35.6 doc/local/documentation.doc File Reference

35.7 doc/local/features.doc File Reference

35.8 doc/local/help\_wanted.doc File Reference

35.9 doc/local/howto\_release.doc File Reference

35.10 doc/local/index.doc File Reference

35.11 doc/local/installation.doc File Reference

35.12 doc/local/linking.doc File Reference

35.13 doc/local/test.doc File Reference

35.14 doc/local/users\_guide.doc File Reference

35.15 doc/local/verification.doc File Reference

35.16 doc/tutorial/tutorial.doc File Reference

35.17 stdair/basic/BasChronometer.cpp File Reference

```
#include <cassert>
#include <stdair/basic/BasChronometer.hpp>
```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

35.18 BasChronometer.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
```

```

00006 // Stdair
00007 #include <stdair/basic/BasChronometer.hpp>
00008
00009 namespace stdair {
00010
00011 // //////////////////////////////////////
00012 BasChronometer::BasChronometer () : _startTimeLaunched (false) {
00013 }
00014
00015 // //////////////////////////////////////
00016 void BasChronometer::start () {
00017     // Get the time-stamp of now, and store it for later use
00018     _startTime = boost::posix_time::microsec_clock::local_time();
00019
00020     // Update the boolean which states whether the chronometer
00021     // is launched
00022     _startTimeLaunched = true;
00023 }
00024
00025 // //////////////////////////////////////
00026 double BasChronometer::elapsed () const {
00027     assert (_startTimeLaunched == true);
00028
00029     // Get the time-stamp of now
00030     const boost::posix_time::ptime lStopTime =
00031         boost::posix_time::microsec_clock::local_time();
00032
00033     // Calculate the time elapsed since the last time-stamp
00034     const boost::posix_time::time_duration lElapsedTime =
00035         lStopTime - _startTime;
00036
00037     // Derived the corresponding number of milliseconds
00038     const double lElapsedTimeInMicroSeconds =
00039         static_cast<const double> (lElapsedTime.total_microseconds());
00040
00041     // The elapsed time given in return is expressed in seconds
00042     return (lElapsedTimeInMicroSeconds / 1e6);
00043 }
00044
00045 }

```

## 35.19 stdair/basic/BasChronometer.hpp File Reference

```
#include <boost/date_time/posix_time/posix_time.hpp>
```

### Classes

- struct [stdair::BasChronometer](#)

### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.



## 35.20 BasChronometer.hpp

```

00001 #ifndef __STDAIR_BAS_BASCHRONOMETER_HPP
00002 #define __STDAIR_BAS_BASCHRONOMETER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // Boost (STL Extension)
00008 // Boost Date-Time (http://boost.org/doc/html/date_time/posix_time.html)
00009 #include <boost/date_time/posix_time/posix_time.hpp>
00010
00011 namespace stdair {
00012
00014     struct BasChronometer {
00016         BasChronometer();
00017
00021         void start ();
00022
00024         std::string getStart () const {
00025             return boost::posix_time::to_simple_string (_startTime);
00026         }
00027
00030         double elapsed () const;
00031
00032     private:
00034         boost::posix_time::ptime _startTime;
00035
00037         bool _startTimeLaunched;
00038     };
00039
00040 }
00041 #endif // __STDAIR_BAS_BASCHRONOMETER_HPP

```

## 35.21 stdair/basic/BasConst.cpp File Reference

```

#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Yield.hpp>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/basic/BasConst_TravelSolution.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## Functions

- const std::string `stdair::DEFAULT_BOM_ROOT_KEY` (" -- ROOT -- ")
- const double `stdair::DEFAULT_EPSILON_VALUE` (0.0001)
- const unsigned int `stdair::DEFAULT_FLIGHT_SPEED` (900)
- const NbOfFlightDates\_T `stdair::DEFAULT_NB_OF_FLIGHTDATES` (0.0)
- const Duration\_T `stdair::NULL_BOOST_TIME_DURATION` (-1,-1,-1)
- const unsigned int `stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR` (365)
- const unsigned int `stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS` (1000)
- const DayDuration\_T `stdair::DEFAULT_DAY_DURATION` (0)
- const DatePeriod\_T `stdair::BOOST_DEFAULT_DATE_PERIOD` (Date\_T(2007, 1, 1), Date\_T(2007, 1, 1))
- const DOW\_String\_T `stdair::DEFAULT_DOW_STRING` ("00000000")
- const DateOffset\_T `stdair::DEFAULT_DATE_OFFSET` (0)
- const Date\_T `stdair::DEFAULT_DATE` (2010, boost::gregorian::Jan, 1)
- const DateTime\_T `stdair::DEFAULT_DATETIME` (DEFAULT\_DATE, NULL\_BOOST\_TIME\_DURATION)
- const Duration\_T `stdair::DEFAULT_EPSILON_DURATION` (0, 0, 0, 1)
- const Count\_T `stdair::SECONDS_IN_ONE_DAY` (86400)
- const Count\_T `stdair::MILLISECONDS_IN_ONE_SECOND` (1000)
- const RandomSeed\_T `stdair::DEFAULT_RANDOM_SEED` (120765987)
- const AirportCode\_T `stdair::AIRPORT_LHR` ("LHR")
- const AirportCode\_T `stdair::AIRPORT_SYD` ("SYD")
- const CityCode\_T `stdair::POS_LHR` ("LHR")
- const Date\_T `stdair::DATE_20110115` (2011, boost::gregorian::Jan, 15)
- const Date\_T `stdair::DATE_20111231` (2011, boost::gregorian::Dec, 31)
- const DayDuration\_T `stdair::NO_ADVANCE_PURCHASE` (0)
- const SaturdayStay\_T `stdair::SATURDAY_STAY` (true)
- const SaturdayStay\_T `stdair::NO_SATURDAY_STAY` (false)
- const ChangeFees\_T `stdair::CHANGE_FEES` (true)
- const ChangeFees\_T `stdair::NO_CHANGE_FEES` (false)
- const NonRefundable\_T `stdair::NON_REFUNDABLE` (true)
- const NonRefundable\_T `stdair::No_NON_REFUNDABLE` (false)
- const SaturdayStay\_T `stdair::DEFAULT_BOM_TREE_SATURDAY_STAY` (true)
- const ChangeFees\_T `stdair::DEFAULT_BOM_TREE_CHANGE_FEES` (true)
- const NonRefundable\_T `stdair::DEFAULT_BOM_TREE_NON_REFUNDABLE` (true)
- const DayDuration\_T `stdair::NO_STAY_DURATION` (0)
- const AirlineCode\_T `stdair::AIRLINE_CODE_BA` ("BA")
- const CabinCode\_T `stdair::CABIN_Y` ("Y")
- const ClassCode\_T `stdair::CLASS_CODE_Y` ("Y")
- const ClassCode\_T `stdair::CLASS_CODE_Q` ("Q")
- const AirportCode\_T `stdair::AIRPORT_SIN` ("SIN")
- const AirportCode\_T `stdair::AIRPORT_BKK` ("BKK")
- const CityCode\_T `stdair::POS_SIN` ("SIN")

- const CabinCode\_T [stdair::CABIN\\_ECO](#) ("Eco")
- const FrequentFlyer\_T [stdair::FREQUENT\\_FLYER\\_MEMBER](#) ("M")
- const ClassCode\_T [stdair::DEFAULT\\_FAMILY\\_CODE](#) ("0")
- const NbOfAirlines\_T [stdair::DEFAULT\\_NBOFAIRLINES](#) (0)
- const FlightPathCode\_T [stdair::DEFAULT\\_FLIGHTPATH\\_CODE](#) ("")
- const Distance\_T [stdair::DEFAULT\\_DISTANCE\\_VALUE](#) (0)
- const ClassCode\_T [stdair::DEFAULT\\_CLOSED\\_CLASS\\_CODE](#) ("CC")
- const NbOfBookings\_T [stdair::DEFAULT\\_CLASS\\_NB\\_OF\\_BOOKINGS](#) (0)
- const NbOfBookings\_T [stdair::DEFAULT\\_CLASS\\_TOTAL\\_NB\\_OF\\_BOOKINGS](#) (0)
- const NbOfBookings\_T [stdair::DEFAULT\\_CLASS\\_UNCONSTRAINED\\_DEMAND](#) (0)
- const NbOfBookings\_T [stdair::DEFAULT\\_CLASS\\_REMAINING\\_DEMAND\\_MEAN](#) (0)
- const NbOfBookings\_T [stdair::DEFAULT\\_CLASS\\_REMAINING\\_DEMAND\\_STANDARD\\_DEVIATION](#) (0)
- const NbOfCancellations\_T [stdair::DEFAULT\\_CLASS\\_NB\\_OF\\_CANCELLATIONS](#) (0)
- const NbOfNoShows\_T [stdair::DEFAULT\\_CLASS\\_NB\\_OF\\_NOSHOWS](#) (0)
- const CabinCapacity\_T [stdair::DEFAULT\\_CABIN\\_CAPACITY](#) (100.0)
- const CommittedSpace\_T [stdair::DEFAULT\\_COMMITTED\\_SPACE](#) (0.0)
- const BlockSpace\_T [stdair::DEFAULT\\_BLOCK\\_SPACE](#) (0.0)
- const Availability\_T [stdair::DEFAULT\\_NULL\\_AVAILABILITY](#) (0.0)
- const Availability\_T [stdair::DEFAULT\\_AVAILABILITY](#) (9.0)
- const Availability\_T [stdair::MAXIMAL\\_AVAILABILITY](#) (9999.0)
- const CensorshipFlag\_T [stdair::DEFAULT\\_CLASS\\_CENSORSHIPFLAG](#) (false)
- const BookingLimit\_T [stdair::DEFAULT\\_CLASS\\_BOOKING\\_LIMIT](#) (9999.0)
- const AuthorizationLevel\_T [stdair::DEFAULT\\_CLASS\\_AUTHORIZATION\\_LEVEL](#) (9999.0)
- const AuthorizationLevel\_T [stdair::DEFAULT\\_CLASS\\_MAX\\_AUTHORIZATION\\_LEVEL](#) (9999.0)
- const AuthorizationLevel\_T [stdair::DEFAULT\\_CLASS\\_MIN\\_AUTHORIZATION\\_LEVEL](#) (0.0)
- const OverbookingRate\_T [stdair::DEFAULT\\_CLASS\\_OVERBOOKING\\_RATE](#) (0.0)
- const BookingRatio\_T [stdair::DEFAULT\\_OND\\_BOOKING\\_RATE](#) (0.0)
- const Fare\_T [stdair::DEFAULT\\_FARE\\_VALUE](#) (0.0)
- const Yield\_T [stdair::DEFAULT\\_CLASS\\_YIELD\\_VALUE](#) (0.0)
- const Revenue\_T [stdair::DEFAULT\\_REVENUE\\_VALUE](#) (0.0)
- const Percentage\_T [stdair::DEFAULT\\_LOAD\\_FACTOR\\_VALUE](#) (100.0)
- const Yield\_T [stdair::DEFAULT\\_YIELD\\_VALUE](#) (0.0)
- const Yield\_T [stdair::DEFAULT\\_YIELD\\_MAX\\_VALUE](#) (std::numeric\_limits< double >::max())
- const NbOfBookings\_T [stdair::DEFAULT\\_YIELD\\_NB\\_OF\\_BOOKINGS](#) (0.0)
- const Identity\_T [stdair::DEFAULT\\_BOOKING\\_NUMBER](#) (0)
- const NbOfCancellations\_T [stdair::DEFAULT\\_YIELD\\_NB\\_OF\\_CANCELLATIONS](#) (0.0)
- const NbOfNoShows\_T [stdair::DEFAULT\\_YIELD\\_NB\\_OF\\_NOSHOWS](#) (0.0)
- const Availability\_T [stdair::DEFAULT\\_YIELD\\_AVAILABILITY](#) (0.0)

- const CensorshipFlag\_T [stdair::DEFAULT\\_YIELD\\_CENSORSHIPFLAG](#) (false)
- const BookingLimit\_T [stdair::DEFAULT\\_YIELD\\_BOOKING\\_LIMIT](#) (0.0)
- const OverbookingRate\_T [stdair::DEFAULT\\_YIELD\\_OVERBOOKING\\_RATE](#) (0.0)
- const Fare\_T [stdair::DEFAULT\\_OND\\_FARE\\_VALUE](#) (0.0)
- const EventQueueID\_T [stdair::DEFAULT\\_EVENT\\_QUEUE\\_ID](#) ("EQ01")
- const Count\_T [stdair::DEFAULT\\_PROGRESS\\_STATUS](#) (0)
- const Date\_T [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATE](#) (2008, boost::gregorian::Jan, 1)
- const DateTime\_T [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#) (DEFAULT\_EVENT\_OLDEST\_DATE, NULL\_BOOST\_TIME\_DURATION)
- const PartySize\_T [stdair::DEFAULT\\_PARTY\\_SIZE](#) (1)
- const DayDuration\_T [stdair::DEFAULT\\_STAY\\_DURATION](#) (7)
- const WTP\_T [stdair::DEFAULT\\_WTP](#) (1000.0)
- const Date\_T [stdair::DEFAULT\\_PREFERRED\\_DEPARTURE\\_DATE](#) (DEFAULT\_DEPARTURE\_DATE)
- const Duration\_T [stdair::DEFAULT\\_PREFERRED\\_DEPARTURE\\_TIME](#) (8, 0, 0)
- const DateOffset\_T [stdair::DEFAULT\\_ADVANCE\\_PURCHASE](#) (22)
- const Date\_T [stdair::DEFAULT\\_REQUEST\\_DATE](#) (DEFAULT\_PREFERRED\_DEPARTURE\_DATE-DEFAULT\_ADVANCE\_PURCHASE)
- const Duration\_T [stdair::DEFAULT\\_REQUEST\\_TIME](#) (8, 0, 0)
- const DateTime\_T [stdair::DEFAULT\\_REQUEST\\_DATE\\_TIME](#) (DEFAULT\_REQUEST\_DATE, DEFAULT\_REQUEST\_TIME)
- const CabinCode\_T [stdair::DEFAULT\\_PREFERRED\\_CABIN](#) ("M")
- const CityCode\_T [stdair::DEFAULT\\_POS](#) ("ALL")
- const ChannelLabel\_T [stdair::DEFAULT\\_CHANNEL](#) ("DC")
- const ChannelLabel\_T [stdair::CHANNEL\\_DN](#) ("DN")
- const ChannelLabel\_T [stdair::CHANNEL\\_IN](#) ("IN")
- const TripType\_T [stdair::TRIP\\_TYPE\\_ONE\\_WAY](#) ("OW")
- const TripType\_T [stdair::TRIP\\_TYPE\\_ROUND\\_TRIP](#) ("RT")
- const TripType\_T [stdair::TRIP\\_TYPE\\_INBOUND](#) ("RI")
- const TripType\_T [stdair::TRIP\\_TYPE\\_OUTBOUND](#) ("RO")
- const FrequentFlyer\_T [stdair::DEFAULT\\_FF\\_TIER](#) ("N")
- const PriceValue\_T [stdair::DEFAULT\\_VALUE\\_OF\\_TIME](#) (100.0)
- const Duration\_T [stdair::DEFAULT\\_MINIMAL\\_CONNECTION\\_TIME](#) (0, 30, 0)
- const Duration\_T [stdair::DEFAULT\\_MAXIMAL\\_CONNECTION\\_TIME](#) (24, 0, 0)
- const MatchingIndicator\_T [stdair::DEFAULT\\_MATCHING\\_INDICATOR](#) (0.0)
- const PriceCurrency\_T [stdair::DEFAULT\\_CURRENCY](#) ("EUR")
- const AvailabilityStatus\_T [stdair::DEFAULT\\_AVAILABILITY\\_STATUS](#) (false)
- const AirlineCode\_T [stdair::DEFAULT\\_AIRLINE\\_CODE](#) ("XX")
- const AirlineCode\_T [stdair::DEFAULT\\_NULL\\_AIRLINE\\_CODE](#) ("")
- const FlightNumber\_T [stdair::DEFAULT\\_FLIGHT\\_NUMBER](#) (9999)
- const GuillotineNumber\_T [stdair::DEFAULT\\_GUILLOTINE\\_NUMBER](#) (9999)
- const Date\_T [stdair::DEFAULT\\_DEPARTURE\\_DATE](#) (1900, boost::gregorian::Jan, 1)
- const AirportCode\_T [stdair::DEFAULT\\_AIRPORT\\_CODE](#) ("XXX")
- const AirportCode\_T [stdair::DEFAULT\\_NULL\\_AIRPORT\\_CODE](#) ("")
- const AirportCode\_T [stdair::DEFAULT\\_ORIGIN](#) ("XXX")

- const AirportCode\_T stdair::DEFAULT\_DESTINATION ("XXX")
- const CabinCode\_T stdair::DEFAULT\_CABIN\_CODE ("X")
- const FamilyCode\_T stdair::DEFAULT\_FARE\_FAMILY\_CODE ("EcoSaver")
- const FamilyCode\_T stdair::DEFAULT\_NULL\_FARE\_FAMILY\_CODE ("NoFF")
- const ClassCode\_T stdair::DEFAULT\_CLASS\_CODE ("X")
- const ClassCode\_T stdair::DEFAULT\_NULL\_CLASS\_CODE ("")
- const BidPrice\_T stdair::DEFAULT\_BID\_PRICE (0.0)
- const unsigned short stdair::MAXIMAL\_NUMBER\_OF\_LEGS\_IN\_FLIGHT (7)
- const unsigned short stdair::MAXIMAL\_NUMBER\_OF\_SEGMENTS\_IN\_OND (3)
- const SeatIndex\_T stdair::DEFAULT\_SEAT\_INDEX (1)
- const std::string stdair::DEFAULT\_FARE\_FAMILY\_VALUE\_TYPE ("FF")
- const std::string stdair::DEFAULT\_SEGMENT\_CABIN\_VALUE\_TYPE ("SC")
- const std::string stdair::DEFAULT\_KEY\_FLD\_DELIMITER (";")
- const std::string stdair::DEFAULT\_KEY\_SUB\_FLD\_DELIMITER (",")
- const boost::char\_separator< char > stdair::DEFAULT\_KEY\_TOKEN\_DELIMITER (";", ",")

#### Variables

- const std::string stdair::DOW\_STR []
- const CensorshipFlagList\_T stdair::DEFAULT\_CLASS\_CENSORSHIPFLAG\_LIST
- const Date\_T stdair::DEFAULT\_DICO\_STUDIED\_DATE
- const AirlineCodeList\_T stdair::DEFAULT\_AIRLINE\_CODE\_LIST
- const ClassList\_StringList\_T stdair::DEFAULT\_CLASS\_CODE\_LIST
- const BidPriceVector\_T stdair::DEFAULT\_BID\_PRICE\_VECTOR = std::vector<BidPrice\_T>()
- const int stdair::DEFAULT\_MAX\_DTD = 365
- const DCPList\_T stdair::DEFAULT\_DCP\_LIST = DefaultDCPList::init()
- const DTDFractMap\_T stdair::DEFAULT\_DTD\_FRAT5COEF\_MAP
- const DTDProbMap\_T stdair::DEFAULT\_DTD\_PROB\_MAP
- const OnDStringList\_T stdair::DEFAULT\_OND\_STRING\_LIST
- const std::string stdair::DISPLAY\_LEVEL\_STRING\_ARRAY [51]

## 35.22 BasConst.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/basic/BasConst_General.hpp>
00006 #include <stdair/basic/BasConst_BomDisplay.hpp>
00007 #include <stdair/basic/BasConst_Event.hpp>
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/BasConst_BookingClass.hpp>
00011 #include <stdair/basic/BasConst_Yield.hpp>
00012 #include <stdair/basic/BasConst_DefaultObject.hpp>
00013 #include <stdair/basic/BasConst_Period_BOM.hpp>
00014 #include <stdair/basic/BasConst_TravelSolution.hpp>

```

```

00015
00016 namespace stdair {
00017
00018     // ////////// General //////////
00020     const std::string DEFAULT_BOM_ROOT_KEY (" -- ROOT -- ");
00021
00023     const double DEFAULT_EPSILON_VALUE (0.0001);
00024
00026     const unsigned int DEFAULT_FLIGHT_SPEED (900);
00027
00029     const NbOfFlightDates_T DEFAULT_NB_OF_FLIGHTDATES (0.0);
00030
00032     const Duration_T NULL_BOOST_TIME_DURATION (-1, -1, -1);
00033
00035     const unsigned int DEFAULT_NB_OF_DAYS_IN_A_YEAR (365);
00036
00038     const unsigned int DEFAULT_NUMBER_OF_SUBDIVISIONS (1000);
00039
00040     // ////////// (Flight-)Period-related BOM //////////
00042     const DayDuration_T DEFAULT_DAY_DURATION (0);
00043
00045     const DatePeriod_T BOOST_DEFAULT_DATE_PERIOD (Date_T (2007, 1, 1),
00046                                                     Date_T (2007, 1, 1));
00047
00049     const std::string DOW_STR[] =
00050     { "Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun" };
00051
00053     const DOW_String_T DEFAULT_DOW_STRING ("0000000");
00054
00056     const DateOffset_T DEFAULT_DATE_OFFSET (0);
00057
00058
00059     // // ////////// General //////////
00061     const Date_T DEFAULT_DATE (2010, boost::gregorian::Jan, 1);
00062
00064     const DateTime_T DEFAULT_DATETIME (DEFAULT_DATE, NULL_BOOST_TIME_DURATION);
00065
00067     const Duration_T DEFAULT_EPSILON_DURATION (0, 0, 0, 1);
00068
00070     const Count_T SECONDS_IN_ONE_DAY (86400);
00071
00073     const Count_T MILLISECONDS_IN_ONE_SECOND (1000);
00074
00076     const RandomSeed_T DEFAULT_RANDOM_SEED (120765987);
00077
00078     // ////////// Default BOM tree objects //////////
00080     const AirportCode_T AIRPORT_LHR ("LHR");
00081
00083     const AirportCode_T AIRPORT_SYD ("SYD");
00084
00086     const CityCode_T POS_LHR ("LHR");
00087
00089     const Date_T DATE_20110115 (2011, boost::gregorian::Jan, 15);
00090     const Date_T DATE_20111231 (2011, boost::gregorian::Dec, 31);
00091
00093     const DayDuration_T NO_ADVANCE_PURCHASE (0);
00094
00096     const SaturdayStay_T SATURDAY_STAY (true);
00097
00099     const SaturdayStay_T NO_SATURDAY_STAY (false);
00100
00102     const ChangeFees_T CHANGE_FEES (true);

```

```

00103
00105     const ChangeFees_T NO_CHANGE_FEES (false);
00106
00108     const NonRefundable_T NON_REFUNDABLE (true);
00109
00111     const NonRefundable_T No_NON_REFUNDABLE (false);
00112
00114     const SaturdayStay_T DEFAULT_BOM_TREE_SATURDAY_STAY (true);
00115
00117     const ChangeFees_T DEFAULT_BOM_TREE_CHANGE_FEES (true);
00118
00120     const NonRefundable_T DEFAULT_BOM_TREE_NON_REFUNDABLE (true);
00121
00123     const DayDuration_T NO_STAY_DURATION (0);
00124
00126     const AirlineCode_T AIRLINE_CODE_BA ("BA");
00127
00129     const CabinCode_T CABIN_Y ("Y");
00130
00132     const ClassCode_T CLASS_CODE_Y ("Y");
00133
00134     // ////////// Travel solutions related objects////////
00136     const ClassCode_T CLASS_CODE_Q ("Q");
00137
00138     // ////////// Booking request related objects////////
00140     const AirportCode_T AIRPORT_SIN ("SIN");
00141
00143     const AirportCode_T AIRPORT_BKK ("BKK");
00144
00146     const CityCode_T POS_SIN ("SIN");
00147
00149     const CabinCode_T CABIN_ECO ("Eco");
00150
00152     const FrequentFlyer_T FREQUENT_FLYER_MEMBER ("M");
00153
00154     // ////////// Default //////////
00156     const ClassCode_T DEFAULT_FAMILY_CODE ("0");
00157
00159     const NbofAirlines_T DEFAULT_NBOFAIRLINES (0);
00160
00162     const FlightPathCode_T DEFAULT_FLIGHTPATH_CODE ("");
00163
00164     // ////////// Booking-class-related BOM //////////
00166     const Distance_T DEFAULT_DISTANCE_VALUE (0);
00167
00169     const ClassCode_T DEFAULT_CLOSED_CLASS_CODE ("CC");
00170
00173     const NbofBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS (0);
00174
00177     const NbofBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS (0);
00178
00180     const NbofBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND (0);
00181
00183     const NbofBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN (0);
00184
00186     const NbofBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION (0);
00187
00189     const NbofCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS (0);
00190
00192     const NbofNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS (0);
00193
00195     const CabinCapacity_T DEFAULT_CABIN_CAPACITY (100.0);

```

```

00196
00198     const CommittedSpace_T DEFAULT_COMMITTED_SPACE (0.0);
00199
00201     const BlockSpace_T DEFAULT_BLOCK_SPACE (0.0);
00202
00204     const Availability_T DEFAULT_NULL_AVAILABILITY (0.0);
00205
00207     const Availability_T DEFAULT_AVAILABILITY (9.0);
00208
00210     const Availability_T MAXIMAL_AVAILABILITY (9999.0);
00211
00212
00213     // ////////// (Segment-)Class-related BOM //////////
00216     const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG (false);
00217
00220     const CensorshipFlagList_T DEFAULT_CLASS_CENSORSHIPFLAG_LIST =
00221         std::vector<CensorshipFlag_T>();
00222
00224     const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT (9999.0);
00225
00227     const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL (9999.0);
00228
00230     const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL (9999.0);
00231
00233     const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL (0.0);
00234
00236     const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE (0.0);
00237
00239     const BookingRatio_T DEFAULT_OND_BOOKING_RATE (0.0);
00240
00242     const Fare_T DEFAULT_FARE_VALUE (0.0);
00243
00245     const Yield_T DEFAULT_CLASS_YIELD_VALUE (0.0);
00246
00248     const Revenue_T DEFAULT_REVENUE_VALUE (0.0);
00249
00251     const Percentage_T DEFAULT_LOAD_FACTOR_VALUE (100.0);
00252
00253
00254     // ////////// (Leg-)YieldRange-related BOM //////////
00256     const Yield_T DEFAULT_YIELD_VALUE (0.0);
00257
00259     const Yield_T DEFAULT_YIELD_MAX_VALUE (std::numeric_limits<double>::max());
00260
00262     const NbOfBookings_T DEFAULT_YIELD_NB_OF_BOOKINGS (0.0);
00263
00265     const Identity_T DEFAULT_BOOKING_NUMBER (0);
00266
00268     const NbOfCancellations_T DEFAULT_YIELD_NB_OF_CANCELLATIONS (0.0);
00269
00271     const NbOfNoShows_T DEFAULT_YIELD_NB_OF_NOSHOWS (0.0);
00272
00274     const Availability_T DEFAULT_YIELD_AVAILABILITY (0.0);
00275
00278     const CensorshipFlag_T DEFAULT_YIELD_CENSORSHIPFLAG (false);
00279
00281     const BookingLimit_T DEFAULT_YIELD_BOOKING_LIMIT (0.0);
00282
00284     const OverbookingRate_T DEFAULT_YIELD_OVERBOOKING_RATE (0.0);
00285
00286
00287     // ////////// OnD-related BOM //////////

```



```
00289     const Fare_T DEFAULT_OND_FARE_VALUE (0.0);
00290
00291
00292     // ////////// Event Generation //////////
00294     const EventQueueID_T DEFAULT_EVENT_QUEUE_ID ("EQ01");
00295
00297     const Count_T DEFAULT_PROGRESS_STATUS (0);
00298
00301     const Date_T DEFAULT_EVENT_OLDEST_DATE (2008, boost::gregorian::Jan, 1);
00302
00305     const DateTime_T DEFAULT_EVENT_OLDEST_DATETIME (DEFAULT_EVENT_OLDEST_DATE,
00306                                                     NULL_BOOST_TIME_DURATION);
00307
00308
00309     // ////////// Booking Request //////////
00311     const PartySize_T DEFAULT_PARTY_SIZE (1);
00312
00314     const DayDuration_T DEFAULT_STAY_DURATION (7);
00315
00317     const WTP_T DEFAULT_WTP (1000.0);
00318
00320     const Date_T DEFAULT_PREFERRED_DEPARTURE_DATE (DEFAULT_DEPARTURE_DATE);
00321
00323     const Duration_T DEFAULT_PREFERRED_DEPARTURE_TIME (8, 0, 0);
00324
00326     const DateOffset_T DEFAULT_ADVANCE_PURCHASE (22);
00327
00329     const Date_T DEFAULT_REQUEST_DATE (DEFAULT_PREFERRED_DEPARTURE_DATE
00330                                       - DEFAULT_ADVANCE_PURCHASE);
00331
00333     const Duration_T DEFAULT_REQUEST_TIME (8, 0, 0);
00334
00336     const DateTime_T DEFAULT_REQUEST_DATE_TIME (DEFAULT_REQUEST_DATE,
00337                                                  DEFAULT_REQUEST_TIME);
00338
00340     const CabinCode_T DEFAULT_PREFERRED_CABIN ("M");
00341
00343     const CityCode_T DEFAULT_POS ("ALL");
00344
00346     const ChannelLabel_T DEFAULT_CHANNEL ("DC");
00347
00349     const ChannelLabel_T CHANNEL_DN ("DN");
00350
00352     const ChannelLabel_T CHANNEL_IN ("IN");
00353
00355     const TripType_T TRIP_TYPE_ONE_WAY ("OW");
00356
00358     const TripType_T TRIP_TYPE_ROUND_TRIP ("RT");
00359
00361     const TripType_T TRIP_TYPE_INBOUND ("RI");
00362
00364     const TripType_T TRIP_TYPE_OUTBOUND ("RO");
00365
00367     const FrequentFlyer_T DEFAULT_FF_TIER ("N");
00368
00370     const PriceValue_T DEFAULT_VALUE_OF_TIME (100.0);
00371
00372
00373     // ////////// Travel Solutions //////////
00375     const Duration_T DEFAULT_MINIMAL_CONNECTION_TIME (0, 30, 0);
00376
00378     const Duration_T DEFAULT_MAXIMAL_CONNECTION_TIME (24, 0, 0);
```

```

00379
00381     const MatchingIndicator_T DEFAULT_MATCHING_INDICATOR (0.0);
00382
00384     const PriceCurrency_T DEFAULT_CURRENCY ("EUR");
00385
00387     const AvailabilityStatus_T DEFAULT_AVAILABILITY_STATUS (false);
00388
00390     const Date_T DEFAULT_DICO_STUDIED_DATE;
00391
00392     // ////////// Inventory-related BOM //////////
00394     const AirlineCode_T DEFAULT_AIRLINE_CODE ("XX");
00395
00397     const AirlineCode_T DEFAULT_NULL_AIRLINE_CODE ("");
00398
00400     const AirlineCodeList_T DEFAULT_AIRLINE_CODE_LIST;
00401
00403     const FlightNumber_T DEFAULT_FLIGHT_NUMBER (9999);
00404
00406     const GuillotineNumber_T DEFAULT_GUILLOTINE_NUMBER (9999);
00407
00409     const Date_T DEFAULT_DEPARTURE_DATE (1900, boost::gregorian::Jan, 1);
00410
00412     const AirportCode_T DEFAULT_AIRPORT_CODE ("XXX");
00413
00415     const AirportCode_T DEFAULT_NULL_AIRPORT_CODE ("");
00416
00418     const AirportCode_T DEFAULT_ORIGIN ("XXX");
00419
00421     const AirportCode_T DEFAULT_DESTINATION ("XXX");
00422
00424     const CabinCode_T DEFAULT_CABIN_CODE ("X");
00425
00427     const FamilyCode_T DEFAULT_FARE_FAMILY_CODE ("EcoSaver");
00428
00430     const FamilyCode_T DEFAULT_NULL_FARE_FAMILY_CODE ("NoFF");
00431
00433     const ClassCode_T DEFAULT_CLASS_CODE ("X");
00434
00436     const ClassCode_T DEFAULT_NULL_CLASS_CODE ("");
00437
00439     const ClassList_StringList_T DEFAULT_CLASS_CODE_LIST;
00440
00442     const BidPrice_T DEFAULT_BID_PRICE (0.0);
00443
00445     const BidPriceVector_T DEFAULT_BID_PRICE_VECTOR = std::vector<BidPrice_T>();
00446
00450     const unsigned short MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT (7);
00451
00454     const unsigned short MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND (3);
00455
00457     const SeatIndex_T DEFAULT_SEAT_INDEX (1);
00458
00460     const std::string DEFAULT_FARE_FAMILY_VALUE_TYPE ("FF");
00461
00463     const std::string DEFAULT_SEGMENT_CABIN_VALUE_TYPE ("SC");
00464
00466     const int DEFAULT_MAX_DTD = 365;
00467
00469     const DCPList_T DEFAULT_DCP_LIST = DefaultDCPList::init();
00470     DCPList_T DefaultDCPList::init() {
00471         DCPList_T oDCPList;
00472         //oDCPList.push_back (72);

```

```

00473     oDCPList.push_back (63); oDCPList.push_back (56); oDCPList.push_back (49);
00474     oDCPList.push_back (42); oDCPList.push_back (35); oDCPList.push_back (31);
00475     oDCPList.push_back (27); oDCPList.push_back (23); oDCPList.push_back (19);
00476     oDCPList.push_back (16); oDCPList.push_back (13); oDCPList.push_back (10);
00477     oDCPList.push_back (7); oDCPList.push_back (5); oDCPList.push_back (3);
00478     oDCPList.push_back (1); oDCPList.push_back (0);
00479     // oDCPList.push_back (63); oDCPList.push_back (49);
00480     // oDCPList.push_back (35); oDCPList.push_back (23);
00481     // oDCPList.push_back (16); oDCPList.push_back (10);
00482     // oDCPList.push_back (5); oDCPList.push_back (1);
00483     // oDCPList.push_back (0);
00484     return oDCPList;
00485 }
00487 const DTDFratMap_T DEFAULT_DTD_FRAT5COEF_MAP =
00488     DefaultDtdFratMap::init();
00489 DTDFratMap_T DefaultDtdFratMap::init() {
00490     DTDFratMap_T oDFCMap;
00491     oDFCMap[71] = 2.50583571429; oDFCMap[63] = 2.55994571429;
00492     oDFCMap[56] = 2.60841857143; oDFCMap[49] = 2.68888;
00493     oDFCMap[42] = 2.78583714286; oDFCMap[35] = 2.89091428571;
00494     oDFCMap[31] = 2.97871428571; oDFCMap[28] = 3.05521428571;
00495     oDFCMap[24] = 3.15177142857; oDFCMap[21] = 3.22164285714;
00496     oDFCMap[17] = 3.32237142857; oDFCMap[14] = 3.38697142857;
00497     oDFCMap[10] = 3.44204285714; oDFCMap[7] = 3.46202857143;
00498     oDFCMap[5] = 3.47177142857; oDFCMap[3] = 3.4792;
00499     oDFCMap[1] = 3.48947142857; // oDFCMap[0] = 3.49111428571;
00500     return oDFCMap;
00501 }
00502
00504 const DTDProbMap_T DEFAULT_DTD_PROB_MAP =
00505     DefaultDtdProbMap::init();
00506 DTDProbMap_T DefaultDtdProbMap::init() {
00507     DTDProbMap_T oDPMap;
00508     oDPMap[-330] = 0; oDPMap[-150] = 0.1; oDPMap[-92] = 0.2;
00509     oDPMap[-55] = 0.3; oDPMap[-34] = 0.4; oDPMap[-21] = 0.5;
00510     oDPMap[-12] = 0.6; oDPMap[-6] = 0.7; oDPMap[-3] = 0.8;
00511     oDPMap[-1] = 0.9; oDPMap[0] = 1.0;
00512     return oDPMap;
00513 }
00514
00515
00516 // ////////// Key and display related //////////
00517 const std::string DEFAULT_KEY_FLD_DELIMITER (";");
00520
00523 const std::string DEFAULT_KEY_SUB_FLD_DELIMITER (",");
00524
00526 const boost::char_separator<char> DEFAULT_KEY_TOKEN_DELIMITER ("; ", " ");
00527
00529 const OnDStringList_T DEFAULT_OND_STRING_LIST;
00530
00531
00532 // ////////// BomManager-related constants //////////
00535 const std::string DISPLAY_LEVEL_STRING_ARRAY[51] =
00536 { "", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00537   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00538   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00539   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00540   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00541   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00542   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00543   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ",
00544   " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " ", " "

```

```

00545     "
00546     "
00547     "
00548     "
00549     "
00550     "
00551     "
00552     "
00553     "
00554     "
00555     "
00556     "
00557     "
00558     "
00559     "
00560     "
00561     "

00562     "
00563     "
00564     "
00565     "
00566     "
00567     "
00568     "
00569     "
00570     "
00571     "
00572     "
00573     "
00574     "
00575     "

    " };

00576
00577
00578 }
```

### 35.23 stdair/basic/BasConst\_BomDisplay.hpp File Reference

```

#include <string>
#include <boost/tokenizer.hpp>
```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

#### Variables

- const std::string [stdair::DEFAULT\\_KEY\\_FLD\\_DELIMITER](#)
- const std::string [stdair::DEFAULT\\_KEY\\_SUB\\_FLD\\_DELIMITER](#)
- const boost::char\_separator< char > [stdair::DEFAULT\\_KEY\\_TOKEN\\_DELIMITER](#)

#### 35.24 BasConst\_BomDisplay.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_BOMMANAGER_HPP
00002 #define __STDAIR_BAS_BASCONST_BOMMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 #include <boost/tokenizer.hpp>
00011
00012 namespace stdair {
00013
00016     extern const std::string DISPLAY_LEVEL_STRING_ARRAY[51];
00017
00020     extern const std::string DEFAULT_KEY_FLD_DELIMITER;
00021
00024     extern const std::string DEFAULT_KEY_SUB_FLD_DELIMITER;
00025
00027     extern const boost::char_separator<char> DEFAULT_KEY_TOKEN_DELIMITER;
00028
00029 }
00030 #endif // __STDAIR_BAS_BASCONST_BOMMANAGER_HPP

```

#### 35.25 stdair/basic/BasConst\_BookingClass.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_fare_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

#### Variables

- const Distance\_T [stdair::DEFAULT\\_DISTANCE\\_VALUE](#)

- const ClassCode\_T stdair::DEFAULT\_CLOSED\_CLASS\_CODE
- const NbOfBookings\_T stdair::DEFAULT\_CLASS\_NB\_OF\_BOOKINGS
- const NbOfBookings\_T stdair::DEFAULT\_CLASS\_TOTAL\_NB\_OF\_BOOKINGS
- const NbOfBookings\_T stdair::DEFAULT\_CLASS\_UNCONSTRAINED\_DEMAND
- const NbOfBookings\_T stdair::DEFAULT\_CLASS\_REMAINING\_DEMAND\_MEAN
- const NbOfBookings\_T stdair::DEFAULT\_CLASS\_REMAINING\_DEMAND\_STANDARD\_DEVIATION
- const NbOfCancellations\_T stdair::DEFAULT\_CLASS\_NB\_OF\_CANCELLATIONS
- const NbOfNoShows\_T stdair::DEFAULT\_CLASS\_NB\_OF\_NOSHOWS
- const CabinCapacity\_T stdair::DEFAULT\_CABIN\_CAPACITY
- const CommittedSpace\_T stdair::DEFAULT\_COMMITTED\_SPACE
- const BlockSpace\_T stdair::DEFAULT\_BLOCK\_SPACE
- const Availability\_T stdair::DEFAULT\_NULL\_AVAILABILITY
- const Availability\_T stdair::DEFAULT\_AVAILABILITY
- const CensorshipFlag\_T stdair::DEFAULT\_CLASS\_CENSORSHIPFLAG
- const BookingLimit\_T stdair::DEFAULT\_CLASS\_BOOKING\_LIMIT
- const AuthorizationLevel\_T stdair::DEFAULT\_CLASS\_AUTHORIZATION\_LEVEL
- const AuthorizationLevel\_T stdair::DEFAULT\_CLASS\_MAX\_AUTHORIZATION\_LEVEL
- const AuthorizationLevel\_T stdair::DEFAULT\_CLASS\_MIN\_AUTHORIZATION\_LEVEL
- const OverbookingRate\_T stdair::DEFAULT\_CLASS\_OVERBOOKING\_RATE
- const Fare\_T stdair::DEFAULT\_FARE\_VALUE
- const Revenue\_T stdair::DEFAULT\_REVENUE\_VALUE
- const PriceCurrency\_T stdair::DEFAULT\_CURRENCY
- const Percentage\_T stdair::DEFAULT\_LOAD\_FACTOR\_VALUE
- const DayDuration\_T stdair::DEFAULT\_DAY\_DURATION
- const double stdair::DEFAULT\_EPSILON\_VALUE

## 35.26 BasConst\_BookingClass.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_BOOKINGCLASS_HPP
00002 #define __STDAIR_BAS_BASCONST_BOOKINGCLASS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_inventory_types.hpp>
00010 #include <stdair/stdair_demand_types.hpp>
00011 #include <stdair/stdair_fare_types.hpp>
00012
00013 namespace stdair {
00014
00015     // ////////// (Segment-)Class-related BOM //////////
00017     extern const Distance_T DEFAULT_DISTANCE_VALUE;
00018
00020     extern const ClassCode_T DEFAULT_CLOSED_CLASS_CODE;
00021
00024     extern const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS;

```

```

00025
00028     extern const NbOfBookings_T DEFAULT_CLASS_TOTAL_NB_OF_BOOKINGS;
00029
00031     extern const NbOfBookings_T DEFAULT_CLASS_UNCONSTRAINED_DEMAND;
00032
00034     extern const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_MEAN;
00035
00038     extern const NbOfBookings_T DEFAULT_CLASS_REMAINING_DEMAND_STANDARD_DEVIATION;
00039
00041     extern const NbOfCancellations_T DEFAULT_CLASS_NB_OF_CANCELLATIONS;
00042
00044     extern const NbOfNoShows_T DEFAULT_CLASS_NB_OF_NOSHOWS;
00045
00047     extern const CabinCapacity_T DEFAULT_CABIN_CAPACITY;
00048
00050     extern const CommittedSpace_T DEFAULT_COMMITTED_SPACE;
00051
00053     extern const BlockSpace_T DEFAULT_BLOCK_SPACE;
00054
00056     extern const Availability_T DEFAULT_NULL_AVAILABILITY;
00057
00059     extern const Availability_T DEFAULT_AVAILABILITY;
00060
00063     extern const CensorshipFlag_T DEFAULT_CLASS_CENSORSHIPFLAG;
00064
00067     extern const CensorshipFlagList_T DEFAULT_CLASS_CENSORSHIPFLAG_LIST;
00068
00070     extern const BookingLimit_T DEFAULT_CLASS_BOOKING_LIMIT;
00071
00073     extern const AuthorizationLevel_T DEFAULT_CLASS_AUTHORIZATION_LEVEL;
00074
00076     extern const AuthorizationLevel_T DEFAULT_CLASS_MAX_AUTHORIZATION_LEVEL;
00077
00079     extern const AuthorizationLevel_T DEFAULT_CLASS_MIN_AUTHORIZATION_LEVEL;
00080
00082     extern const OverbookingRate_T DEFAULT_CLASS_OVERBOOKING_RATE;
00083
00085     extern const Fare_T DEFAULT_FARE_VALUE;
00086
00088     extern const Revenue_T DEFAULT_REVENUE_VALUE;
00089
00091     extern const PriceCurrency_T DEFAULT_CURRENCY;
00092
00094     extern const Percentage_T DEFAULT_LOAD_FACTOR_VALUE;
00095
00097     extern const DayDuration_T DEFAULT_DAY_DURATION;
00098
00101     extern const double DEFAULT_EPSILON_VALUE;
00102
00103 }
00104 #endif // __STDAIR_BAS_BASCONST_BOOKINGCLASS_HPP

```

## 35.27 stdair/basic/BasConst\_DefaultObject.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

#### Variables

- const AirportCode\_T stdair::AIRPORT\_LHR
- const AirportCode\_T stdair::AIRPORT\_SYD
- const CityCode\_T stdair::POS\_LHR
- const DayDuration\_T stdair::NO\_ADVANCE\_PURCHASE
- const SaturdayStay\_T stdair::SATURDAY\_STAY
- const SaturdayStay\_T stdair::NO\_SATURDAY\_STAY
- const ChangeFees\_T stdair::CHANGE\_FEES
- const ChangeFees\_T stdair::NO\_CHANGE\_FEES
- const NonRefundable\_T stdair::NON\_REFUNDABLE
- const NonRefundable\_T stdair::NO\_NON\_REFUNDABLE
- const DayDuration\_T stdair::NO\_STAY\_DURATION
- const CabinCode\_T stdair::CABIN\_Y
- const AirlineCode\_T stdair::AIRLINE\_CODE\_BA
- const ClassCode\_T stdair::CLASS\_CODE\_Y
- const ClassCode\_T stdair::CLASS\_CODE\_Q
- const AirportCode\_T stdair::AIRPORT\_SIN
- const AirportCode\_T stdair::AIRPORT\_BKK
- const CityCode\_T stdair::POS\_SIN
- const CabinCode\_T stdair::CABIN\_ECO
- const FrequentFlyer\_T stdair::FREQUENT\_FLYER\_MEMBER

#### 35.28 BasConst\_DefaultObject.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_DEFAULTOBJECT_HPP
00002 #define __STDAIR_BAS_BASCONST_DEFAULTOBJECT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012 // /////////// Fare and Yield related BOM Tree/////////
00014 extern const AirportCode_T AIRPORT_LHR;
00015
00017 extern const AirportCode_T AIRPORT_SYD;
00018
00020 extern const CityCode_T POS_LHR;
00021
00023 extern const DayDuration_T NO_ADVANCE_PURCHASE;
00024
00026 extern const SaturdayStay_T SATURDAY_STAY;
00027
00029 extern const SaturdayStay_T NO_SATURDAY_STAY;
00030
00032 extern const ChangeFees_T CHANGE_FEES;

```



```

00033
00035  extern const ChangeFees_T NO_CHANGE_FEES;
00036
00038  extern const NonRefundable_T NON_REFUNDABLE;
00039
00041  extern const NonRefundable_T NO_NON_REFUNDABLE;
00042
00044  extern const DayDuration_T NO_STAY_DURATION;
00045
00047  extern const CabinCode_T CABIN_Y;
00048
00050  extern const AirlineCode_T AIRLINE_CODE_BA;
00051
00053  extern const ClassCode_T CLASS_CODE_Y;
00054
00055  // ////////// Travel Solution related objects////////
00057  extern const ClassCode_T CLASS_CODE_Q;
00058
00059  // ////////// Booking request related objects////////
00061  extern const AirportCode_T AIRPORT_SIN;
00062
00064  extern const AirportCode_T AIRPORT_BKK;
00065
00067  extern const CityCode_T POS_SIN;
00068
00070  extern const CabinCode_T CABIN_ECO;
00071
00073  extern const FrequentFlyer_T FREQUENT_FLYER_MEMBER;
00074
00075 }
00076 #endif // __STDAIR_BAS_BASCONST_DEFAULTOBJECT_HPP

```

## 35.29 stdair/basic/BasConst\_Event.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_event_types.hpp>

```

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### Variables

- const EventQueueID\_T [stdair::DEFAULT\\_EVENT\\_QUEUE\\_ID](#)
- const Count\_T [stdair::DEFAULT\\_PROGRESS\\_STATUS](#)
- const Date\_T [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATE](#)
- const DateTime\_T [stdair::DEFAULT\\_EVENT\\_OLDEST\\_DATETIME](#)

### 35.30 BasConst\_Event.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_EVENT_HPP
00002 #define __STDAIR_BAS_BASCONST_EVENT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010 #include <stdair/stdair_event_types.hpp>
00011
00012 namespace stdair {
00013
00015     extern const EventQueueID_T DEFAULT_EVENT_QUEUE_ID;
00016
00018     extern const Count_T DEFAULT_PROGRESS_STATUS;
00019
00022     extern const Date_T DEFAULT_EVENT_OLDEST_DATE;
00023
00026     extern const DateTime_T DEFAULT_EVENT_OLDEST_DATETIME;
00027
00028 }
00029 #endif // __STDAIR_BAS_BASCONST_EVENT_HPP

```

### 35.31 stdair/basic/BasConst\_General.hpp File Reference

```

#include <string>
#include <stdair/stdair_types.hpp>

```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

#### Variables

- const std::string `stdair::DEFAULT_BOM_ROOT_KEY`
- const NbOfFlightDates\_T `stdair::DEFAULT_NB_OF_FLIGHTDATES`
- const unsigned int `stdair::DEFAULT_FLIGHT_SPEED`
- const BookingRatio\_T `stdair::DEFAULT_OND_BOOKING_RATE`
- const Count\_T `stdair::SECONDS_IN_ONE_DAY`
- const Count\_T `stdair::MILLISECONDS_IN_ONE_SECOND`
- const Date\_T `stdair::DEFAULT_DATE`
- const DateTime\_T `stdair::DEFAULT_DATETIME`
- const Duration\_T `stdair::DEFAULT_EPSILON_DURATION`
- const RandomSeed\_T `stdair::DEFAULT_RANDOM_SEED`
- const Duration\_T `stdair::NULL_BOOST_TIME_DURATION`
- const Fare\_T `stdair::DEFAULT_CLASS_FARE_VALUE`
- const NbOfAirlines\_T `stdair::DEFAULT_NBOFAIRLINES`

- const unsigned int `stdair::DEFAULT_NB_OF_DAYS_IN_A_YEAR`
- const `Channellabel_T` `stdair::DEFAULT_CHANNEL`
- const unsigned int `stdair::DEFAULT_NUMBER_OF_SUBDIVISIONS`

### 35.32 BasConst\_General.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_GENERAL_HPP
00002 #define __STDAIR_BAS_BASCONST_GENERAL_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_types.hpp>
00011
00012 namespace stdair {
00013
00015     extern const std::string DEFAULT_BOM_ROOT_KEY;
00016
00018     extern const double DEFAULT_EPSILON_VALUE;
00019
00021     extern const CabinCapacity_T DEFAULT_CABIN_CAPACITY;
00022
00024     extern const NbOfFlightDates_T DEFAULT_NB_OF_FLIGHTDATES;
00025
00027     extern const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS;
00028
00030     extern const Distance_T DEFAULT_DISTANCE_VALUE;
00031
00033     extern const unsigned int DEFAULT_FLIGHT_SPEED;
00034
00036     extern const Fare_T DEFAULT_FARE_VALUE;
00037
00039     extern const PriceCurrency_T DEFAULT_CURRENCY;
00040
00042     extern const Revenue_T DEFAULT_REVENUE_VALUE;
00043
00045     extern const BookingRatio_T DEFAULT_OND_BOOKING_RATE;
00046
00048     extern const Count_T SECONDS_IN_ONE_DAY;
00049
00051     extern const Count_T MILLISECONDS_IN_ONE_SECOND;
00052
00054     extern const Date_T DEFAULT_DATE;
00055
00057     extern const DateTime_T DEFAULT_DATETIME;
00058
00060     extern const Duration_T DEFAULT_EPSILON_DURATION;
00061
00063     extern const RandomSeed_T DEFAULT_RANDOM_SEED;
00064
00066     extern const Duration_T NULL_BOOST_TIME_DURATION;
00067
00069     extern const Fare_T DEFAULT_CLASS_FARE_VALUE;
00070
00072     extern const NbOfAirlines_T DEFAULT_NBOFAIRLINES;
00073
00075     extern const unsigned int DEFAULT_NB_OF_DAYS_IN_A_YEAR;

```

```

00076
00078     extern const NbOfBookings_T DEFAULT_CLASS_NB_OF_BOOKINGS;
00079
00081     extern const ChannelLabel_T DEFAULT_CHANNEL;
00082
00084     extern const OnDStringList_T DEFAULT_OND_STRING_LIST;
00085
00087     extern const unsigned int DEFAULT_NUMBER_OF_SUBDIVISIONS;
00088
00089 }
00090 #endif // __STDAIR_BAS_BASCONST_GENERAL_HPP

```

### 35.33 stdair/basic/BasConst\_Inventory.hpp File Reference

```
#include <stdair/stdair_inventory_types.hpp>
```

```
#include <stdair/stdair_date_time_types.hpp>
```

#### Classes

- struct [stdair::DefaultDCPList](#)
- struct [stdair::DefaultDtdFratMap](#)
- struct [stdair::DefaultDtdProbMap](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

#### Variables

- const AirlineCode\_T [stdair::DEFAULT\\_AIRLINE\\_CODE](#)
- const AirlineCode\_T [stdair::DEFAULT\\_NULL\\_AIRLINE\\_CODE](#)
- const FlightNumber\_T [stdair::DEFAULT\\_FLIGHT\\_NUMBER](#)
- const GuillotineNumber\_T [stdair::DEFAULT\\_GUILLOTINE\\_NUMBER](#)
- const Date\_T [stdair::DEFAULT\\_DEPARTURE\\_DATE](#)
- const AirportCode\_T [stdair::DEFAULT\\_AIRPORT\\_CODE](#)
- const AirportCode\_T [stdair::DEFAULT\\_NULL\\_AIRPORT\\_CODE](#)
- const AirportCode\_T [stdair::DEFAULT\\_ORIGIN](#)
- const AirportCode\_T [stdair::DEFAULT\\_DESTINATION](#)
- const CabinCode\_T [stdair::DEFAULT\\_CABIN\\_CODE](#)
- const FamilyCode\_T [stdair::DEFAULT\\_FARE\\_FAMILY\\_CODE](#)
- const FamilyCode\_T [stdair::DEFAULT\\_NULL\\_FARE\\_FAMILY\\_CODE](#)
- const ClassCode\_T [stdair::DEFAULT\\_CLASS\\_CODE](#)
- const ClassCode\_T [stdair::DEFAULT\\_NULL\\_CLASS\\_CODE](#)
- const BidPrice\_T [stdair::DEFAULT\\_BID\\_PRICE](#)
- const unsigned short [stdair::MAXIMAL\\_NUMBER\\_OF\\_LEGS\\_IN\\_FLIGHT](#)
- const unsigned short [stdair::MAXIMAL\\_NUMBER\\_OF\\_SEGMENTS\\_IN\\_OND](#)

- const Availability\_T stdair::MAXIMAL\_AVAILABILITY
- const SeatIndex\_T stdair::DEFAULT\_SEAT\_INDEX
- const std::string stdair::DEFAULT\_FARE\_FAMILY\_VALUE\_TYPE
- const std::string stdair::DEFAULT\_SEGMENT\_CABIN\_VALUE\_TYPE

### 35.34 BasConst\_Inventory.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_INVENTORY_HPP
00002 #define __STDAIR_BAS_BASCONST_INVENTORY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010
00011 namespace stdair {
00012
00013     // ////////// Inventory-related BOM //////////
00015     extern const AirlineCode_T DEFAULT_AIRLINE_CODE;
00016
00018     extern const AirlineCode_T DEFAULT_NULL_AIRLINE_CODE;
00019
00021     extern const AirlineCodeList_T DEFAULT_AIRLINE_CODE_LIST;
00022
00024     extern const FlightNumber_T DEFAULT_FLIGHT_NUMBER;
00025
00027     extern const GuillotineNumber_T DEFAULT_GUILLOTINE_NUMBER;
00028
00030     extern const Date_T DEFAULT_DEPARTURE_DATE;
00031
00033     extern const AirportCode_T DEFAULT_AIRPORT_CODE;
00034
00036     extern const AirportCode_T DEFAULT_NULL_AIRPORT_CODE;
00037
00039     extern const AirportCode_T DEFAULT_ORIGIN;
00040
00042     extern const AirportCode_T DEFAULT_DESTINATION;
00043
00045     extern const CabinCode_T DEFAULT_CABIN_CODE;
00046
00048     extern const FamilyCode_T DEFAULT_FARE_FAMILY_CODE;
00049
00051     extern const FamilyCode_T DEFAULT_NULL_FARE_FAMILY_CODE;
00052
00054     extern const ClassCode_T DEFAULT_CLASS_CODE;
00055
00057     extern const ClassCode_T DEFAULT_NULL_CLASS_CODE;
00058
00060     extern const ClassList_StringList_T DEFAULT_CLASS_CODE_LIST;
00061
00063     extern const BidPrice_T DEFAULT_BID_PRICE;
00064
00066     extern const BidPriceVector_T DEFAULT_BID_PRICE_VECTOR;
00067
00071     extern const unsigned short MAXIMAL_NUMBER_OF_LEGS_IN_FLIGHT;
00072
00075     extern const unsigned short MAXIMAL_NUMBER_OF_SEGMENTS_IN_OND;
00076

```

```

00078  extern const Availability_T MAXIMAL_AVAILABILITY;
00079
00081  extern const SeatIndex_T DEFAULT_SEAT_INDEX;
00082
00084  extern const std::string DEFAULT_FARE_FAMILY_VALUE_TYPE;
00085
00087  extern const std::string DEFAULT_SEGMENT_CABIN_VALUE_TYPE;
00088
00090  extern const int DEFAULT_MAX_DTD;
00091
00093  extern const DCPList_T DEFAULT_DCP_LIST;
00094  struct DefaultDCPList { static DCPList_T init(); };
00095
00097  extern const DTDFratMap_T DEFAULT_DTD_FRAT5COEF_MAP;
00098  struct DefaultDtdFratMap { static DTDFratMap_T init(); };
00099
00101  extern const DTDProbMap_T DEFAULT_DTD_PROB_MAP;
00102  struct DefaultDtdProbMap { static DTDProbMap_T init(); };
00103
00104
00105 }
00106 #endif // __STDAIR_BAS_BASCONST_INVENTORY_HPP

```

### 35.35 stdair/basic/BasConst\_Period\_BOM.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

#### Variables

- const `DatePeriod_T` `stdair::BOOST_DEFAULT_DATE_PERIOD`
- const `DOW_String_T` `stdair::DEFAULT_DOW_STRING`
- const `DateOffset_T` `stdair::DEFAULT_DATE_OFFSET`

### 35.36 BasConst\_Period\_BOM.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_PERIOD_BOM_HPP
00002 #define __STDAIR_BAS_BASCONST_PERIOD_BOM_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012 // ////////// (Flight-)Period-related BOM //////////
00014  extern const DatePeriod_T BOOST_DEFAULT_DATE_PERIOD;

```

```

00015
00017     extern const std::string DOW_STR[];
00018
00020     extern const DOW_String_T DEFAULT_DOW_STRING;
00021
00023     extern const DateOffset_T DEFAULT_DATE_OFFSET;
00024
00026     extern const DayDuration_T DEFAULT_DAY_DURATION;
00027
00028 }
00029 #endif // __STDAIR_BAS_BASCONST_PERIOD_BOM_HPP

```

### 35.37 stdair/basic/BasConst\_Request.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_date_time_types.hpp>

```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

#### Variables

- const PartySize\_T `stdair::DEFAULT_PARTY_SIZE`
- const DayDuration\_T `stdair::DEFAULT_STAY_DURATION`
- const WTP\_T `stdair::DEFAULT_WTP`
- const CityCode\_T `stdair::DEFAULT_POS`
- const Date\_T `stdair::DEFAULT_PREFERRED_DEPARTURE_DATE`
- const Duration\_T `stdair::DEFAULT_PREFERRED_DEPARTURE_TIME`
- const DateOffset\_T `stdair::DEFAULT_ADVANCE_PURCHASE`
- const Date\_T `stdair::DEFAULT_REQUEST_DATE`
- const Duration\_T `stdair::DEFAULT_REQUEST_TIME`
- const DateTime\_T `stdair::DEFAULT_REQUEST_DATE_TIME`
- const CabinCode\_T `stdair::DEFAULT_PREFERRED_CABIN`
- const ChannelLabel\_T `stdair::CHANNEL_DN`
- const ChannelLabel\_T `stdair::CHANNEL_IN`
- const TripType\_T `stdair::TRIP_TYPE_ONE_WAY`
- const TripType\_T `stdair::TRIP_TYPE_ROUND_TRIP`
- const TripType\_T `stdair::TRIP_TYPE_INBOUND`
- const TripType\_T `stdair::TRIP_TYPE_OUTBOUND`
- const FrequentFlyer\_T `stdair::DEFAULT_FF_TIER`
- const PriceValue\_T `stdair::DEFAULT_VALUE_OF_TIME`

## 35.38 BasConst\_Request.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_REQUEST_HPP
00002 #define __STDAIR_BAS_BASCONST_REQUEST_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_demand_types.hpp>
00010 #include <stdair/stdair_date_time_types.hpp>
00011
00012 namespace stdair {
00013
00015     extern const PartySize_T DEFAULT_PARTY_SIZE;
00016
00018     extern const DayDuration_T DEFAULT_STAY_DURATION;
00019
00021     extern const WTP_T DEFAULT_WTP;
00022
00024     extern const CityCode_T DEFAULT_POS;
00025
00027     extern const Date_T DEFAULT_PREFERRED_DEPARTURE_DATE;
00028
00030     extern const Duration_T DEFAULT_PREFERRED_DEPARTURE_TIME;
00031
00033     extern const DateOffset_T DEFAULT_ADVANCE_PURCHASE;
00034
00036     extern const Date_T DEFAULT_REQUEST_DATE;
00037
00039     extern const Duration_T DEFAULT_REQUEST_TIME;
00040
00042     extern const DateTime_T DEFAULT_REQUEST_DATE_TIME;
00043
00045     extern const CabinCode_T DEFAULT_PREFERRED_CABIN;
00046
00048     extern const ChannelLabel_T DEFAULT_CHANNEL;
00049
00051     extern const ChannelLabel_T CHANNEL_DN;
00052
00054     extern const ChannelLabel_T CHANNEL_IN;
00055
00057     extern const TripType_T TRIP_TYPE_ONE_WAY;
00058
00060     extern const TripType_T TRIP_TYPE_ROUND_TRIP;
00061
00063     extern const TripType_T TRIP_TYPE_INBOUND;
00064
00066     extern const TripType_T TRIP_TYPE_OUTBOUND;
00067
00069     extern const FrequentFlyer_T DEFAULT_FF_TIER;
00070
00072     extern const PriceValue_T DEFAULT_VALUE_OF_TIME;
00073
00074 }
00075 #endif // __STDAIR_BAS_BASCONST_REQUEST_HPP

```



### 35.39 stdair/basic/BasConst\_TravelSolution.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

#### Variables

- const Duration\_T `stdair::DEFAULT_MINIMAL_CONNECTION_TIME`
- const Duration\_T `stdair::DEFAULT_MAXIMAL_CONNECTION_TIME`
- const FlightPathCode\_T `stdair::DEFAULT_FLIGHTPATH_CODE`
- const Availability\_T `stdair::DEFAULT_CLASS_AVAILABILITY`
- const AvailabilityStatus\_T `stdair::DEFAULT_AVAILABILITY_STATUS`
- const unsigned short `stdair::DEFAULT_NUMBER_OF_REQUIRED_SEATS`
- const MatchingIndicator\_T `stdair::DEFAULT_MATCHING_INDICATOR`
- const AirlineCode\_T `stdair::DEFAULT_DICO_STUDIED_AIRLINE`

### 35.40 BasConst\_TravelSolution.hpp

```
00001 #ifndef __STDAIR_BAS_BASCONST_TRAVELSOLUTION_HPP
00002 #define __STDAIR_BAS_BASCONST_TRAVELSOLUTION_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012 // ////////// Travel Solutions //////////
00014 extern const Distance_T DEFAULT_DISTANCE_VALUE;
00015
00017 extern const Duration_T DEFAULT_MINIMAL_CONNECTION_TIME;
00018
00020 extern const Duration_T DEFAULT_MAXIMAL_CONNECTION_TIME;
00021
00023 extern const Duration_T NULL_BOOST_TIME_DURATION;
00024
00026 extern const FlightPathCode_T DEFAULT_FLIGHTPATH_CODE;
00027
00029 extern const Availability_T DEFAULT_CLASS_AVAILABILITY;
00030
00032 extern const AvailabilityStatus_T DEFAULT_AVAILABILITY_STATUS;
00033
00035 extern const unsigned short DEFAULT_NUMBER_OF_REQUIRED_SEATS;
00036
00039 extern const MatchingIndicator_T DEFAULT_MATCHING_INDICATOR;
00040
00042 extern const Revenue_T DEFAULT_REVENUE_VALUE;
```

```

00043
00045     extern const AirlineCode_T DEFAULT_DICO_STUDIED_AIRLINE;
00046
00048     extern const Date_T DEFAULT_DICO_STUDIED_DATE;
00049
00050 }
00051 #endif // __STDAIR_BAS_BASCONST_TRAVELSOLUTION_HPP

```

### 35.41 stdair/basic/BasConst\_Yield.hpp File Reference

```
#include <stdair/stdair_types.hpp>
```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

#### Variables

- const Yield\_T `stdair::DEFAULT_YIELD_VALUE`
- const Yield\_T `stdair::DEFAULT_YIELD_MAX_VALUE`

### 35.42 BasConst\_Yield.hpp

```

00001 #ifndef __STDAIR_BAS_BASCONST_YIELD_HPP
00002 #define __STDAIR_BAS_BASCONST_YIELD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_types.hpp>
00009
00010 namespace stdair {
00011
00012     // ////////// (Leg-)Yield-related BOM //////////
00014     extern const Yield_T DEFAULT_YIELD_VALUE;
00015
00017     extern const Yield_T DEFAULT_YIELD_MAX_VALUE;
00018
00019 }
00020 #endif // __STDAIR_BAS_BASCONST_YIELD_HPP

```

### 35.43 stdair/basic/BasDBParams.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasDBParams.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.44 BasDBParams.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasDBParams.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 BasDBParams::BasDBParams() {
00014 }
00015
00016 // //////////////////////////////////////
00017 BasDBParams::BasDBParams(const BasDBParams& iDBParams)
00018 : _user (iDBParams._user), _passwd (iDBParams._passwd),
00019   _host (iDBParams._host), _port (iDBParams._port),
00020   _dbname (iDBParams._dbname) {
00021 }
00022
00023 // //////////////////////////////////////
00024 BasDBParams::BasDBParams(const std::string& iDBUser,
00025                          const std::string& iDBPasswd,
00026                          const std::string& iDBHost,
00027                          const std::string& iDBPort,
00028                          const std::string& iDBName)
00029 : _user (iDBUser), _passwd (iDBPasswd), _host (iDBHost), _port (iDBPort),
00030   _dbname (iDBName) {
00031 }
00032
00033 // //////////////////////////////////////
00034 BasDBParams::~BasDBParams() {
00035 }
00036
00037 // //////////////////////////////////////
00038 const std::string BasDBParams::describe() const {
00039     return toString();
00040 }
00041
00042 // //////////////////////////////////////
00043 std::string BasDBParams::toShortString() const {
00044     std::ostringstream oStr;
00045     oStr << _dbname << "." << _user << "@" << _host << ":" << _port;
00046     return oStr.str();
00047 }
00048
00049 // //////////////////////////////////////
00050 std::string BasDBParams::toString() const {
00051     std::ostringstream oStr;
00052     oStr << _dbname << "." << _user << "@" << _host << ":" << _port;
00053     return oStr.str();

```

```

00054     }
00055
00056     // //////////////////////////////////////
00057     bool BasDBParams::check() const {
00058         if (_user.empty() == true || _passwd.empty() == true
00059             || _host.empty() == true || _port.empty()
00060             || _dbname.empty() == true) {
00061             return false;
00062         }
00063         return true;
00064     }
00065
00066 }

```

### 35.45 stdair/basic/BasDBParams.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_db.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::BasDBParams](#)  
*Structure holding the parameters for connection to a database.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.46 BasDBParams.hpp

```

00001 #ifndef __STDAIR_BAS_BASDBPARAMS_HPP
00002 #define __STDAIR_BAS_BASDBPARAMS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // Stdair
00011 #include <stdair/stdair_db.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013
00014 namespace stdair {
00015
00019     struct BasDBParams : public StructAbstract {
00020     public:
00021         // //////////// Getters ////////////

```

```
00023     const std::string& getUser() const {
00024         return _user;
00025     }
00026
00028     const std::string& getPassword() const {
00029         return _passwd;
00030     }
00031
00033     const std::string& getHost() const {
00034         return _host;
00035     }
00036
00038     const std::string& getPort() const {
00039         return _port;
00040     }
00041
00043     const std::string& getDBName() const {
00044         return _dbname;
00045     }
00046
00047
00048     // ////////// Setters //////////
00050     void setUser (const std::string& iUser) {
00051         _user = iUser;
00052     }
00053
00055     void setPassword (const std::string& iPasswd) {
00056         _passwd = iPasswd;
00057     }
00058
00060     void setHost (const std::string& iHost) {
00061         _host = iHost;
00062     }
00063
00065     void setPort (const std::string& iPort) {
00066         _port = iPort;
00067     }
00068
00070     void setDBName (const std::string& iDBName) {
00071         _dbname = iDBName;
00072     }
00073
00074
00075     public:
00076         // ////////// Busines methods //////////
00080         bool check() const;
00081
00082
00083     public:
00084         // ////////// Display methods //////////
00088         const std::string describe() const;
00089
00093         std::string toShortString() const;
00094
00098         std::string toString() const;
00099
00100
00101     public:
00105         BasDBParams (const std::string& iDBUser, const std::string& iDBPasswd,
00106                     const std::string& iDBHost, const std::string& iDBPort,
00107                     const std::string& iDBName);
00108
```

```

00112     BasDBParams();
00113
00117     BasDBParams (const BasDBParams&);
00118
00122     ~BasDBParams();
00123
00124
00125 private:
00126     // ////////// Attributes //////////
00128     std::string _user;
00130     std::string _passwd;
00132     std::string _host;
00134     std::string _port;
00136     std::string _dbname;
00137 };
00138
00139 }
00140 #endif // __STDAIR_BAS_BASDBPARAMS_HPP

```

### 35.47 stdair/basic/BasFileMgr.cpp File Reference

```

#include <cassert>
#include <boost/version.hpp>
#include <boost/filesystem/path.hpp>
#include <boost/filesystem/operations.hpp>
#include <stdair/basic/BasFileMgr.hpp>

```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.48 BasFileMgr.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // Boost (STL Extension)
00007 // Boost Filesystem (http://www.boost.org/doc/libs/1_41_0/libs/filesystem/doc/ind
ex.htm)
00008 #include <boost/version.hpp>
00009 #if BOOST_VERSION >= 103500
00010 #include <boost/filesystem.hpp>
00011 #else // BOOST_VERSION >= 103500
00012 #include <boost/filesystem/path.hpp>
00013 #include <boost/filesystem/operations.hpp>
00014 #endif // BOOST_VERSION >= 103500
00015 // StdAir
00016 #include <stdair/basic/BasFileMgr.hpp>
00017

```

```

00018 namespace boostfs = boost::filesystem;
00019
00020 namespace stdair {
00021
00022     // //////////////////////////////////////
00023     bool BasFileMgr::doesExistAndIsReadable (const std::string& iFilepath) {
00024         bool oFine = false;
00025
00026         boostfs::path lPath (iFilepath);
00027
00028         if (boostfs::exists (lPath) == false) {
00029             return oFine;
00030         }
00031
00032         #if BOOST_VERSION >= 103500
00033             if (boostfs::is_regular (lPath) == true) {
00034                 oFine = true;
00035             }
00036         #endif // BOOST_VERSION >= 103500
00037
00038         return oFine;
00039     }
00040
00041 }

```

### 35.49 stdair/basic/BasFileMgr.hpp File Reference

```
#include <string>
```

#### Classes

- struct [stdair::BasFileMgr](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.50 BasFileMgr.hpp

```

00001 #ifndef __STDAIR_BAS_BASFILEMGR_HPP
00002 #define __STDAIR_BAS_BASFILEMGR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
00012     struct BasFileMgr {
00013     public:
00014
00015

```

```

00016 // ////////////////// Functional Support Methods //////////////////
00017 static bool doesExistAndIsReadable (const std::string& iFilepath);
00018 };
00019 };
00020 };
00021 }
00022 #endif // __STDAIR_BAS_BASFILEMGR_HPP

```

## 35.51 stdair/basic/BasLogParams.cpp File Reference

```

#include <cassert>
#include <iostream>
#include <sstream>
#include <stdair/basic/BasLogParams.hpp>

```

### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

## 35.52 BasLogParams.cpp

```

00001 // //////////////////
00002 // Import section
00003 // //////////////////
00004 // STL
00005 #include <cassert>
00006 #include <iostream>
00007 #include <sstream>
00008 // StdAir
00009 #include <stdair/basic/BasLogParams.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////
00014 BasLogParams::BasLogParams()
00015 : _logLevel (LOG::DEBUG), _logStream (std::cout),
00016   _forceMultipleInit (false) {
00017     assert (false);
00018 }
00019
00020 // //////////////////
00021 BasLogParams::BasLogParams (const BasLogParams& iLogParams)
00022 : _logLevel (iLogParams._logLevel), _logStream (iLogParams._logStream),
00023   _forceMultipleInit (iLogParams._forceMultipleInit) {
00024 }
00025
00026 // //////////////////
00027 BasLogParams::BasLogParams (const LOG::EN_LogLevel iLogLevel,
00028                             std::ostream& ioLogOutputStream,
00029                             const bool iForceMultipleInstance)
00030 : _logLevel (iLogLevel), _logStream (ioLogOutputStream),
00031   _forceMultipleInit (iForceMultipleInstance) {

```



```

00032     }
00033
00034     // //////////////////////////////////////
00035     BasLogParams::~BasLogParams() {
00036     }
00037
00038     // //////////////////////////////////////
00039     const std::string BasLogParams::describe() const {
00040         return toString();
00041     }
00042
00043     // //////////////////////////////////////
00044     std::string BasLogParams::toShortString() const {
00045         const std::string isForcedStr = (_forceMultipleInit == true)? " (forced)":"";
00046         std::ostringstream ostr;
00047         ostr << LOG::_logLevels[_logLevel] << isForcedStr;
00048         return ostr.str();
00049     }
00050
00051     // //////////////////////////////////////
00052     std::string BasLogParams::toString() const {
00053         std::ostringstream ostr;
00054         ostr << LOG::_logLevels[_logLevel];
00055         return ostr.str();
00056     }
00057
00058 }

```

### 35.53 stdair/basic/BasLogParams.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_log.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::BasLogParams](#)  
Structure holding parameters for logging.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.54 BasLogParams.hpp

```

00001 #ifndef __STDAIR_BAS_BASLOGPARAMS_HPP
00002 #define __STDAIR_BAS_BASLOGPARAMS_HPP
00003
00004 // //////////////////////////////////////

```

```

00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // Stdair
00011 #include <stdair/stdair_log.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013
00014 namespace stdair {
00015
00016     struct BasLogParams : public StructAbstract {
00017     public:
00018         // ////////// Getters //////////
00019         const LOG::EN_LogLevel& getLogLevel() const {
00020             return _logLevel;
00021         }
00022
00023         std::ostream& getLogStream() const {
00024             return _logStream;
00025         }
00026
00027         const bool getForcedInitialisationFlag() const {
00028             return _forceMultipleInit;
00029         }
00030
00031         // ////////// Setters //////////
00032         void setForcedInitialisationFlag (const bool iForceMultipleInstance) {
00033             _forceMultipleInit = iForceMultipleInstance;
00034         }
00035
00036     public:
00037         // ////////// Busines methods //////////
00038         bool check() const;
00039
00040     public:
00041         // ////////// Display methods //////////
00042         const std::string describe() const;
00043
00044         std::string toShortString() const;
00045
00046         std::string toString() const;
00047
00048     public:
00049         BasLogParams (const LOG::EN_LogLevel iLogLevel,
00050                      std::ostream& ioLogOutputStream,
00051                      const bool iForceMultipleInstance = false);
00052
00053         BasLogParams (const BasLogParams&);
00054
00055         ~BasLogParams();
00056
00057     private:
00058         BasLogParams();
00059
00060     private:

```

```

00111 // ////////// Attributes //////////
00115 const LOG::EN_LogLevel _logLevel;
00116
00120 std::ostream& _logStream;
00121
00135 bool _forceMultipleInit;
00136 };
00137
00138 }
00139 #endif // __STDAIR_BAS_BASLOGPARAMS_HPP

```

## 35.55 stdair/basic/BasParserHelperTypes.hpp File Reference

```

#include <string>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/service/Logger.hpp>

```

### Classes

- struct [stdair::date\\_time\\_element< MIN, MAX >](#)

### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### Typedefs

- typedef date\_time\_element< 0, 23 > [stdair::hour\\_t](#)
- typedef date\_time\_element< 0, 59 > [stdair::minute\\_t](#)
- typedef date\_time\_element< 0, 59 > [stdair::second\\_t](#)
- typedef date\_time\_element< 1900, 2100 > [stdair::year\\_t](#)
- typedef date\_time\_element< 1, 12 > [stdair::month\\_t](#)
- typedef date\_time\_element< 1, 31 > [stdair::day\\_t](#)

### Functions

- template<int MIN, int MAX>  
date\_time\_element< MIN, MAX > [stdair::operator\\*](#) (const date\_time\_element< MIN, MAX > &o1, const date\_time\_element< MIN, MAX > &o2)
- template<int MIN, int MAX>  
date\_time\_element< MIN, MAX > [stdair::operator+](#) (const date\_time\_element< MIN, MAX > &o1, const date\_time\_element< MIN, MAX > &o2)

## 35.56 BasParserHelperTypes.hpp

```

00001 #ifndef __STDAIR_BAS_BASCOMPARSERHELPERTYPES_HPP
00002 #define __STDAIR_BAS_BASCOMPARSERHELPERTYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <sstream>
00010 // StdAir
00011 #include <stdair/stdair_exceptions.hpp>
00012 #include <stdair/service/Logger.hpp>
00013
00014 namespace stdair {
00015
00016 // //////////////////////////////////////
00017 //
00018 // Parser structure helper
00019 //
00020 // //////////////////////////////////////
00022 template <int MIN = 0, int MAX = 0>
00023 struct date_time_element {
00024     unsigned int _value;
00025
00026     // ////////////////////////////////// Constructors //////////////////////////////////
00028     date_time_element () { }
00030     date_time_element (const date_time_element& t) : _value (t._value) { }
00032     date_time_element (int i) : _value (i) { }
00034     void check () const {
00035         if (_value < MIN || _value > MAX) {
00036             std::ostringstream oMessage;
00037             oMessage << "The value: " << _value << " is out of range ("
00038                 << MIN << ", " << MAX << ")";
00039             throw stdair::ParserException (oMessage.str());
00040         }
00041     }
00042 };
00043
00045 template <int MIN, int MAX>
00046 inline date_time_element<MIN,
00047     MAX> operator*(const date_time_element<MIN, MAX>& o1,
00048     const date_time_element<MIN, MAX>& o2) {
00049     return date_time_element<MIN, MAX> (o1._value * o2._value);
00050 }
00051
00053 template <int MIN, int MAX>
00054 inline date_time_element<MIN,
00055     MAX> operator+(const date_time_element<MIN, MAX>& o1,
00056     const date_time_element<MIN, MAX>& o2) {
00057     return date_time_element<MIN, MAX> (o1._value + o2._value);
00058 }
00059
00061 typedef date_time_element<0, 23> hour_t;
00062 typedef date_time_element<0, 59> minute_t;
00063 typedef date_time_element<0, 59> second_t;
00064 typedef date_time_element<1900, 2100> year_t;
00065 typedef date_time_element<1, 12> month_t;
00066 typedef date_time_element<1, 31> day_t;

```

```

00067
00068 }
00069 #endif // __STDAIR_BAS_BASCOMPASERHELPERTYPES_HPP

```

### 35.57 stdair/basic/BasParserTypes.hpp File Reference

```

#include <string>
#include <boost/spirit/include/qi.hpp>
#include <boost/spirit/include/phoenix_core.hpp>
#include <boost/spirit/include/phoenix_operator.hpp>
#include <boost/spirit/include/support_multi_pass.hpp>
#include <stdair/basic/BasParserHelperTypes.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::istreambuf\_iterator< char > [stdair::base\\_iterator\\_t](#)
- typedef boost::spirit::multi\_pass< base\_iterator\_t > [stdair::iterator\\_t](#)
- typedef boost::spirit::qi::int\_parser< unsigned int, 10, 1, 1 > [stdair::int1\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< int, 10, 2, 2 > [stdair::uint2\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< int, 10, 4, 4 > [stdair::uint4\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< int, 10, 1, 4 > [stdair::uint1\\_4\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< hour\_t, 10, 2, 2 > [stdair::hour\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< minute\_t, 10, 2, 2 > [stdair::minute\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< second\_t, 10, 2, 2 > [stdair::second\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< year\_t, 10, 4, 4 > [stdair::year\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< month\_t, 10, 2, 2 > [stdair::month\\_p\\_t](#)
- typedef boost::spirit::qi::uint\_parser< day\_t, 10, 2, 2 > [stdair::day\\_p\\_t](#)

### 35.58 BasParserTypes.hpp

```

00001 #ifndef __STDAIR_BAS_BASCOMPASERTYPES_HPP
00002 #define __STDAIR_BAS_BASCOMPASERTYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost Spirit (Parsing)
00010 #include <boost/spirit/include/qi.hpp>
00011 #include <boost/spirit/include/phoenix_core.hpp>

```

```

00012 #include <boost/spirit/include/phoenix_operator.hpp>
00013 #include <boost/spirit/include/support_multi_pass.hpp>
00014 // STDAIR
00015 #include <stdair/basic/BasParserHelperTypes.hpp>
00016
00017 namespace stdair {
00018
00019 // //////////////////////////////////////
00020 //
00021 // Definition of Basic Types
00022 //
00023 // //////////////////////////////////////
00024 // The types of iterator, scanner and rule are then derived from
00025 // the parsing unit.
00026 typedef std::istreambuf_iterator<char> base_iterator_t;
00027 typedef boost::spirit::multi_pass<base_iterator_t> iterator_t;
00028
00029 // //////////////////////////////////////
00030 //
00031 // Parser related types
00032 //
00033 // //////////////////////////////////////
00035 typedef boost::spirit::qi::int_parser<unsigned int, 10, 1, 1> int1_p_t;
00036
00038 typedef boost::spirit::qi::uint_parser<int, 10, 2, 2> uint2_p_t;
00039
00041 typedef boost::spirit::qi::uint_parser<int, 10, 4, 4> uint4_p_t;
00042
00044 typedef boost::spirit::qi::uint_parser<int, 10, 1, 4> uint1_4_p_t;
00045
00047 typedef boost::spirit::qi::uint_parser<hour_t, 10, 2, 2> hour_p_t;
00048 typedef boost::spirit::qi::uint_parser<minute_t, 10, 2, 2> minute_p_t;
00049 typedef boost::spirit::qi::uint_parser<second_t, 10, 2, 2> second_p_t;
00050 typedef boost::spirit::qi::uint_parser<year_t, 10, 4, 4> year_p_t;
00051 typedef boost::spirit::qi::uint_parser<month_t, 10, 2, 2> month_p_t;
00052 typedef boost::spirit::qi::uint_parser<day_t, 10, 2, 2> day_p_t;
00053 }
00054 #endif // __STDAIR_BAS_BASCOMPARSERTYPES_HPP

```

## 35.59 stdair/basic/BasTypes.hpp File Reference

```
#include <string>
```

### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

## 35.60 BasTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BAS_BASTYPES_HPP
00003 #define __STDAIR_BAS_BASTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section

```

```

00007 // //////////////////////////////////////
00008 // STL
00009 #include <string>
00010
00011 namespace stdair {
00012
00013 }
00014 #endif // __STDAIR_BAS_BASTYPES_HPP

```

### 35.61 stdair/basic/ContinuousAttributeLite.hpp File Reference

```

#include <cassert>
#include <iosfwd>
#include <string>
#include <vector>
#include <map>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/DictionaryManager.hpp>

```

#### Classes

- struct [stdair::ContinuousAttributeLite< T >](#)  
*Class modeling the distribution of values that can be taken by a continuous attribute.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.62 ContinuousAttributeLite.hpp

```

00001 #ifndef __STDAIR_BAS_CONTINUOUSATTRIBUTE_LITE_HPP
00002 #define __STDAIR_BAS_CONTINUOUSATTRIBUTE_LITE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <cassert>
00009 #include <iosfwd>
00010 #include <string>
00011 #include <vector>
00012 #include <map>
00013 // StdAir
00014 #include <stdair/stdair_basic_types.hpp>
00015 // TraDemGen

```

```

00016 #include <stdair/stdair_exceptions.hpp>
00017 #include <stdair/basic/DictionaryManager.hpp>
00018
00019 namespace stdair {
00020
00021     template <typename T>
00022     struct ContinuousAttributeLite {
00023     public:
00024         // ////////////////////////////////// Type definitions //////////////////////////////////
00025         typedef std::map<T, stdair::Probability_T> ContinuousDistribution_T;
00026
00027     public:
00028         // ////////////////////////////////// Business Methods //////////////////////////////////
00029         const T getValue(const stdair::Probability_T& iCumulativeProbability) const {
00030             const DictionaryKey_T& lKey =
00031                 DictionaryManager::valueToKey (iCumulativeProbability);
00032
00033             // Find the first cumulative probability value greater or equal to lKey.
00034             unsigned int idx = 0;
00035             for (; idx < _size; ++idx) {
00036                 if (_cumulativeDistribution.at(idx) > lKey) {
00037                     break;
00038                 }
00039             }
00040
00041             if (idx == 0) {
00042                 return _valueArray.at(idx);
00043             }
00044             if (idx == _size) {
00045                 return _valueArray.at(idx-1);
00046             }
00047
00048             //
00049             const stdair::Probability_T& lCumulativeCurrentPoint =
00050                 DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00051             const T& lValueCurrentPoint = _valueArray.at(idx);
00052
00053             //
00054             const stdair::Probability_T& lCumulativePreviousPoint =
00055                 DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00056             const T& lValuePreviousPoint = _valueArray.at(idx-1);
00057
00058             if (lCumulativePreviousPoint == lCumulativeCurrentPoint) {
00059                 return lValuePreviousPoint;
00060             }
00061
00062             T oValue= lValuePreviousPoint + (lValueCurrentPoint - lValuePreviousPoint)
00063                 * (iCumulativeProbability - lCumulativePreviousPoint)
00064                 / (lCumulativeCurrentPoint - lCumulativePreviousPoint);
00065
00066             return oValue;
00067         }
00068     public:
00069         // ////////////////////////////////// Business Methods //////////////////////////////////
00070         const stdair::Probability_T getRemainingProportion(const T& iValue) const {
00071
00072             // Find the first value greater than iValue.
00073             unsigned int idx = 0;
00074             for (; idx < _size; ++idx) {
00075                 if (_valueArray.at(idx) > iValue) {

```



```

00090         break;
00091     }
00092 }
00093 if (idx == 0) {
00094     const stdair::Probability_T& oCumulativeProbability =
00095         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00096     return 1 - oCumulativeProbability;
00097 }
00098 if (idx == _size) {
00099     const stdair::Probability_T& oCumulativeProbability =
00100         DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00101     return 1 - oCumulativeProbability;
00102 }
00103
00104 //
00105 const stdair::Probability_T& lCumulativeCurrentPoint =
00106     DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00107 const T& lValueCurrentPoint = _valueArray.at(idx);
00108
00109 //
00110 const stdair::Probability_T& lCumulativePreviousPoint =
00111     DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00112 const T& lValuePreviousPoint = _valueArray.at(idx-1);
00113
00114 if (lValuePreviousPoint == lValueCurrentPoint) {
00115     return 1 - lCumulativePreviousPoint;
00116 }
00117
00118 const stdair::Probability_T& oCumulativeProbability =
00119     lCumulativePreviousPoint + (lCumulativeCurrentPoint - lCumulativePrevious
Point)
00120     * (iValue - lValuePreviousPoint)
00121     / (lValueCurrentPoint - lValuePreviousPoint);
00122
00123     return 1 - oCumulativeProbability;
00124 }
00125
00126 public:
00127     // ////////////////////////////////// Business Methods //////////////////////////////////
00131     const double getDerivativeValue(const T iKey) const{
00132
00133         // Find the first key value greater or equal to iKey.
00134         unsigned int idx = 0;
00135         for (; idx < _size; ++idx) {
00136             if (_valueArray.at(idx) > iKey) {
00137                 break;
00138             }
00139         }
00140         assert (idx != 0);
00141         assert (idx != _size);
00142
00143         //
00144         const stdair::Probability_T& lCumulativeCurrentPoint =
00145             DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00146         const T& lValueCurrentPoint = _valueArray.at(idx);
00147
00148         //
00149         const stdair::Probability_T& lCumulativePreviousPoint =
00150             DictionaryManager::keyToValue (_cumulativeDistribution.at(idx-1));
00151         const T& lValuePreviousPoint = _valueArray.at(idx-1);
00152         assert (lValueCurrentPoint != lValuePreviousPoint);
00153

```

```

00154         const double oValue= (lCumulativeCurrentPoint - lCumulativePreviousPoint)
00155             / (lValueCurrentPoint - lValuePreviousPoint);
00156
00157         return oValue;
00158     }
00159
00163     const T getUpperBound (const T iKey) const {
00164         // Find the first key value greater or equal to iKey.
00165         unsigned int idx = 0;
00166         for (; idx < _size; ++idx) {
00167             if (_valueArray.at(idx) > iKey) {
00168                 break;
00169             }
00170         }
00171         assert (idx != 0);
00172         assert (idx != _size);
00173
00174         return _valueArray.at (idx);
00175     }
00176
00177 public:
00178     // //////////// Display Support Methods ////////////
00182     const std::string displayCumulativeDistribution() const {
00183         std::ostringstream oStr;
00184
00185         for (unsigned int idx = 0; idx < _size; ++idx) {
00186             if (idx != 0) {
00187                 oStr << ", ";
00188             }
00189
00190             const stdair::Probability_T lProbability =
00191                 DictionaryManager::keyToValue (_cumulativeDistribution.at(idx));
00192
00193             oStr << _valueArray.at(idx) << ":" << lProbability;
00194         }
00195         return oStr.str();
00196     }
00197
00198
00199 public:
00200     // //////////// Constructors and destructors ////////////
00204     ContinuousAttributeLite (const ContinuousDistribution_T& iValueMap)
00205         : _size (iValueMap.size()) {
00206         init (iValueMap);
00207     }
00208
00212     ContinuousAttributeLite (const ContinuousAttributeLite& iCAL)
00213         : _size (iCAL._size),
00214           _cumulativeDistribution (iCAL._cumulativeDistribution),
00215           _valueArray (iCAL._valueArray) {
00216     }
00217
00221     ContinuousAttributeLite& operator= (const ContinuousAttributeLite& iCAL) {
00222         _size = iCAL._size;
00223         _cumulativeDistribution = iCAL._cumulativeDistribution;
00224         _valueArray = iCAL._valueArray;
00225         return *this;
00226     }
00227
00231     virtual ~ContinuousAttributeLite() {
00232     }
00233

```

```

00234 private:
00238 ContinuousAttributeLite() : _size(1) {
00239     }
00240
00245 void init (const ContinuousDistribution_T& iValueMap) {
00246     //
00247     const unsigned int lSize = iValueMap.size();
00248     _cumulativeDistribution.reserve (lSize);
00249     _valueArray.reserve (lSize);
00250
00251     // Browse the map to retrieve the values and cumulative probabilities.
00252     for (typename ContinuousDistribution_T::const_iterator it =
00253         iValueMap.begin(); it != iValueMap.end(); ++it) {
00254
00255         const T& attributeValue = it->first;
00256         const DictionaryKey_T& lKey = DictionaryManager::valueToKey (it->second);
00257
00258         // Build the two arrays.
00259         _cumulativeDistribution.push_back (lKey);
00260         _valueArray.push_back (attributeValue);
00261     }
00262 }
00263
00264 private:
00265 // ////////// Attributes //////////
00266 unsigned int _size;
00271
00275 std::vector<DictionaryKey_T> _cumulativeDistribution;
00276
00280 std::vector<T> _valueArray;
00281 };
00282
00283 }
00284 #endif // __STDAIR_BAS_CONTINUOUSATTRIBUTE_LITE_HPP

```

### 35.63 stdair/basic/DemandGenerationMethod.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/DemandGenerationMethod.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.64 DemandGenerationMethod.cpp

```

00001 // //////////////////////////////////////
00002 // Import section

```

```

00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/DemandGenerationMethod.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 const std::string DemandGenerationMethod::_labels[LAST_VALUE] =
00015     { "PoissonProcess", "StatisticsOrder" };
00016
00017 // //////////////////////////////////////
00018 const char DemandGenerationMethod::_methodLabels[LAST_VALUE] = { 'P', 'S' };
00019
00020
00021 // //////////////////////////////////////
00022 DemandGenerationMethod::DemandGenerationMethod() : _method (LAST_VALUE) {
00023     assert (false);
00024 }
00025
00026 // //////////////////////////////////////
00027 DemandGenerationMethod::
00028 DemandGenerationMethod (const DemandGenerationMethod& iDemandGenerationMethod)
00029     : _method (iDemandGenerationMethod._method) {
00030 }
00031
00032 // //////////////////////////////////////
00033 DemandGenerationMethod::
00034 DemandGenerationMethod (const EN_DemandGenerationMethod& iDemandGenerationMetho
00035 d)
00036     : _method (iDemandGenerationMethod) {
00037 }
00038
00039 // //////////////////////////////////////
00040 DemandGenerationMethod::EN_DemandGenerationMethod
00041 DemandGenerationMethod::getMethod (const char iMethodChar) {
00042     EN_DemandGenerationMethod oMethod;
00043     switch (iMethodChar) {
00044     case 'P': oMethod = POI_PRO; break;
00045     case 'S': oMethod = STA_ORD; break;
00046     default: oMethod = LAST_VALUE; break;
00047     }
00048
00049     if (oMethod == LAST_VALUE) {
00050         const std::string& lLabels = describeLabels();
00051         std::ostringstream oMessage;
00052         oMessage << "The demand (booking request) generation method '"
00053             << iMethodChar
00054             << "' is not known. Known demand (booking request) generation "
00055             << "methods: " << lLabels;
00056         throw CodeConversionException (oMessage.str());
00057     }
00058
00059     return oMethod;
00060 }
00061
00062 // //////////////////////////////////////
00063 DemandGenerationMethod::DemandGenerationMethod (const char iMethodChar)
00064     : _method (getMethod (iMethodChar)) {

```

```

00064     }
00065
00066     // //////////////////////////////////////
00067     DemandGenerationMethod::
00068     DemandGenerationMethod (const std::string& iMethodStr) {
00069         //
00070         const size_t lSize = iMethodStr.size();
00071         assert (lSize == 1);
00072         const char lMethodChar = iMethodStr[0];
00073         _method = getMethod (lMethodChar);
00074     }
00075
00076     // //////////////////////////////////////
00077     const std::string& DemandGenerationMethod::
00078     getLabel (const EN_DemandGenerationMethod& iMethod) {
00079         return _labels[iMethod];
00080     }
00081
00082     // //////////////////////////////////////
00083     char DemandGenerationMethod::
00084     getMethodLabel (const EN_DemandGenerationMethod& iMethod) {
00085         return _methodLabels[iMethod];
00086     }
00087
00088     // //////////////////////////////////////
00089     std::string DemandGenerationMethod::
00090     getMethodLabelAsString (const EN_DemandGenerationMethod& iMethod) {
00091         std::ostringstream ostr;
00092         ostr << _methodLabels[iMethod];
00093         return ostr.str();
00094     }
00095
00096     // //////////////////////////////////////
00097     std::string DemandGenerationMethod::describeLabels() {
00098         std::ostringstream ostr;
00099         for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00100             if (idx != 0) {
00101                 ostr << ", ";
00102             }
00103             ostr << _labels[idx];
00104         }
00105         return ostr.str();
00106     }
00107
00108     // //////////////////////////////////////
00109     DemandGenerationMethod::EN_DemandGenerationMethod
00110     DemandGenerationMethod::getMethod() const {
00111         return _method;
00112     }
00113
00114     // //////////////////////////////////////
00115     char DemandGenerationMethod::getMethodAsChar() const {
00116         const char oMethodChar = _methodLabels[_method];
00117         return oMethodChar;
00118     }
00119
00120     // //////////////////////////////////////
00121     std::string DemandGenerationMethod::getMethodAsString() const {
00122         std::ostringstream ostr;
00123         ostr << _methodLabels[_method];
00124         return ostr.str();
00125     }

```

```

00126
00127 // //////////////////////////////////////
00128 const std::string DemandGenerationMethod::describe() const {
00129     std::ostringstream ostr;
00130     ostr << _labels[_method];
00131     return ostr.str();
00132 }
00133
00134 // //////////////////////////////////////
00135 bool DemandGenerationMethod::
00136 operator== (const EN_DemandGenerationMethod& iMethod) const {
00137     return (_method == iMethod);
00138 }
00139
00140 }

```

### 35.65 stdair/basic/DemandGenerationMethod.hpp File Reference

```

#include <string>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::DemandGenerationMethod](#)  
*Enumeration of demand (booking request) generation methods.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.66 DemandGenerationMethod.hpp

```

00001 #ifndef __STDAIR_BAS_DEMANDGENERATIONMETHOD_HPP
00002 #define __STDAIR_BAS_DEMANDGENERATIONMETHOD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017     struct DemandGenerationMethod : public StructAbstract {
00018     public:
00019         typedef enum {
00020             POI_PRO = 0,
00021             STA_ORD,
00022             LAST_VALUE

```

```

00023     } EN_DemandGenerationMethod;
00024
00028     static const std::string& getLabel (const EN_DemandGenerationMethod&);
00029
00033     static EN_DemandGenerationMethod getMethod (const char);
00034
00038     static char getMethodLabel (const EN_DemandGenerationMethod&);
00039
00043     static std::string getMethodLabelAsString (const EN_DemandGenerationMethod&);
00044
00048     static std::string describeLabels();
00049
00053     EN_DemandGenerationMethod getMethod() const;
00054
00058     char getMethodAsChar() const;
00059
00063     std::string getMethodAsString() const;
00064
00069     const std::string describe() const;
00070
00071 public:
00075     bool operator== (const EN_DemandGenerationMethod&) const;
00076
00077 public:
00081     DemandGenerationMethod (const EN_DemandGenerationMethod&);
00085     DemandGenerationMethod (const char iMethod);
00089     DemandGenerationMethod (const std::string& iMethod);
00093     DemandGenerationMethod (const DemandGenerationMethod&);
00094
00095 private:
00099     DemandGenerationMethod();
00100
00101
00102 private:
00106     static const std::string _labels[LAST_VALUE];
00110     static const char _methodLabels[LAST_VALUE];
00111
00112 private:
00113     // ////////// Attributes //////////
00117     EN_DemandGenerationMethod _method;
00118 };
00119
00120 }
00121 #endif // __STDAIR_BAS_DEMANDGENERATIONMETHOD_HPP

```

## 35.67 stdair/basic/DictionaryManager.cpp File Reference

```

#include <stdair/basic/DictionaryManager.hpp>
#include <stdair/basic/BasConst_General.hpp>

```

### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

## 35.68 DictionaryManager.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/basic/DictionaryManager.hpp>
00006 #include <stdair/basic/BasConst_General.hpp>
00007
00008 namespace stdair {
00009
00010 // //////////////////////////////////////
00011 const stdair::Probability_T DictionaryManager::
00012 keyToValue (const DictionaryKey_T iKey) {
00013     const float lValue =
00014         static_cast<float> (iKey) / DEFAULT_NUMBER_OF_SUBDIVISIONS;
00015     const stdair::Probability_T lProbability (lValue);
00016     return lProbability;
00017 }
00018
00019 // //////////////////////////////////////
00020 const DictionaryKey_T DictionaryManager::
00021 valueToKey (const stdair::Probability_T iValue) {
00022     const unsigned short lValueMultipliedByThousand =
00023         static_cast<unsigned short> (iValue) * DEFAULT_NUMBER_OF_SUBDIVISIONS;
00024     const DictionaryKey_T lDictionaryKey (lValueMultipliedByThousand);
00025     return lDictionaryKey;
00026 }
00027
00028 }

```

## 35.69 stdair/basic/DictionaryManager.hpp File Reference

```
#include <stdair/stdair_maths_types.hpp>
```

## Classes

- class [stdair::DictionaryManager](#)  
*Class wrapper of dictionary business methods.*

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## Typedefs

- typedef unsigned short [stdair::DictionaryKey\\_T](#)



## 35.70 DictionaryManager.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BASIC_DICTIONARYMANAGER_HPP
00003 #define __STDAIR_BASIC_DICTIONARYMANAGER_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // StdAir
00009 #include <stdair/stdair_maths_types.hpp>
00010
00011 namespace stdair {
00012
00013     // ////////////////////////////////// Type definitions //////////////////////////////////
00017     typedef unsigned short DictionaryKey_T;
00018
00022     class DictionaryManager {
00023     public:
00024         // ////////////////////////////////// Business methods //////////////////////////////////
00028         static const stdair::Probability_T keyToValue (const DictionaryKey_T);
00029
00033         static const DictionaryKey_T valueToKey (const stdair::Probability_T);
00034     };
00035 }
00036 #endif // __STDAIR_BASIC_DICTIONARYMANAGER_HPP

```

## 35.71 stdair/basic/EventType.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/EventType.hpp>

```

## Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

## 35.72 EventType.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/EventType.hpp>
00010
00011 namespace stdair {
00012

```

```

00013 // //////////////////////////////////////
00014 const std::string EventType::_labels[LAST_VALUE] =
00015 { "BookingRequest", "Cancellation", "OptimisationNotificationForFlightDate",
00016   "OptimisationNotificationForNetwork", "ScheduleChange", "Snapshot",
00017   "RevenueMangement", "BreakPoint" };
00018
00019 // //////////////////////////////////////
00020 const char EventType::_typeLabels[LAST_VALUE] = { 'B', 'X', 'F', 'N', 'C', 'S', 'R', 'P' };
00021
00022
00023
00024 // //////////////////////////////////////
00025 EventType::EventType()
00026 : _type (LAST_VALUE) {
00027     assert (false);
00028 }
00029
00030 // //////////////////////////////////////
00031 EventType::EventType (const EventType& iEventType)
00032 : _type (iEventType._type) {
00033 }
00034
00035 // //////////////////////////////////////
00036 EventType::EventType (const EN_EventType& iEventType)
00037 : _type (iEventType) {
00038 }
00039
00040 // //////////////////////////////////////
00041 EventType::EventType (const char iType) {
00042     switch (iType) {
00043     case 'B': _type = BKG_REQ; break;
00044     case 'X': _type = CX; break;
00045     case 'F': _type = OPT_NOT_4_FD; break;
00046     case 'N': _type = OPT_NOT_4_NET; break;
00047     case 'C': _type = SKD_CHG; break;
00048     case 'S': _type = SNAPSHOT; break;
00049     case 'R': _type = RM; break;
00050     case 'P': _type = BRK_PT; break;
00051     default: _type = LAST_VALUE; break;
00052     }
00053
00054     if (_type == LAST_VALUE) {
00055         const std::string& lLabels = describeLabels();
00056         std::ostringstream oMessage;
00057         oMessage << "The event type '" << iType
00058             << "' is not known. Known event types: " << lLabels;
00059         throw CodeConversionException (oMessage.str());
00060     }
00061 }
00062
00063 // //////////////////////////////////////
00064 const std::string& EventType::getLabel (const EN_EventType& iType) {
00065     return _labels[iType];
00066 }
00067
00068 // //////////////////////////////////////
00069 char EventType::getTypeLabel (const EN_EventType& iType) {
00070     return _typeLabels[iType];
00071 }
00072
00073 // //////////////////////////////////////
00074 std::string EventType::getTypeLabelAsString (const EN_EventType& iType) {

```

```

00075     std::ostringstream ostr;
00076     ostr << _typeLabels[iType];
00077     return ostr.str();
00078 }
00079
00080 // //////////////////////////////////////
00081 std::string EventType::describeLabels() {
00082     std::ostringstream ostr;
00083     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00084         if (idx != 0) {
00085             ostr << ", ";
00086         }
00087         ostr << _labels[idx];
00088     }
00089     return ostr.str();
00090 }
00091
00092 // //////////////////////////////////////
00093 EventType::EN_EventType EventType::getType() const {
00094     return _type;
00095 }
00096
00097 // //////////////////////////////////////
00098 std::string EventType::getTypeAsString() const {
00099     std::ostringstream ostr;
00100     ostr << _typeLabels[_type];
00101     return ostr.str();
00102 }
00103
00104 // //////////////////////////////////////
00105 const std::string EventType::describe() const {
00106     std::ostringstream ostr;
00107     ostr << _labels[_type];
00108     return ostr.str();
00109 }
00110
00111 // //////////////////////////////////////
00112 bool EventType::operator==(const EN_EventType& iType) const {
00113     return (_type == iType);
00114 }
00115
00116 }

```

### 35.73 stdair/basic/EventType.hpp File Reference

```
#include <string>
```

```
#include <stdair/basic/StructAbstract.hpp>
```

#### Classes

- struct [stdair::EventType](#)

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.74 EventType.hpp

```

00001 #ifndef __STDAIR_BAS_EVENTTYPE_HPP
00002 #define __STDAIR_BAS_EVENTTYPE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00014     struct EventType : public StructAbstract {
00015     public:
00016         typedef enum {
00017             BKG_REQ = 0,
00018             CX,
00019             OPT_NOT_4_FD,
00020             OPT_NOT_4_NET,
00021             SKD_CHG,
00022             SNAPSHOT,
00023             RM,
00024             BRK_PT,
00025             LAST_VALUE
00026         } EN_EventType;
00027
00028         static const std::string& getLabel (const EN_EventType&);
00029
00030         static char getTypeLabel (const EN_EventType&);
00031
00032         static std::string getTypeLabelAsString (const EN_EventType&);
00033
00034         static std::string describeLabels();
00035
00036         EN_EventType getType() const;
00037
00038         std::string getTypeAsString() const;
00039
00040         const std::string describe() const;
00041
00042     public:
00043         bool operator== (const EN_EventType&) const;
00044
00045     public:
00046         EventType (const EN_EventType&);
00047         EventType (const char iType);
00048         EventType (const EventType&);
00049
00050     private:
00051         EventType();
00052
00053     private:
00054         static const std::string _labels[LAST_VALUE];
00055         static const char _typeLabels[LAST_VALUE];

```

```

00074
00075
00076     private:
00077         // ////////// Attributes //////////
00079         EN_EventType _type;
00080     };
00081
00082 }
00083 #endif // __STDAIR_BAS_EVENTTYPE_HPP

```

## 35.75 stdair/basic/float\_utils.hpp File Reference

```
#include <stdair/basic/float_utils_google.hpp>
```

### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.76 float\_utils.hpp

```

00001 #ifndef __STDAIR_BAS_FLOAT_UTILS_HPP
00002 #define __STDAIR_BAS_FLOAT_UTILS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/basic/float_utils_google.hpp>
00009
00010 namespace stdair {
00011
00023 }
00024 #endif // __STDAIR_BAS_FLOAT_UTILS_HPP

```

## 35.77 stdair/basic/float\_utils\_google.hpp File Reference

### Classes

- class [TypeWithSize< size >](#)
- class [TypeWithSize< 4 >](#)
- class [TypeWithSize< 8 >](#)
- class [FloatingPoint< RawType >](#)

## 35.78 float\_utils\_google.hpp

```

00001 #ifndef __STDAIR_BAS_FLOAT_UTILS_GOOGLE_HPP
00002 #define __STDAIR_BAS_FLOAT_UTILS_GOOGLE_HPP
00003
00004 // Redistribution and use in source and binary forms, with or without

```

```
00005 // modification, are permitted provided that the following conditions are
00006 // met:
00007 //
00008 //      * Redistributions of source code must retain the above copyright
00009 // notice, this list of conditions and the following disclaimer.
00010 //      * Redistributions in binary form must reproduce the above
00011 // copyright notice, this list of conditions and the following disclaimer
00012 // in the documentation and/or other materials provided with the
00013 // distribution.
00014 //      * Neither the name of Google Inc. nor the names of its
00015 // contributors may be used to endorse or promote products derived from
00016 // this software without specific prior written permission.
00017 //
00018 // THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS
00019 // "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
00020 // LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR
00021 // A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT
00022 // OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL,
00023 // SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT
00024 // LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
00025 // DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY
00026 // THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT
00027 // (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE
00028 // OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
00029 //
00030 // Authors: wan@google.com (Zhanyong Wan), eefacm@gmail.com (Sean McAfee)
00031 //
00032 // The Google C++ Testing Framework (Google Test)
00033
00034
00035 // This template class serves as a compile-time function from size to
00036 // type. It maps a size in bytes to a primitive type with that
00037 // size. e.g.
00038 //
00039 //     TypeWithSize<4>::UInt
00040 //
00041 // is typedef-ed to be unsigned int (unsigned integer made up of 4
00042 // bytes).
00043 //
00044 // Such functionality should belong to STL, but I cannot find it
00045 // there.
00046 //
00047 // Google Test uses this class in the implementation of floating-point
00048 // comparison.
00049 //
00050 // For now it only handles UInt (unsigned int) as that's all Google Test
00051 // needs. Other types can be easily added in the future if need
00052 // arises.
00053 template <size_t size>
00054 class TypeWithSize {
00055 public:
00056     // This prevents the user from using TypeWithSize<N> with incorrect
00057     // values of N.
00058     typedef void UInt;
00059 };
00060
00061 // The specialization for size 4.
00062 template <>
00063 class TypeWithSize<4> {
00064 public:
00065     // unsigned int has size 4 in both gcc and MSVC.
00066     //
```

```
00067 // As base/basicTypes.h doesn't compile on Windows, we cannot use
00068 // uint32, uint64, and etc here.
00069 typedef int Int;
00070 typedef unsigned int UInt;
00071 };
00072
00073 // The specialization for size 8.
00074 template <>
00075 class TypeWithSize<8> {
00076 public:
00077 #if GTEST_OS_WINDOWS
00078     typedef __int64 Int;
00079     typedef unsigned __int64 UInt;
00080 #else
00081     typedef long long Int; // NOLINT
00082     typedef unsigned long long UInt; // NOLINT
00083 #endif // GTEST_OS_WINDOWS
00084 };
00085
00086
00087 // This template class represents an IEEE floating-point number
00088 // (either single-precision or double-precision, depending on the
00089 // template parameters).
00090 //
00091 // The purpose of this class is to do more sophisticated number
00092 // comparison. (Due to round-off error, etc, it's very unlikely that
00093 // two floating-points will be equal exactly. Hence a naive
00094 // comparison by the == operation often doesn't work.)
00095 //
00096 // Format of IEEE floating-point:
00097 //
00098 //   The most-significant bit being the leftmost, an IEEE
00099 //   floating-point looks like
00100 //
00101 //       sign_bit exponent_bits fraction_bits
00102 //
00103 //   Here, sign_bit is a single bit that designates the sign of the
00104 //   number.
00105 //
00106 //   For float, there are 8 exponent bits and 23 fraction bits.
00107 //
00108 //   For double, there are 11 exponent bits and 52 fraction bits.
00109 //
00110 //   More details can be found at
00111 //   http://en.wikipedia.org/wiki/IEEE\_floating-point\_standard.
00112 //
00113 // Template parameter:
00114 //
00115 //   RawType: the raw floating-point type (either float or double)
00116 template <typename RawType>
00117 class FloatingPoint {
00118 public:
00119     // Defines the unsigned integer type that has the same size as the
00120     // floating point number.
00121     typedef typename TypeWithSize<sizeof(RawType)>::UInt Bits;
00122
00123     // Constants.
00124
00125     // # of bits in a number.
00126     static const size_t kBitCount = 8*sizeof(RawType);
00127
00128     // # of fraction bits in a number.
```

```

00129 static const size_t kFractionBitCount =
00130     std::numeric_limits<RawType>::digits - 1;
00131
00132 // # of exponent bits in a number.
00133 static const size_t kExponentBitCount = kBitCount - 1 - kFractionBitCount;
00134
00135 // The mask for the sign bit.
00136 static const Bits kSignBitMask = static_cast<Bits>(1) << (kBitCount - 1);
00137
00138 // The mask for the fraction bits.
00139 static const Bits kFractionBitMask =
00140     ~static_cast<Bits>(0) >> (kExponentBitCount + 1);
00141
00142 // The mask for the exponent bits.
00143 static const Bits kExponentBitMask = ~(kSignBitMask | kFractionBitMask);
00144
00145 // How many ULP's (Units in the Last Place) we want to tolerate when
00146 // comparing two numbers. The larger the value, the more error we
00147 // allow. A 0 value means that two numbers must be exactly the same
00148 // to be considered equal.
00149 //
00150 // The maximum error of a single floating-point operation is 0.5
00151 // units in the last place. On Intel CPU's, all floating-point
00152 // calculations are done with 80-bit precision, while double has 64
00153 // bits. Therefore, 4 should be enough for ordinary use.
00154 //
00155 // See the following article for more details on ULP:
00156 // http://www.cygus-software.com/papers/comparingfloats/comparingfloats.htm.
00157 static const size_t kMaxUlp = 4;
00158
00159 // Constructs a FloatingPoint from a raw floating-point number.
00160 //
00161 // On an Intel CPU, passing a non-normalized NAN (Not a Number)
00162 // around may change its bits, although the new value is guaranteed
00163 // to be also a NAN. Therefore, don't expect this constructor to
00164 // preserve the bits in x when x is a NAN.
00165 explicit FloatingPoint(const RawType& x) { u_.value_ = x; }
00166
00167 // Static methods
00168
00169 // Reinterprets a bit pattern as a floating-point number.
00170 //
00171 // This function is needed to test the AlmostEquals() method.
00172 static RawType ReinterpretBits(const Bits bits) {
00173     FloatingPoint fp(0);
00174     fp.u_.bits_ = bits;
00175     return fp.u_.value_;
00176 }
00177
00178 // Returns the floating-point number that represent positive infinity.
00179 static RawType Infinity() {
00180     return ReinterpretBits(kExponentBitMask);
00181 }
00182
00183 // Non-static methods
00184
00185 // Returns the bits that represents this number.
00186 const Bits &bits() const { return u_.bits_; }
00187
00188 // Returns the exponent bits of this number.
00189 Bits exponent_bits() const { return kExponentBitMask & u_.bits_; }
00190

```



```

00191 // Returns the fraction bits of this number.
00192 Bits fraction_bits() const { return kFractionBitMask & u_.bits_; }
00193
00194 // Returns the sign bit of this number.
00195 Bits sign_bit() const { return kSignBitMask & u_.bits_; }
00196
00197 // Returns true iff this is NAN (not a number).
00198 bool is_nan() const {
00199     // It's a NAN if the exponent bits are all ones and the fraction
00200     // bits are not entirely zeros.
00201     return (exponent_bits() == kExponentBitMask) && (fraction_bits() != 0);
00202 }
00203
00204 // Returns true iff this number is at most kMaxUlp's ULP's away from
00205 // rhs. In particular, this function:
00206 //
00207 // - returns false if either number is (or both are) NAN.
00208 // - treats really large numbers as almost equal to infinity.
00209 // - thinks +0.0 and -0.0 are 0 DLP's apart.
00210 bool AlmostEquals(const FloatingPoint& rhs) const {
00211     // The IEEE standard says that any comparison operation involving
00212     // a NAN must return false.
00213     if (is_nan() || rhs.is_nan()) return false;
00214
00215     return DistanceBetweenSignAndMagnitudeNumbers(u_.bits_, rhs.u_.bits_)
00216         <= kMaxUlp's;
00217 }
00218
00219 private:
00220 // The data type used to store the actual floating-point number.
00221 union FloatingPointUnion {
00222     RawType value_; // The raw floating-point number.
00223     Bits bits_;     // The bits that represent the number.
00224 };
00225
00226 // Converts an integer from the sign-and-magnitude representation to
00227 // the biased representation. More precisely, let N be 2 to the
00228 // power of (kBitCount - 1), an integer x is represented by the
00229 // unsigned number x + N.
00230 //
00231 // For instance,
00232 //
00233 // -N + 1 (the most negative number representable using
00234 // sign-and-magnitude) is represented by 1;
00235 // 0 is represented by N; and
00236 // N - 1 (the biggest number representable using
00237 // sign-and-magnitude) is represented by 2N - 1.
00238 //
00239 // Read http://en.wikipedia.org/wiki/Signed\_number\_representations
00240 // for more details on signed number representations.
00241 static Bits SignAndMagnitudeToBiased(const Bits &sam) {
00242     if (kSignBitMask & sam) {
00243         // sam represents a negative number.
00244         return ~sam + 1;
00245     } else {
00246         // sam represents a positive number.
00247         return kSignBitMask | sam;
00248     }
00249 }
00250
00251 // Given two numbers in the sign-and-magnitude representation,
00252 // returns the distance between them as an unsigned number.

```

```

00253     static Bits DistanceBetweenSignAndMagnitudeNumbers(const Bits &sam1,
00254                                                         const Bits &sam2) {
00255         const Bits biased1 = SignAndMagnitudeToBiased(sam1);
00256         const Bits biased2 = SignAndMagnitudeToBiased(sam2);
00257         return (biased1 >= biased2) ? (biased1 - biased2) : (biased2 - biased1);
00258     }
00259
00260     FloatingPointUnion u_;
00261 };
00262
00263 #endif // __STDAIR_BAS_FLOAT_UTILS_GOOGLE_HPP

```

### 35.79 stdair/basic/ForecastingMethod.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/ForecastingMethod.hpp>

```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.80 ForecastingMethod.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/ForecastingMethod.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     const std::string ForecastingMethod::_labels[LAST_VALUE] =
00015         { "AdditivePickUp", "MultiplicativePickUp" };
00016
00017     // //////////////////////////////////////
00018     const char ForecastingMethod::_methodLabels[LAST_VALUE] = { 'A', 'M' };
00019
00020
00021
00022     // //////////////////////////////////////
00023     ForecastingMethod::ForecastingMethod()
00024         : _method (LAST_VALUE) {
00025         assert (false);
00026     }
00027

```

```

00028 // //////////////////////////////////////
00029 ForecastingMethod::
00030 ForecastingMethod (const ForecastingMethod& iForecastingMethod)
00031 : _method (iForecastingMethod._method) {
00032 }
00033
00034 // //////////////////////////////////////
00035 ForecastingMethod::
00036 ForecastingMethod (const EN_ForecastingMethod& iForecastingMethod)
00037 : _method (iForecastingMethod) {
00038 }
00039
00040 // //////////////////////////////////////
00041 ForecastingMethod::ForecastingMethod (const char iMethod) {
00042     switch (iMethod) {
00043         case 'A': _method = ADD_PK; break;
00044         case 'M': _method = MUL_PK; break;
00045         default: _method = LAST_VALUE; break;
00046     }
00047
00048     if (_method == LAST_VALUE) {
00049         const std::string& lLabels = describeLabels();
00050         std::ostringstream oMessage;
00051         oMessage << "The forecasting method '" << iMethod
00052             << "' is not known. Known forecasting methods: " << lLabels;
00053         throw CodeConversionException (oMessage.str());
00054     }
00055 }
00056
00057 // //////////////////////////////////////
00058 const std::string& ForecastingMethod::
00059 getLabel (const EN_ForecastingMethod& iMethod) {
00060     return _labels[iMethod];
00061 }
00062
00063 // //////////////////////////////////////
00064 char ForecastingMethod::getMethodLabel (const EN_ForecastingMethod& iMethod) {
00065     return _methodLabels[iMethod];
00066 }
00067
00068 // //////////////////////////////////////
00069 std::string ForecastingMethod::
00070 getMethodLabelAsString (const EN_ForecastingMethod& iMethod) {
00071     std::ostringstream oStr;
00072     oStr << _methodLabels[iMethod];
00073     return oStr.str();
00074 }
00075
00076 // //////////////////////////////////////
00077 std::string ForecastingMethod::describeLabels() {
00078     std::ostringstream ostr;
00079     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00080         if (idx != 0) {
00081             ostr << ", ";
00082         }
00083         ostr << _labels[idx];
00084     }
00085     return ostr.str();
00086 }
00087
00088 // //////////////////////////////////////
00089 ForecastingMethod::EN_ForecastingMethod ForecastingMethod::getMethod() const {

```

```

00090     return _method;
00091 }
00092
00093 // //////////////////////////////////////
00094 std::string ForecastingMethod::getMethodAsString() const {
00095     std::ostringstream ostr;
00096     ostr << _methodLabels[_method];
00097     return ostr.str();
00098 }
00099
00100 // //////////////////////////////////////
00101 const std::string ForecastingMethod::describe() const {
00102     std::ostringstream ostr;
00103     ostr << _labels[_method];
00104     return ostr.str();
00105 }
00106
00107 // //////////////////////////////////////
00108 bool ForecastingMethod::
00109 operator== (const EN_ForecastingMethod& iMethod) const {
00110     return (_method == iMethod);
00111 }
00112
00113 }

```

### 35.81 stdair/basic/ForecastingMethod.hpp File Reference

```

#include <string>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::ForecastingMethod](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.82 ForecastingMethod.hpp

```

00001 #ifndef __STDAIR_BAS_FORECASTINGMETHOD_HPP
00002 #define __STDAIR_BAS_FORECASTINGMETHOD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {

```

```

00013
00015 struct ForecastingMethod : public StructAbstract {
00016 public:
00017     typedef enum {
00018         ADD_PK = 0,
00019         MUL_PK,
00020         LAST_VALUE
00021     } EN_ForecastingMethod;
00022
00025     static const std::string& getLabel (const EN_ForecastingMethod&);
00026
00028     static char getMethodLabel (const EN_ForecastingMethod&);
00029
00031     static std::string getMethodLabelAsString (const EN_ForecastingMethod&);
00032
00034     static std::string describeLabels();
00035
00037     EN_ForecastingMethod getMethod() const;
00038
00040     std::string getMethodAsString() const;
00041
00044     const std::string describe() const;
00045
00046 public:
00048     bool operator== (const EN_ForecastingMethod&) const;
00049
00050 public:
00052     ForecastingMethod (const EN_ForecastingMethod&);
00054     ForecastingMethod (const char iMethod);
00056     ForecastingMethod (const ForecastingMethod&);
00057
00058 private:
00060     ForecastingMethod();
00061
00062
00063 private:
00065     static const std::string _labels[LAST_VALUE];
00067     static const char _methodLabels[LAST_VALUE];
00068
00069
00070 private:
00071     // ////////// Attributes //////////
00073     EN_ForecastingMethod _method;
00074 };
00075
00076 }
00077 #endif // __STDAIR_BAS_FORECASTINGMETHOD_HPP

```

### 35.83 stdair/basic/PartnershipTechnique.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/stdair_exceptions.hpp>

#include <stdair/basic/PartnershipTechnique.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.84 PartnershipTechnique.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/PartnershipTechnique.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 const std::string PartnershipTechnique::_labels[LAST_VALUE] =
00015     { "None",
00016       "RevenueAvailabilityExchangeDemandAggregation",
00017       "RevenueAvailabilityExchangeYieldProration",
00018       "InterlineBidPriceDemandAggregation",
00019       "InterlineBidPriceYieldProration",
00020       "NonProtectionistInterlineBidPriceYieldProration",
00021       "RevenueManagementCooperation",
00022       "AdvancedRevenueManagementCooperation"};
00023
00024 // //////////////////////////////////////
00025 const char PartnershipTechnique::_techniqueLabels[LAST_VALUE] = { 'N',
00026                                                                      'r',
00027                                                                      'R',
00028                                                                      'i',
00029                                                                      'I',
00030                                                                      'U',
00031                                                                      'C',
00032                                                                      'A'};
00033
00034 // //////////////////////////////////////
00035 PartnershipTechnique::PartnershipTechnique() : _technique (LAST_VALUE) {
00036     assert (false);
00037 }
00038
00039 // //////////////////////////////////////
00040 PartnershipTechnique::
00041 PartnershipTechnique (const PartnershipTechnique& iPartnershipTechnique)
00042     : _technique (iPartnershipTechnique._technique) {
00043 }
00044
00045 // //////////////////////////////////////
00046 PartnershipTechnique::
00047 PartnershipTechnique (const EN_PartnershipTechnique& iPartnershipTechnique)
00048     : _technique (iPartnershipTechnique) {
00049 }
00050
00051 // //////////////////////////////////////
00052 PartnershipTechnique::EN_PartnershipTechnique

```

```

00054 PartnershipTechnique::getTechnique (const char iTechniqueChar) {
00055     EN_PartnershipTechnique oTechnique;
00056     switch (iTechniqueChar) {
00057         case 'N': oTechnique = NONE; break;
00058         case 'r': oTechnique = RAE_DA; break;
00059         case 'R': oTechnique = RAE_YP; break;
00060         case 'i': oTechnique = IBP_DA; break;
00061         case 'I': oTechnique = IBP_YP; break;
00062         case 'U': oTechnique = IBP_YP_U; break;
00063         case 'C': oTechnique = RMC; break;
00064         case 'A': oTechnique = A_RMC; break;
00065         default: oTechnique = LAST_VALUE; break;
00066     }
00067
00068     if (oTechnique == LAST_VALUE) {
00069         const std::string& lLabels = describeLabels();
00070         std::ostringstream oMessage;
00071         oMessage << "The partnership technique '"
00072                 << iTechniqueChar
00073                 << "' is not known. Known partnership techniques: "
00074                 << lLabels;
00075         throw CodeConversionException (oMessage.str());
00076     }
00077
00078     return oTechnique;
00079 }
00080
00081 // //////////////////////////////////////
00082 PartnershipTechnique::PartnershipTechnique (const char iTechniqueChar)
00083 : _technique (getTechnique (iTechniqueChar)) {
00084 }
00085
00086 // //////////////////////////////////////
00087 PartnershipTechnique::
00088 PartnershipTechnique (const std::string& iTechniqueStr) {
00089     //
00090     const size_t lSize = iTechniqueStr.size();
00091     assert (lSize == 1);
00092     const char lTechniqueChar = iTechniqueStr[0];
00093     _technique = getTechnique (lTechniqueChar);
00094 }
00095
00096 // //////////////////////////////////////
00097 const std::string& PartnershipTechnique::
00098 getLabel (const EN_PartnershipTechnique& iTechnique) {
00099     return _labels[iTechnique];
00100 }
00101
00102 // //////////////////////////////////////
00103 char PartnershipTechnique::
00104 getTechniqueLabel (const EN_PartnershipTechnique& iTechnique) {
00105     return _techniqueLabels[iTechnique];
00106 }
00107
00108 // //////////////////////////////////////
00109 std::string PartnershipTechnique::
00110 getTechniqueLabelAsString (const EN_PartnershipTechnique& iTechnique) {
00111     std::ostringstream oStr;
00112     oStr << _techniqueLabels[iTechnique];
00113     return oStr.str();
00114 }
00115

```

```

00116 // //////////////////////////////////////
00117 std::string PartnershipTechnique::describeLabels() {
00118     std::ostringstream ostr;
00119     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00120         if (idx != 0) {
00121             ostr << ", ";
00122         }
00123         ostr << _labels[idx];
00124     }
00125     return ostr.str();
00126 }
00127
00128 // //////////////////////////////////////
00129 PartnershipTechnique::EN_PartnershipTechnique
00130 PartnershipTechnique::getTechnique() const {
00131     return _technique;
00132 }
00133
00134 // //////////////////////////////////////
00135 char PartnershipTechnique::getTechniqueAsChar() const {
00136     const char oTechniqueChar = _techniqueLabels[_technique];
00137     return oTechniqueChar;
00138 }
00139
00140 // //////////////////////////////////////
00141 std::string PartnershipTechnique::getTechniqueAsString() const {
00142     std::ostringstream ostr;
00143     ostr << _techniqueLabels[_technique];
00144     return ostr.str();
00145 }
00146
00147 // //////////////////////////////////////
00148 const std::string PartnershipTechnique::describe() const {
00149     std::ostringstream ostr;
00150     ostr << _labels[_technique];
00151     return ostr.str();
00152 }
00153
00154 // //////////////////////////////////////
00155 bool PartnershipTechnique::
00156 operator== (const EN_PartnershipTechnique& iTechnique) const {
00157     return (_technique == iTechnique);
00158 }
00159
00160 }

```

## 35.85 stdair/basic/PartnershipTechnique.hpp File Reference

```
#include <string>
```

```
#include <stdair/basic/StructAbstract.hpp>
```

### Classes

- struct [stdair::PartnershipTechnique](#)  
*Enumeration of partnership techniques.*



## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.86 PartnershipTechnique.hpp

```

00001 #ifndef __STDAIR_BAS_PARTNERSHIPTECHNIQUE_HPP
00002 #define __STDAIR_BAS_PARTNERSHIPTECHNIQUE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017     struct PartnershipTechnique : public StructAbstract {
00018     public:
00019         typedef enum {
00020             NONE = 0,
00021             RAE_DA,
00022             RAE_YP,
00023             IBP_DA,
00024             IBP_YP,
00025             IBP_YP_U,
00026             RMC,
00027             A_RMC,
00028             LAST_VALUE
00029         } EN_PartnershipTechnique;
00030
00034         static const std::string& getLabel (const EN_PartnershipTechnique&);
00035
00039         static EN_PartnershipTechnique getTechnique (const char);
00040
00044         static char getTechniqueLabel (const EN_PartnershipTechnique&);
00045
00049         static std::string getTechniqueLabelAsString (const EN_PartnershipTechnique&)
00050     ;
00054         static std::string describeLabels();
00055
00059         EN_PartnershipTechnique getTechnique() const;
00060
00064         char getTechniqueAsChar() const;
00065
00069         std::string getTechniqueAsString() const;
00070
00075         const std::string describe() const;
00076
00077     public:
00081         bool operator== (const EN_PartnershipTechnique&) const;
00082
00083     public:
00087         PartnershipTechnique (const EN_PartnershipTechnique&);
00091         PartnershipTechnique (const char iTechnique);
00095         PartnershipTechnique (const std::string& iTechnique);

```

```

00099     PartnershipTechnique (const PartnershipTechnique&);
00100
00101 private:
00102     PartnershipTechnique();
00103
00104 private:
00105     static const std::string _labels[LAST_VALUE];
00106     static const char _techniqueLabels[LAST_VALUE];
00107
00108 private:
00109     // ////////// Attributes //////////
00110     EN_PartnershipTechnique _technique;
00111 };
00112
00113 }
00114
00115 #endif // __STDAIR_BAS_PARTNERSHIPTECHNIQUE_HPP

```

### 35.87 stdair/basic/PassengerType.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/PassengerType.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.88 PassengerType.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/PassengerType.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     const std::string PassengerType::_labels[LAST_VALUE] =
00015         { "Leisure", "Business", "First" };
00016
00017     const char PassengerType::_typeLabels[LAST_VALUE] = { 'L', 'B', 'F' };
00018
00019
00020     // //////////////////////////////////////
00021     PassengerType::PassengerType (const EN_PassengerType& iPassengerType)

```

```

00022     : _type (iPassengerType) {
00023     }
00024
00025     // //////////////////////////////////////
00026     PassengerType::PassengerType (const char iType) {
00027         switch (iType) {
00028             case 'L': _type = LEISURE; break;
00029             case 'B': _type = BUSINESS; break;
00030             case 'F': _type = FIRST; break;
00031             default: _type = LAST_VALUE; break;
00032         }
00033
00034         if (_type == LAST_VALUE) {
00035             const std::string& lLabels = describeLabels();
00036             std::ostringstream oMessage;
00037             oMessage << "The passenger type '" << iType
00038                 << "' is not known. Known passenger types: " << lLabels;
00039             throw CodeConversionException (oMessage.str());
00040         }
00041     }
00042
00043     // //////////////////////////////////////
00044     const std::string& PassengerType::getLabel (const EN_PassengerType& iType) {
00045         return _labels[iType];
00046     }
00047
00048     // //////////////////////////////////////
00049     char PassengerType::getTypeLabel (const EN_PassengerType& iType) {
00050         return _typeLabels[iType];
00051     }
00052
00053     // //////////////////////////////////////
00054     std::string PassengerType::
00055     getTypeLabelAsString (const EN_PassengerType& iType) {
00056         std::ostringstream oStr;
00057         oStr << _typeLabels[iType];
00058         return oStr.str();
00059     }
00060
00061     // //////////////////////////////////////
00062     std::string PassengerType::describeLabels() {
00063         std::ostringstream ostr;
00064         for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00065             if (idx != 0) {
00066                 ostr << ", ";
00067             }
00068             ostr << _labels[idx];
00069         }
00070         return ostr.str();
00071     }
00072
00073     // //////////////////////////////////////
00074     PassengerType::EN_PassengerType PassengerType::getType() const {
00075         return _type;
00076     }
00077
00078     // //////////////////////////////////////
00079     std::string PassengerType::getTypeAsString() const {
00080         std::ostringstream oStr;
00081         oStr << _typeLabels[_type];
00082         return oStr.str();
00083     }

```

```

00084
00085 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00086 const std::string PassengerType::describe() const {
00087     std::ostringstream ostr;
00088     ostr << _labels[_type];
00089     return ostr.str();
00090 }
00091
00092 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00093 bool PassengerType::operator== (const EN_PassengerType& iType) const {
00094     return (_type == iType);
00095 }
00096
00097 }

```

### 35.89 stdair/basic/PassengerType.hpp File Reference

```
#include <string>
```

```
#include <stdair/basic/StructAbstract.hpp>
```

#### Classes

- struct [stdair::PassengerType](#)

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.90 PassengerType.hpp

```

00001 #ifndef __STDAIR_BAS_PASSENGERTYPE_HPP
00002 #define __STDAIR_BAS_PASSENGERTYPE_HPP
00003
00004 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00005 // Import section
00006 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00015     struct PassengerType : public StructAbstract {
00016     public:
00017         typedef enum {
00018             LEISURE = 0,
00019             BUSINESS,
00020             FIRST,
00021             LAST_VALUE
00022         } EN_PassengerType;
00023

```

```

00025     static const std::string& getLabel (const EN_PassengerType&);
00026
00028     static char getTypeLabel (const EN_PassengerType&);
00029
00031     static std::string getTypeLabelAsString (const EN_PassengerType&);
00032
00034     static std::string describeLabels();
00035
00037     EN_PassengerType getType() const;
00038
00040     std::string getTypeAsString() const;
00041
00043     const std::string describe() const;
00044
00045 public:
00047     bool operator== (const EN_PassengerType&) const;
00048
00049 public:
00051     PassengerType (const EN_PassengerType&);
00053     PassengerType (const char iType);
00054
00055 private:
00056     static const std::string _labels[LAST_VALUE];
00058     static const char _typeLabels[LAST_VALUE];
00061
00062 private:
00063     // ////////// Attributes //////////
00064     EN_PassengerType _type;
00067 };
00068
00069 }
00070 #endif // __STDAIR_BAS_PASSENGERTYPE_HPP

```

### 35.91 stdair/basic/ProgressStatus.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/basic/ProgressStatus.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.92 ProgressStatus.cpp

```

00001 // //////////////////////////////////////
00002 // Import section

```

```

00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/BasConst_Event.hpp>
00010 #include <stdair/basic/ProgressStatus.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 ProgressStatus::ProgressStatus (const Count_T& iCurrentNb,
00016                                const Count_T& iExpectedNb,
00017                                const Count_T& iActualNb)
00018 : _currentNb (iCurrentNb),
00019   _expectedNb (iExpectedNb), _actualNb (iActualNb) {
00020 }
00021
00022 // //////////////////////////////////////
00023 ProgressStatus::ProgressStatus (const Count_T& iExpectedNb,
00024                                const Count_T& iActualNb)
00025 : _currentNb (DEFAULT_PROGRESS_STATUS),
00026   _expectedNb (iExpectedNb), _actualNb (iActualNb) {
00027 }
00028
00029 // //////////////////////////////////////
00030 ProgressStatus::ProgressStatus (const Count_T& iActualNb)
00031 : _currentNb (DEFAULT_PROGRESS_STATUS),
00032   _expectedNb (iActualNb), _actualNb (DEFAULT_PROGRESS_STATUS) {
00033 }
00034
00035 // //////////////////////////////////////
00036 ProgressStatus::ProgressStatus ()
00037 : _currentNb (DEFAULT_PROGRESS_STATUS),
00038   _expectedNb (DEFAULT_PROGRESS_STATUS),
00039   _actualNb (DEFAULT_PROGRESS_STATUS) {
00040 }
00041
00042 // //////////////////////////////////////
00043 ProgressStatus::ProgressStatus (const ProgressStatus& iProgressStatus)
00044 : _currentNb (iProgressStatus._currentNb),
00045   _expectedNb (iProgressStatus._expectedNb),
00046   _actualNb (iProgressStatus._actualNb) {
00047 }
00048
00049 // //////////////////////////////////////
00050 void ProgressStatus::reset () {
00051   _currentNb = DEFAULT_PROGRESS_STATUS;
00052   _actualNb = DEFAULT_PROGRESS_STATUS;
00053 }
00054
00055 // //////////////////////////////////////
00056 const std::string ProgressStatus::describe() const {
00057   std::ostringstream oStr;
00058   oStr << _currentNb << " / {" << _expectedNb << ", " << _actualNb << "}";
00059   return oStr.str();
00060 }
00061
00062 }

```

**35.93 stdair/basic/ProgressStatus.hpp File Reference**

```
#include <string>
#include <boost/progress.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

**Classes**

- struct [stdair::ProgressStatus](#)

**Namespaces**

- namespace [stdair](#)  
*Handle on the StdAir library context.*

**35.94 ProgressStatus.hpp**

```
00001 #ifndef __STDAIR_BAS_PROGRESSTATUS_HPP
00002 #define __STDAIR_BAS_PROGRESSTATUS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost Progress
00010 #include <boost/progress.hpp>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014
00015 namespace stdair {
00016
00025     struct ProgressStatus : public StructAbstract {
00026     public:
00027         // ////////////////////////////////////// Getters //////////////////////////////////////
00029         const Count_T& count() const {
00030             return _currentNb;
00031         }
00032
00034         const Count_T& getCurrentNb() const {
00035             return _currentNb;
00036         }
00037
00039         const Count_T& getExpectedNb() const {
00040             return _expectedNb;
00041         }
00042
00044         const Count_T& getActualNb() const {
00045             return _actualNb;
00046         }
00047
```

```

00049     const ProgressPercentage_T progress() const {
00050         if (_actualNb == 0) {
00051             return 100.0;
00052         }
00053         return (static_cast<Percentage_T> (_currentNb)
00054             / static_cast<Percentage_T> (_actualNb));
00055     }
00056
00057
00058     // ////////////////////////////////// Setters //////////////////////////////////
00060     void setCurrentNb (const Count_T& iCurrentNb) {
00061         _currentNb = iCurrentNb;
00062     }
00063
00065     void setExpectedNb (const Count_T& iExpectedNb) {
00066         _expectedNb = iExpectedNb;
00067     }
00068
00070     void setActualNb (const Count_T& iActualNb) {
00071         _actualNb = iActualNb;
00072     }
00073
00075     void reset();
00076
00078     Count_T operator+= (Count_T iIncrement) {
00079         _currentNb += iIncrement;
00080         return _currentNb;
00081     }
00082
00084     Count_T operator++() {
00085         ++_currentNb;
00086         return _currentNb;
00087     }
00088
00089
00090     public:
00091         // ////////////////////////////////// Display Support Methods //////////////////////////////////
00093         const std::string describe() const;
00094
00095
00096     public:
00104         ProgressStatus (const Count_T& iCurrentNb, const Count_T& iExpectedNb,
00105             const Count_T& iActualNb);
00106
00115         ProgressStatus (const Count_T& iExpectedNb, const Count_T& iActualNb);
00116
00125         ProgressStatus (const Count_T& iActualNb);
00126
00132         ProgressStatus();
00133
00137         ProgressStatus (const ProgressStatus&);
00138
00139     private:
00140         // ////////////////////////////////// Attributes //////////////////////////////////
00142         Count_T _currentNb;
00143
00145         Count_T _expectedNb;
00146
00148         Count_T _actualNb;
00149     };
00150
00151 }

```



```
00152 #endif // __STDAIR_BAS_PROGRESSSTATUS_HPP
```

### 35.95 stdair/basic/ProgressStatusSet.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/ProgressStatusSet.hpp>
```

#### Namespaces

- namespace `stdair`  
Handle on the `StdAir` library context.

### 35.96 ProgressStatusSet.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/ProgressStatusSet.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 ProgressStatusSet::ProgressStatusSet()
00014 : _eventType (EventType::LAST_VALUE), _typeSpecificProgressStatus(),
00015   _generatorProgressStatus(), _overallProgressStatus(), _generatorKey ("") {
00016   assert (false);
00017 }
00018
00019 // //////////////////////////////////////
00020 ProgressStatusSet::ProgressStatusSet (const EventType::EN_EventType& iType)
00021 : _eventType (iType), _typeSpecificProgressStatus(),
00022   _generatorProgressStatus(), _overallProgressStatus(), _generatorKey ("") {
00023 }
00024
00025 // //////////////////////////////////////
00026 ProgressStatusSet::
00027 ProgressStatusSet (const ProgressStatusSet& iProgressStatusSet)
00028 : _eventType (iProgressStatusSet._eventType),
00029   _typeSpecificProgressStatus(iProgressStatusSet._typeSpecificProgressStatu
00030 s),
00031   _generatorProgressStatus (iProgressStatusSet._generatorProgressStatus),
00032   _overallProgressStatus (iProgressStatusSet._overallProgressStatus),
00033   _generatorKey (iProgressStatusSet._generatorKey) {
00034 }
00035 // //////////////////////////////////////
00036 ProgressStatusSet::~ProgressStatusSet () {
00037 }
00038
```

```

00039 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00040 void ProgressStatusSet::fromStream (std::istream& ioIn) {
00041 }
00042
00043 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00044 const std::string ProgressStatusSet::describe() const {
00045     std::ostringstream oStr;
00046
00047     oStr << "-[Overall]"
00048         << "[" << _overallProgressStatus.getCurrentNb()
00049         << "/" << _overallProgressStatus.getExpectedNb()
00050         << "," << _overallProgressStatus.getActualNb()
00051         << "]" ";
00052
00053     oStr << "[" << EventType (_eventType) << "]"
00054         << "[" << _typeSpecificProgressStatus.getCurrentNb()
00055         << "/" << _typeSpecificProgressStatus.getExpectedNb()
00056         << "," << _typeSpecificProgressStatus.getActualNb()
00057         << "]" ";
00058
00059     oStr << " [Specific generator: " << _generatorKey << "]"
00060         << "[" << _generatorProgressStatus.getCurrentNb()
00061         << "/" << _generatorProgressStatus.getExpectedNb()
00062         << "," << _generatorProgressStatus.getActualNb()
00063         << "]" ";
00064
00065     return oStr.str();
00066 }
00067
00068 }

```

## 35.97 stdair/basic/ProgressStatusSet.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/basic/EventType.hpp>
#include <stdair/basic/ProgressStatus.hpp>

```

### Classes

- struct [stdair::ProgressStatusSet](#)

### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.98 ProgressStatusSet.hpp

```

00001 #ifndef __STDAIR_BAS_PROGRESSSTATUSSET_HPP
00002 #define __STDAIR_BAS_PROGRESSSTATUSSET_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_event_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/basic/EventType.hpp>
00015 #include <stdair/basic/ProgressStatus.hpp>
00016
00017 namespace stdair {
00018
00022     struct ProgressStatusSet : public StructAbstract {
00023         // ////////////////////////////////// Getters //////////////////////////////////
00031         const ProgressStatus& getTypeSpecificStatus() const {
00032             return _typeSpecificProgressStatus;
00033         }
00034
00043         const ProgressStatus& getSpecificGeneratorStatus() const {
00044             return _generatorProgressStatus;
00045         }
00046
00054         const ProgressStatus& getOverallStatus() const {
00055             return _overallProgressStatus;
00056         }
00057
00058
00059         // ////////////////////////////////// Setters //////////////////////////////////
00060     public:
00062         void setTypeSpecificStatus (const ProgressStatus& iProgressStatus) {
00063             _typeSpecificProgressStatus = iProgressStatus;
00064         }
00065
00068         void setSpecificGeneratorStatus (const ProgressStatus& iProgressStatus,
00069                                         const EventGeneratorKey_T& iKey) {
00070             _generatorProgressStatus = iProgressStatus;
00071             _generatorKey = iKey;
00072         }
00073
00076         void setOverallStatus (const ProgressStatus& iProgressStatus) {
00077             _overallProgressStatus = iProgressStatus;
00078         }
00079
00080
00081         // ////////////////////////////////// Display methods //////////////////////////////////
00082     public:
00085         void fromStream (std::istream& ioIn);
00086
00088         const std::string describe() const;
00089
00090
00091         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00092     public:
00094         ProgressStatusSet (const EventType::EN_EventType&);

```

```

00096     ProgressStatusSet (const ProgressStatusSet&);
00097     ~ProgressStatusSet ();
00098
00099 private:
00100     ProgressStatusSet ();
00101
00102     // ////////////////////////////////// Attributes //////////////////////////////////
00103 private:
00104     const EventType::EN_EventType _eventType;
00105
00106     ProgressStatus _typeSpecificProgressStatus;
00107
00108     ProgressStatus _generatorProgressStatus;
00109
00110     ProgressStatus _overallProgressStatus;
00111
00112     EventGeneratorKey_T _generatorKey;
00113 };
00114
00115 }
00116 #endif // __STDAIR_BASIC_PROGRESSSTATUSSET_HPP

```

### 35.99 stdair/basic/RandomGeneration.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/version.hpp>
#include <stdair/basic/RandomGeneration.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.100 RandomGeneration.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/version.hpp>
00009 #if BOOST_VERSION >= 103500
00010 #include <boost/math/distributions/normal.hpp>
00011 #endif // BOOST_VERSION >= 103500
00012 // StdAir
00013 #include <stdair/basic/RandomGeneration.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////

```

```

00023 RandomGeneration::RandomGeneration() : _generator (1) {
00024 }
00025
00026 // //////////////////////////////////////
00027 RandomGeneration::RandomGeneration (const RandomSeed_T& iSeed)
00028 : _generator (iSeed) {
00029 }
00030
00031 // //////////////////////////////////////
00032 RandomGeneration::RandomGeneration (const RandomGeneration& iRandomGeneration)
00033 : _generator (iRandomGeneration._generator) {
00034 }
00035
00036 // //////////////////////////////////////
00037 RandomGeneration::~RandomGeneration() {
00038 }
00039
00040 // //////////////////////////////////////
00041 void RandomGeneration::init (const RandomSeed_T& iSeed) {
00042     _generator.seed (iSeed);
00043 }
00044
00045 // //////////////////////////////////////
00046 const std::string RandomGeneration::describe() const {
00047     std::ostringstream ostr;
00048     ostr << _generator;
00049     return ostr.str();
00050 }
00051
00052 // //////////////////////////////////////
00053 RealNumber_T RandomGeneration::generateUniform01() {
00054     UniformGenerator_T lGenerator (_generator, boost::uniform_real<>(0, 1));
00055     return lGenerator();
00056 }
00057
00058 // //////////////////////////////////////
00059 RealNumber_T RandomGeneration::generateUniform(const RealNumber_T& iMinValue,
00060                                                const RealNumber_T& iMaxValue) {
00061     const Probability_T lVariateUnif01 = generateUniform01();
00062     const RealNumber_T lVariateUnif =
00063         iMinValue + lVariateUnif01 * (iMaxValue - iMinValue);
00064     return lVariateUnif;
00065 }
00066
00067 // //////////////////////////////////////
00068 RealNumber_T RandomGeneration::generateNormal (const RealNumber_T& mu,
00069                                                const RealNumber_T& sigma) {
00070
00071     #if BOOST_VERSION >= 103500
00072         const Probability_T lVariateUnif = generateUniform01();
00073         const boost::math::normal lNormal (mu, sigma);
00074         const RealNumber_T lRealNumberOfRequestsToBeGenerated =
00075             boost::math::quantile (lNormal, lVariateUnif);
00076     #else // BOOST_VERSION >= 103500
00077         // TODO: rely on GSL when Boost version smaller than 1.35
00078         const RealNumber_T lRealNumberOfRequestsToBeGenerated = 0.0;
00079     #endif // BOOST_VERSION >= 103500
00080
00081     return lRealNumberOfRequestsToBeGenerated;
00082 }
00083 }

```

```

00084
00085 // //////////////////////////////////////
00086 RealNumber_T RandomGeneration::generateExponential (const RealNumber_T& lambda)
00087 {
00091     ExponentialDistribution_T lExponentialDistribution (lambda);
00092
00094     ExponentialGenerator_T lExponentialDistributionGenerator (_generator,
00095                                                                lExponentialDistrib
00096                                                                ution);
00097
00098     // Generate a random variate, expressed in (fractional) day
00099     const RealNumber_T lExponentialVariateInDays =
00100         lExponentialDistributionGenerator();
00101
00102     return lExponentialVariateInDays;
00103 }
00104 }

```

### 35.101 stdair/basic/RandomGeneration.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::RandomGeneration](#)  
Class holding a random generator.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.102 RandomGeneration.hpp

```

00001 #ifndef __STDAIR_BAS_RANDOMGENERATION_HPP
00002 #define __STDAIR_BAS_RANDOMGENERATION_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_maths_types.hpp>
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017     struct RandomGeneration : public StructAbstract {
00018     public:

```

```

00019 // //////////// Business Methods ////////////
00024 RealNumber_T generateUniform01();
00025
00030 RealNumber_T operator() () {
00031     return generateUniform01();
00032 }
00033
00039 RealNumber_T generateUniform (const RealNumber_T&, const RealNumber_T&);
00040
00045 RealNumber_T generateNormal (const RealNumber_T&, const RealNumber_T&);
00046
00051 RealNumber_T generateExponential (const RealNumber_T&);
00052
00056 BaseGenerator_T& getBaseGenerator () { return _generator; }
00057
00058
00059 public:
00060 // //////////// Display Support Methods ////////////
00064 const std::string describe() const;
00065
00066
00067 public:
00068 // //////////// Constructors and destructors ////////////
00072 RandomGeneration (const RandomSeed_T&);
00076 RandomGeneration();
00077
00078 private:
00082 RandomGeneration (const RandomGeneration&);
00086 RandomGeneration& operator= (const RandomGeneration& iRandomGeneration) {
00087     _generator = iRandomGeneration._generator;
00088     return *this;
00089 }
00090 public:
00094 ~RandomGeneration();
00095
00103 void init (const RandomSeed_T&);
00104
00105 // //////////// Attributes ////////////
00112 BaseGenerator_T _generator;
00113 };
00114
00115 }
00116 #endif // __STDAIR_BAS_RANDOMGENERATION_HPP

```

### 35.103 stdair/basic/SampleType.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/SampleType.hpp>

```

#### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.104 SampleType.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/SampleType.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 const std::string SampleType::_labels[LAST_VALUE] =
00015     { "All", "AllForPartnerships", "RevenueManagement", "Inventory", "Schedule",
00016       "RevenueAccounting", "FareQuote", "CRS", "DemandGeneration", "EventManagemen
00017       nt",
00018       "CustomerChoice" };
00019
00020 // //////////////////////////////////////
00021 const char SampleType::_typeLabels[LAST_VALUE] = { 'A', 'P', 'R', 'I', 'S', 'T', 'F', 'C', 'D', 'E', '
00022     'M' };
00023
00024 // //////////////////////////////////////
00025 SampleType::SampleType()
00026     : _type (LAST_VALUE) {
00027     assert (false);
00028 }
00029
00030 // //////////////////////////////////////
00031 SampleType::SampleType (const SampleType& iSampleType)
00032     : _type (iSampleType._type) {
00033 }
00034
00035 // //////////////////////////////////////
00036 SampleType::SampleType (const EN_SampleType& iSampleType)
00037     : _type (iSampleType) {
00038 }
00039
00040 // //////////////////////////////////////
00041 SampleType::SampleType (const char iType) {
00042     switch (iType) {
00043     case 'A': _type = ALL; break;
00044     case 'P': _type = A4P; break;
00045     case 'R': _type = RMS; break;
00046     case 'I': _type = INV; break;
00047     case 'S': _type = SCH; break;
00048     case 'T': _type = RAC; break;
00049     case 'F': _type = FQT; break;
00050     case 'C': _type = CRS; break;
00051     case 'D': _type = DEM; break;
00052     case 'E': _type = EVT; break;
00053     case 'M': _type = CCM; break;
00054     default: _type = LAST_VALUE; break;
00055     }
00056
00057     if (_type == LAST_VALUE) {
00058         const std::string& lLabels = describeLabels();

```



```

00059         std::ostringstream oMessage;
00060         oMessage << "The sample type '" << iType
00061             << "' is not known. Known sample types: " << lLabels;
00062         throw CodeConversionException (oMessage.str());
00063     }
00064 }
00065
00066 // //////////////////////////////////////
00067 const std::string& SampleType::getLabel (const EN_SampleType& iType) {
00068     return _labels[iType];
00069 }
00070
00071 // //////////////////////////////////////
00072 char SampleType::getTypeLabel (const EN_SampleType& iType) {
00073     return _typeLabels[iType];
00074 }
00075
00076 // //////////////////////////////////////
00077 std::string SampleType::getTypeLabelAsString (const EN_SampleType& iType) {
00078     std::ostringstream ostr;
00079     ostr << _typeLabels[iType];
00080     return ostr.str();
00081 }
00082
00083 // //////////////////////////////////////
00084 std::string SampleType::describeLabels() {
00085     std::ostringstream ostr;
00086     for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00087         if (idx != 0) {
00088             ostr << ", ";
00089         }
00090         ostr << _labels[idx];
00091     }
00092     return ostr.str();
00093 }
00094
00095 // //////////////////////////////////////
00096 SampleType::EN_SampleType SampleType::getType() const {
00097     return _type;
00098 }
00099
00100 // //////////////////////////////////////
00101 std::string SampleType::getTypeAsString() const {
00102     std::ostringstream ostr;
00103     ostr << _typeLabels[_type];
00104     return ostr.str();
00105 }
00106
00107 // //////////////////////////////////////
00108 const std::string SampleType::describe() const {
00109     std::ostringstream ostr;
00110     ostr << _labels[_type];
00111     return ostr.str();
00112 }
00113
00114 // //////////////////////////////////////
00115 bool SampleType::operator==(const EN_SampleType& iType) const {
00116     return (_type == iType);
00117 }
00118
00119 }

```

## 35.105 stdair/basic/SampleType.hpp File Reference

```
#include <string>
#include <stdair/basic/StructAbstract.hpp>
```

## Classes

- struct [stdair::SampleType](#)  
*Enumeration of BOM sample types.*

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.106 SampleType.hpp

```
00001 #ifndef __STDAIR_BAS_SAMPLETYPE_HPP
00002 #define __STDAIR_BAS_SAMPLETYPE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00025     struct SampleType : public StructAbstract {
00026     public:
00027         typedef enum {
00028             ALL = 0,
00029             A4P,
00030             RMS,
00031             INV,
00032             SCH,
00033             RAC,
00034             FQT,
00035             CRS,
00036             DEM,
00037             EVT,
00038             CCM,
00039             LAST_VALUE
00040         } EN_SampleType;
00041
00045         static const std::string& getLabel (const EN_SampleType&);
00046
00050         static char getTypeLabel (const EN_SampleType&);
00051
00055         static std::string getTypeLabelAsString (const EN_SampleType&);
00056
00060         static std::string describeLabels();
```

```

00061
00065     EN_SampleType getType() const;
00066
00070     std::string getTypeAsString() const;
00071
00075     const std::string describe() const;
00076
00077 public:
00081     bool operator== (const EN_SampleType&) const;
00082
00083 public:
00087     SampleType (const EN_SampleType&);
00091     SampleType (const char iType);
00095     SampleType (const SampleType&);
00096
00097 private:
00101     SampleType();
00102
00103
00104 private:
00108     static const std::string _labels[LAST_VALUE];
00109
00113     static const char _typeLabels[LAST_VALUE];
00114
00115
00116 private:
00117     // ////////// Attributes //////////
00121     EN_SampleType _type;
00122 };
00123
00124 }
00125 #endif // __STDAIR_BAS_SAMPLETYPE_HPP

```

### 35.107 stdair/basic/ServiceInitialisationType.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/ServiceInitialisationType.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.108 ServiceInitialisationType.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>

```

```

00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/basic/ServiceInitialisationType.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     const std::string ServiceInitialisationType::_labels[LAST_VALUE] =
00015         { "Not yet initialised", "File parsing", "Built-in sample BOM" };
00016
00017     // //////////////////////////////////////
00018     const char ServiceInitialisationType::_typeLabels[LAST_VALUE] =
00019         { 'N', 'F', 'B' };
00020
00021
00022     // //////////////////////////////////////
00023     ServiceInitialisationType::ServiceInitialisationType()
00024         : _type (LAST_VALUE) {
00025         assert (false);
00026     }
00027
00028     // //////////////////////////////////////
00029     ServiceInitialisationType::
00030     ServiceInitialisationType (const ServiceInitialisationType& iServiceInitialisat
00031 ionType)
00032         : _type (iServiceInitialisationType._type) {
00033     }
00034
00035     // //////////////////////////////////////
00036     ServiceInitialisationType::
00037     ServiceInitialisationType (const EN_ServiceInitialisationType& iServiceInitiali
00038 sationType)
00039         : _type (iServiceInitialisationType) {
00040     }
00041
00042     // //////////////////////////////////////
00043     ServiceInitialisationType::EN_ServiceInitialisationType
00044     ServiceInitialisationType::getType (const char iTypeChar) {
00045         EN_ServiceInitialisationType oType;
00046         switch (iTypeChar) {
00047             case 'N': oType = NOT_YET_INITIALISED; break;
00048             case 'F': oType = FILE_PARSING; break;
00049             case 'B': oType = BUILTIN_SAMPLE; break;
00050             default: oType = LAST_VALUE; break;
00051         }
00052
00053         if (oType == LAST_VALUE) {
00054             const std::string& lLabels = describeLabels();
00055             std::ostringstream oMessage;
00056             oMessage << "The service initialisation type '" << iTypeChar
00057                 << "' is not known. "
00058                 << "Known service initialisation types: " << lLabels;
00059             throw CodeConversionException (oMessage.str());
00060         }
00061
00062         return oType;
00063     }
00064
00065     // //////////////////////////////////////
00066     ServiceInitialisationType::
00067     ServiceInitialisationType (const char iTypeChar)
00068         : _type (getType (iTypeChar)) {

```

```

00067     }
00068
00069     // //////////////////////////////////////
00070     ServiceInitialisationType::
00071     ServiceInitialisationType (const std::string& iTypeStr) {
00072         //
00073         const size_t lSize = iTypeStr.size();
00074         assert (lSize == 1);
00075         const char lTypeChar = iTypeStr[0];
00076         _type = getType (lTypeChar);
00077     }
00078
00079     // //////////////////////////////////////
00080     const std::string& ServiceInitialisationType::
00081     getLabel (const EN_ServiceInitialisationType& iType) {
00082         return _labels[iType];
00083     }
00084
00085     // //////////////////////////////////////
00086     char ServiceInitialisationType::
00087     getTypeLabel (const EN_ServiceInitialisationType& iType) {
00088         return _typeLabels[iType];
00089     }
00090
00091     // //////////////////////////////////////
00092     std::string ServiceInitialisationType::
00093     getTypeLabelAsString (const EN_ServiceInitialisationType& iType) {
00094         std::ostringstream ostr;
00095         ostr << _typeLabels[iType];
00096         return ostr.str();
00097     }
00098
00099     // //////////////////////////////////////
00100     std::string ServiceInitialisationType::describeLabels() {
00101         std::ostringstream ostr;
00102         for (unsigned short idx = 0; idx != LAST_VALUE; ++idx) {
00103             if (idx != 0) {
00104                 ostr << ", ";
00105             }
00106             ostr << _labels[idx];
00107         }
00108         return ostr.str();
00109     }
00110
00111     // //////////////////////////////////////
00112     ServiceInitialisationType::EN_ServiceInitialisationType
00113     ServiceInitialisationType::getType() const {
00114         return _type;
00115     }
00116
00117     // //////////////////////////////////////
00118     char ServiceInitialisationType::getTypeAsChar() const {
00119         const char oTypeChar = _typeLabels[_type];
00120         return oTypeChar;
00121     }
00122
00123     // //////////////////////////////////////
00124     std::string ServiceInitialisationType::getTypeAsString() const {
00125         std::ostringstream ostr;
00126         ostr << _typeLabels[_type];
00127         return ostr.str();
00128     }

```

```

00129
00130 // //////////////////////////////////////
00131 const std::string ServiceInitialisationType::describe() const {
00132     std::ostringstream ostr;
00133     ostr << _labels[_type];
00134     return ostr.str();
00135 }
00136
00137 // //////////////////////////////////////
00138 bool ServiceInitialisationType::
00139 operator== (const EN_ServiceInitialisationType& iType) const {
00140     return (_type == iType);
00141 }
00142
00143 }

```

### 35.109 stdair/basic/ServiceInitialisationType.hpp File Reference

```

#include <string>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::ServiceInitialisationType](#)  
*Enumeration of service initialisation types.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.110 ServiceInitialisationType.hpp

```

00001 #ifndef __STDAIR_BAS_SERVICEINITIALISATIONTYPE_HPP
00002 #define __STDAIR_BAS_SERVICEINITIALISATIONTYPE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/basic/StructAbstract.hpp>
00011
00012 namespace stdair {
00013
00017     struct ServiceInitialisationType : public StructAbstract {
00018     public:
00019         typedef enum {
00020             NOT_YET_INITIALISED = 0,
00021             FILE_PARSING,
00022             BUILTIN_SAMPLE,

```

```

00023     LAST_VALUE
00024 } EN_ServiceInitialisationType;
00025
00030     static const std::string& getLabel (const EN_ServiceInitialisationType&);
00031
00035     static EN_ServiceInitialisationType getType (const char);
00036
00040     static char getTypeLabel (const EN_ServiceInitialisationType&);
00041
00045     static std::string
00046     getTypeLabelAsString (const EN_ServiceInitialisationType&);
00047
00051     static std::string describeLabels();
00052
00056     EN_ServiceInitialisationType getType() const;
00057
00061     char getTypeAsChar() const;
00062
00066     std::string getTypeAsString() const;
00067
00072     const std::string describe() const;
00073
00074 public:
00078     bool operator== (const EN_ServiceInitialisationType&) const;
00079
00080 public:
00084     ServiceInitialisationType (const EN_ServiceInitialisationType&);
00088     ServiceInitialisationType (const char iType);
00092     ServiceInitialisationType (const std::string& iType);
00096     ServiceInitialisationType (const ServiceInitialisationType&);
00097
00098 private:
00102     ServiceInitialisationType();
00103
00104
00105 private:
00109     static const std::string _labels[LAST_VALUE];
00113     static const char _typeLabels[LAST_VALUE];
00114
00115 private:
00116     // ////////// Attributes //////////
00120     EN_ServiceInitialisationType _type;
00121 };
00122
00123 }
00124 #endif // __STDAIR_BAS_SERVICEINITIALISATIONTYPE_HPP

```

### 35.111 stdair/basic/StructAbstract.hpp File Reference

```

#include <iosfwd>
#include <string>

```

#### Classes

- struct [stdair::StructAbstract](#)

*Base class for the light structures.*

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## Functions

- `template<class charT , class traits >`  
`std::basic_ostream< charT, traits > & operator<< (std::basic_ostream< charT,`  
`traits > &ioOut, const stdair::StructAbstract &iStruct)`
- `template<class charT , class traits >`  
`std::basic_istream< charT, traits > & operator>> (std::basic_istream< charT,`  
`traits > &ioln, stdair::StructAbstract &ioStruct)`

## 35.111.1 Function Documentation

**35.111.1.1** `template<class charT , class traits > std::basic_ostream<charT, traits>&`  
`operator<< ( std::basic_ostream< charT, traits > & ioOut, const`  
`stdair::StructAbstract & iStruct ) [inline]`

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line [61](#) of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::toStream\(\)](#).

**35.111.1.2** `template<class charT , class traits > std::basic_istream<charT, traits>&`  
`operator>> ( std::basic_istream< charT, traits > & ioln, stdair::StructAbstract`  
`& ioStruct ) [inline]`

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line [89](#) of file [StructAbstract.hpp](#).

References [stdair::StructAbstract::fromStream\(\)](#).

## 35.112 StructAbstract.hpp

```
00001 #ifndef __STDAIR_BAS_STRUCTABSTRACT_HPP
00002 #define __STDAIR_BAS_STRUCTABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010
```



```

00011 namespace stdair {
00012
00016     struct StructAbstract {
00017     public:
00018
00022         virtual ~StructAbstract() {}
00023
00029         void toStream (std::ostream& ioOut) const {
00030             ioOut << describe();
00031         }
00032
00038         virtual void fromStream (std::istream& ioIn) {}
00039
00043         virtual const std::string describe() const = 0;
00044
00045     protected:
00049         StructAbstract() {}
00050     };
00051 }
00052
00058 template <class charT, class traits>
00059 inline
00060 std::basic_ostream<charT, traits>&
00061 operator<< (std::basic_ostream<charT, traits>& ioOut,
00062            const stdair::StructAbstract& iStruct) {
00068     std::basic_ostringstream<charT, traits> ostr;
00069     ostr.copyfmt (ioOut);
00070     ostr.width (0);
00071
00072     // Fill string stream
00073     iStruct.toStream (ostr);
00074
00075     // Print string stream
00076     ioOut << ostr.str();
00077
00078     return ioOut;
00079 }
00080
00086 template <class charT, class traits>
00087 inline
00088 std::basic_istream<charT, traits>&
00089 operator>> (std::basic_istream<charT, traits>& ioIn,
00090            stdair::StructAbstract& ioStruct) {
00091     // Fill the Structure object with the input stream.
00092     ioStruct.fromStream (ioIn);
00093     return ioIn;
00094 }
00095 }
00096 #endif // __STDAIR_BAS_STRUCTABSTRACT_HPP

```

### 35.113 stdair/basic/YieldRange.cpp File Reference

```

#include <limits>

#include <sstream>

#include <stdair/basic/YieldRange.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.114 YieldRange.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <limits>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/YieldRange.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 YieldRange::YieldRange() :
00014     _upperYield (std::numeric_limits<Yield_T>::max()),
00015     _averageYield (std::numeric_limits<Yield_T>::max()),
00016     _lowerYield (std::numeric_limits<Yield_T>::min()) {
00017 }
00018
00019 // //////////////////////////////////////
00020 YieldRange::YieldRange (const YieldRange& iYieldRange) :
00021     _upperYield (iYieldRange.getUpperYield()),
00022     _averageYield (iYieldRange.getAverageYield()),
00023     _lowerYield (std::numeric_limits<Yield_T>::min()) {
00024 }
00025
00026 // //////////////////////////////////////
00027 YieldRange::YieldRange (const Yield_T iUpperYield) :
00028     _upperYield (iUpperYield), _averageYield (iUpperYield),
00029     _lowerYield (iUpperYield) {
00030 }
00031
00032 // //////////////////////////////////////
00033 YieldRange::YieldRange (const Yield_T iUpperYield,
00034                         const Yield_T iAverageYield) :
00035     _upperYield (iUpperYield), _averageYield (iAverageYield),
00036     _lowerYield (std::numeric_limits<Yield_T>::min()) {
00037 }
00038
00039 // //////////////////////////////////////
00040 YieldRange::YieldRange (const Yield_T iUpperYield,
00041                         const Yield_T iAverageYield,
00042                         const Yield_T iLowerYield) :
00043     _upperYield (iUpperYield), _averageYield (iAverageYield),
00044     _lowerYield (iLowerYield) {
00045 }
00046
00047 // //////////////////////////////////////
00048 YieldRange::~YieldRange() {
00049 }
00050
00051 // //////////////////////////////////////
00052 void YieldRange::toStream (std::ostream& ioOut) const {
00053     ioOut << _averageYield << "[" << _lowerYield << ", "

```

```

00054         << _upperYield << "]";
00055     }
00056
00057     // //////////////////////////////////////
00058     void YieldRange::fromStream (std::istream& ioIn) {
00059     }
00060
00061     // //////////////////////////////////////
00062     const std::string YieldRange::describe() const {
00063         std::ostringstream oStr;
00064
00065         return oStr.str();
00066     }
00067
00068 }

```

### 35.115 stdair/basic/YieldRange.hpp File Reference

```

#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- class [stdair::YieldRange](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.116 YieldRange.hpp

```

00001 #ifndef __STDAIR_BAS_YELDRANGE_HPP
00002 #define __STDAIR_BAS_YELDRANGE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/basic/StructAbstract.hpp>
00010
00011 namespace stdair {
00012
00023     class YieldRange : public StructAbstract {
00024     public:
00026         YieldRange ();
00027         YieldRange (const YieldRange&);
00028         YieldRange (const Yield_T iUpperYield);
00029         YieldRange (const Yield_T iUpperYield, const Yield_T iAverageYield);
00030         YieldRange (const Yield_T iUpperYield, const Yield_T iAverageYield,
00031                     const Yield_T iLowerYield);
00032

```

```

00034     virtual ~YieldRange();
00035
00036
00037     // //////////// Getters ////////////
00039     Yield_T getUpperYield() const {
00040         return _upperYield;
00041     }
00043     Yield_T getAverageYield() const {
00044         return _averageYield;
00045     }
00047     Yield_T getLowerYield() const {
00048         return _lowerYield;
00049     }
00050
00051     // //////////// Setters ////////////
00053     void setUpperYield (const Yield_T iUpperYield) {
00054         _upperYield = iUpperYield;
00055     }
00057     void setAverageYield (const Yield_T iAverageYield) {
00058         _averageYield = iAverageYield;
00059     }
00061     void setLowerYield (const Yield_T iLowerYield) {
00062         _lowerYield = iLowerYield;
00063     }
00064
00065
00066     // //////////// Display methods ////////////
00069     void toStream (std::ostream&) const;
00070
00073     void fromStream (std::istream&);
00074
00076     const std::string describe() const;
00077
00078 private:
00079     // //////////// Attributes ////////////
00081     Yield_T _upperYield;
00082
00084     Yield_T _averageYield;
00085
00087     Yield_T _lowerYield;
00088 };
00089 }
00090 #endif // __STDAIR_BAS_YIELDRANGE_HPP

```

### 35.117 stdair/bom/AirlineClassList.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/AirlineClassList.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.118 AirlineClassList.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/service/Logger.hpp>
00014 #include <stdair/bom/AirlineClassList.hpp>
00015
00016 namespace stdair {
00017
00018 // //////////////////////////////////////
00019 AirlineClassList::AirlineClassList()
00020 : _key (DEFAULT_AIRLINE_CODE_LIST, DEFAULT_CLASS_CODE_LIST),
00021   _parent (NULL) {
00022     assert (false);
00023 }
00024
00025 // //////////////////////////////////////
00026 AirlineClassList::AirlineClassList (const AirlineClassList& iACL)
00027 : _key (iACL._key), _parent (NULL) {
00028     assert (false);
00029 }
00030
00031 // //////////////////////////////////////
00032 AirlineClassList::AirlineClassList (const Key_T& iKey)
00033 : _key (iKey), _parent (NULL) {
00034 }
00035
00036 // //////////////////////////////////////
00037 AirlineClassList::~AirlineClassList() {
00038 }
00039
00040 // //////////////////////////////////////
00041 std::string AirlineClassList::toString() const {
00042     std::ostringstream oStr;
00043     oStr << describeKey() << ", " << _yield << ", " << _fare;
00044     return oStr.str();
00045 }
00046
00047 // //////////////////////////////////////
00048 void AirlineClassList::serialisationImplementationExport() const {
00049     std::ostringstream oStr;
00050     boost::archive::text_oarchive oa (oStr);
00051     oa << *this;
00052 }
00053

```

```

00054 // //////////////////////////////////////
00055 void AirlineClassList::serialisationImplementationImport() {
00056     std::istringstream iStr;
00057     boost::archive::text_iarchive ia (iStr);
00058     ia >> *this;
00059 }
00060
00061 // //////////////////////////////////////
00062 template<class Archive>
00063 void AirlineClassList::serialize (Archive& ioArchive,
00064                                   const unsigned int iFileVersion) {
00065     ioArchive & _key & _yield & _fare;
00066 }
00067
00068 }
00069
00070
00071

```

### 35.119 stdair/bom/AirlineClassList.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/AirlineClassListKey.hpp>
#include <stdair/bom/AirlineClassListTypes.hpp>

```

#### Classes

- class [stdair::AirlineClassList](#)  
*Class representing the actual attributes for a segment-features.*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.120 AirlineClassList.hpp

```

00001 #ifndef __STDAIR_BOM_AIRLINECLASSLIST_HPP
00002 #define __STDAIR_BOM_AIRLINECLASSLIST_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL

```

```

00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/AirlineClassListKey.hpp>
00013 #include <stdair/bom/AirlineClassListTypes.hpp>
00014
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023
00027     class AirlineClassList : public BomAbstract {
00028     template <typename BOM> friend class FacBom;
00029     friend class FacBomManager;
00030     friend class boost::serialization::access;
00031
00032     public:
00033         // /////////// Type definitions ///////////
00037         typedef AirlineClassListKey Key_T;
00038
00039
00040     public:
00041         // /////////// Getters ///////////
00043         const Key_T& getKey() const {
00044             return _key;
00045         }
00046
00048         BomAbstract* const getParent() const {
00049             return _parent;
00050         }
00051
00053         const AirlineCodeList_T& getAirlineCodeList() const {
00054             return _key.getAirlineCodeList();
00055         }
00056
00058         const ClassList_StringList_T& getClassCodeList() const {
00059             return _key.getClassCodeList();
00060         }
00061
00063         const HolderMap_T& getHolderMap() const {
00064             return _holderMap;
00065         }
00066
00068         const stdair::Yield_T& getYield() const {
00069             return _yield;
00070         }
00071
00073         const stdair::Fare_T& getFare() const {
00074             return _fare;
00075         }
00076
00077     public:
00078         // /////////// Setters ///////////
00079         void setYield (const Yield_T& iYield) {
00080             _yield = iYield;
00081         }
00082
00083         void setFare (const Fare_T& iFare) {

```

```

00084     _fare = iFare;
00085 }
00086
00087 public:
00088     // //////////// Display support methods ////////////
00094     void toStream (std::ostream& ioOut) const {
00095         ioOut << toString();
00096     }
00097
00103     void fromStream (std::istream& ioIn) {
00104     }
00105
00109     std::string toString() const;
00110
00114     const std::string describeKey() const {
00115         return _key.toString();
00116     }
00117
00118
00119 public:
00120     // //////////// (Boost) Serialisation support methods ////////////
00124     template<class Archive>
00125     void serialize (Archive& ar, const unsigned int iFileVersion);
00126
00127 private:
00132     void serialisationImplementationExport() const;
00133     void serialisationImplementationImport();
00134
00135
00136 protected:
00137     // //////////// Constructors and destructors ////////////
00141     AirlineClassList (const Key_T&);
00145     virtual ~AirlineClassList();
00146
00147 private:
00151     AirlineClassList();
00152
00156     AirlineClassList (const AirlineClassList&);
00157
00158
00159 protected:
00160     // //////////// Attributes ////////////
00164     Key_T _key;
00165
00169     BomAbstract* _parent;
00170
00174     HolderMap_T _holderMap;
00175
00176     /*
00177      * Yield value.
00178      */
00179     Yield_T _yield;
00180
00181     /*
00182      * Fare value.
00183      */
00184     Fare_T _fare;
00185 };
00186
00187 }
00188 #endif // __STDAIR_BOM_AIRLINECLASSLIST_HPP
00189

```



## 35.121 stdair/bom/AirlineClassListKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/AirlineClassListKey.hpp>
```

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## Functions

- template void [stdair::AirlineClassListKey::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [stdair::AirlineClassListKey::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

## 35.122 AirlineClassListKey.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_BomDisplay.hpp>
00013 #include <stdair/bom/AirlineClassListKey.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 AirlineClassListKey::AirlineClassListKey() {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 AirlineClassListKey::
00024 AirlineClassListKey (const AirlineCodeList_T& iAirlineCodeList,
00025                     const ClassList_StringList_T& iClassCodeList)
00026     : _airlineCodeList (iAirlineCodeList), _classCodeList (iClassCodeList) {
```

```

00027     }
00028
00029     // //////////////////////////////////////
00030     AirlineClassListKey::AirlineClassListKey (const AirlineClassListKey& iKey)
00031         : _airlineCodeList (iKey._airlineCodeList),
00032           _classCodeList (iKey._classCodeList) {
00033     }
00034
00035     // //////////////////////////////////////
00036     AirlineClassListKey::~AirlineClassListKey() {
00037     }
00038
00039     // //////////////////////////////////////
00040     void AirlineClassListKey::toStream (std::ostream& ioOut) const {
00041         ioOut << "AirlineClassListKey: " << toString() << std::endl;
00042     }
00043
00044     // //////////////////////////////////////
00045     void AirlineClassListKey::fromStream (std::istream& ioIn) {
00046     }
00047
00048     // //////////////////////////////////////
00049     const std::string AirlineClassListKey::toString() const {
00050         std::ostringstream oStr;
00051         assert (_airlineCodeList.size() == _classCodeList.size());
00052
00053         unsigned short idx = 0;
00054         AirlineCodeList_T::const_iterator itAirlineCode = _airlineCodeList.begin();
00055         for (ClassList_StringList_T::const_iterator itClassCode =
00056             _classCodeList.begin(); itClassCode != _classCodeList.end();
00057             ++itClassCode, ++itAirlineCode, ++idx) {
00058             if (idx != 0) {
00059                 oStr << DEFAULT_KEY_SUB_FLD_DELIMITER << " ";
00060             }
00061
00062             const AirlineCode_T& lAirlineCode = *itAirlineCode;
00063             const ClassCode_T& lClassCode = *itClassCode;
00064             oStr << lAirlineCode << " " << lClassCode;
00065         }
00066
00067         return oStr.str();
00068     }
00069
00070     // //////////////////////////////////////
00071     void AirlineClassListKey::serialisationImplementationExport() const {
00072         std::ostringstream oStr;
00073         boost::archive::text_oarchive oa (oStr);
00074         oa << *this;
00075     }
00076
00077     // //////////////////////////////////////
00078     void AirlineClassListKey::serialisationImplementationImport() {
00079         std::istringstream iStr;
00080         boost::archive::text_iarchive ia (iStr);
00081         ia >> *this;
00082     }
00083
00084     // //////////////////////////////////////
00085     template<class Archive>
00086     void AirlineClassListKey::serialize (Archive& ioArchive,
00087                                         const unsigned int iFileVersion) {
00088         AirlineCodeList_T::const_iterator itAirlineCode = _airlineCodeList.begin();

```

```

00097     for (ClassList_StringList_T::const_iterator itClassCode =
00098           _classCodeList.begin(); itClassCode != _classCodeList.end();
00099           ++itClassCode, ++itAirlineCode) {
00100         AirlineCode_T lAirlineCode = *itAirlineCode;
00101         ClassCode_T lClassCode = *itClassCode;
00102
00103         ioArchive & lAirlineCode & lClassCode;
00104     }
00105 }
00106
00107 // //////////////////////////////////////
00108 // Explicit template instantiation
00109 namespace ba = boost::archive;
00110 template void AirlineClassListKey::
00111     serialize<ba::text_oarchive> (ba::text_oarchive&, unsigned int);
00112 template void AirlineClassListKey::
00113     serialize<ba::text_iarchive> (ba::text_iarchive&, unsigned int);
00114 // //////////////////////////////////////
00115
00116 }

```

### 35.123 stdair/bom/AirlineClassListKey.hpp File Reference

```

#include <iosfwd>

#include <stdair/stdair_inventory_types.hpp>

#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::AirlineClassListKey](#)  
*Key of airport-pair.*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.124 AirlineClassListKey.hpp

```

00001 #ifndef __STDAIR_BOM_AIRLINECLASSLISTKEY_HPP
00002 #define __STDAIR_BOM_AIRLINECLASSLISTKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>

```

```

00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/KeyAbstract.hpp>
00012
00014 namespace boost {
00015     namespace serialization {
00016         class access;
00017     }
00018 }
00019
00020 namespace stdair {
00021
00025     struct AirlineClassListKey : public KeyAbstract {
00026         friend class boost::serialization::access;
00027
00028         // ////////// Constructors and destructors //////////
00029     private:
00033         AirlineClassListKey();
00034
00035     public:
00039         AirlineClassListKey (const AirlineCodeList_T&,
00040                             const ClassList_StringList_T&);
00041
00045         AirlineClassListKey (const AirlineClassListKey&);
00046
00050         ~AirlineClassListKey();
00051
00052
00053     public:
00054         // ////////// Getters //////////
00056         const AirlineCodeList_T& getAirlineCodeList() const {
00057             return _airlineCodeList;
00058         }
00059
00061         const ClassList_StringList_T& getClassCodeList() const {
00062             return _classCodeList;
00063         }
00064
00065
00066     public:
00067         // ////////// Display support methods //////////
00073         void toStream (std::ostream& ioOut) const;
00074
00080         void fromStream (std::istream& ioIn);
00081
00091         const std::string toString() const;
00092
00093
00094     public:
00095         // ////////// (Boost) Serialisation support methods //////////
00099         template<class Archive>
00100         void serialize (Archive& ar, const unsigned int iFileVersion);
00101
00102     private:
00107         void serialisationImplementationExport() const;
00108         void serialisationImplementationImport();
00109
00110
00111     private:
00112         // ////////// Attributes //////////
00116         AirlineCodeList_T _airlineCodeList;
00117

```

```

00121     ClassList_StringList_T _classCodeList;
00122 };
00123
00124 }
00125 #endif // __STDAIR_BOM_AIRLINECLASSLISTKEY_HPP

```

## 35.125 stdair/bom/AirlineClassListTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

### Namespaces

- namespace `stdair`  
Handle on the `StdAir` library context.

### Typedefs

- typedef std::list< AirlineClassList \* > `stdair::AirlineClassListList_T`
- typedef std::map< const MapKey\_T, AirlineClassList \* > `stdair::AirlineClassListMap_T`
- typedef std::pair< MapKey\_T, AirlineClassList \* > `stdair::AirlineClassListWithKey_T`
- typedef std::list< AirlineClassListWithKey\_T > `stdair::AirlineClassListDetailedList_T`

## 35.126 AirlineClassListTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_AIRLINECLASSLISTTYPES_HPP
00003 #define __STDAIR_BOM_AIRLINECLASSLISTTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class AirlineClassList;
00018
00020     typedef std::list<AirlineClassList*> AirlineClassListList_T;
00021
00023     typedef std::map<const MapKey_T, AirlineClassList*> AirlineClassListMap_T;

```

```

00024
00026     typedef std::pair<MapKey_T, AirlineClassList*> AirlineClassListWithKey_T;
00027     typedef std::list<AirlineClassListWithKey_T> AirlineClassListDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_AIRLINECLASSLISTTYPES_HPP

```

## 35.127 stdair/bom/AirlineFeature.cpp File Reference

```

#include <cassert>

#include <stdair/stdair_types.hpp>

#include <stdair/bom/AirlineFeature.hpp>

```

### Namespaces

- namespace `stdair`  
Handle on the `StdAir` library context.

## 35.128 AirlineFeature.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/stdair_types.hpp>
00008 #include <stdair/bom/AirlineFeature.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 AirlineFeature::AirlineFeature (const Key_T& iKey) : _key (iKey) {
00014 }
00015
00016 // //////////////////////////////////////
00017 AirlineFeature::~AirlineFeature () {
00018 }
00019
00020 // //////////////////////////////////////
00021 void AirlineFeature::init (const ForecasterMode_T& iForecastMode,
00022                          const HistoricalDataLimit_T& iHistoricalDataLimit,
00023                          const ControlMode_T& iControlMode) {
00024     _forecasterMode = iForecastMode;
00025     _historicalDataLimit = iHistoricalDataLimit;
00026     _controlMode = iControlMode;
00027 }
00028
00029 // //////////////////////////////////////
00030 std::string AirlineFeature::toString() const {
00031     std::ostringstream ostr;
00032     ostr << describeKey()
00033         << ", " << _forecasterMode
00034         << ", " << _historicalDataLimit
00035         << ", " << _controlMode;

```

```

00036     return ostr.str();
00037 }
00038
00039 }
00040

```

### 35.129 stdair/bom/AirlineFeature.hpp File Reference

```

#include <stdair/stdair_rm_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/AirlineFeatureKey.hpp>
#include <stdair/bom/AirlineFeatureTypes.hpp>

```

#### Classes

- class [stdair::AirlineFeature](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.130 AirlineFeature.hpp

```

00001 #ifndef __STDAIR_BOM_AIRLINEFEATURE_HPP
00002 #define __STDAIR_BOM_AIRLINEFEATURE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_rm_types.hpp>
00009 #include <stdair/bom/BomAbstract.hpp>
00010 #include <stdair/bom/AirlineFeatureKey.hpp>
00011 #include <stdair/bom/AirlineFeatureTypes.hpp>
00012
00013 namespace stdair {
00014
00016     class AirlineFeature : public BomAbstract {
00017     template <typename BOM> friend class FacBom;
00018
00019     public:
00020         // Type definitions.
00022         typedef AirlineFeatureKey Key_T;
00023
00024     public:
00025         // //////////// Getters ////////////
00027         const Key_T& getKey() const {
00028             return _key;
00029         }
00030

```

```

00031 public:
00032     // //////////// Setters ////////////
00034     void init (const ForecasterMode_T&, const HistoricalDataLimit_T&,
00035               const ControlMode_T&);
00036
00037 public:
00038     // //////////// Display support methods ////////////
00041     void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00042
00045     void fromStream (std::istream& ioIn) { }
00046
00048     std::string toString() const;
00049
00051     const std::string describeKey() const { return _key.toString(); }
00052
00053 protected:
00055     AirlineFeature ();
00056     AirlineFeature (const AirlineFeature&);
00057     AirlineFeature (const Key_T&);
00059     virtual ~AirlineFeature();
00060
00061 protected:
00062     // Attributes
00064     Key_T _key;
00065
00067     ForecasterMode_T _forecasterMode;
00068
00070     HistoricalDataLimit_T _historicalDataLimit;
00071
00073     ControlMode_T _controlMode;
00074 };
00075
00076 }
00077 #endif // __STDAIR_BOM_AIRLINEFEATURE_HPP
00078

```

### 35.131 stdair/bom/AirlineFeatureKey.cpp File Reference

```

#include <sstream>

#include <stdair/bom/AirlineFeatureKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.132 AirlineFeatureKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 // StdAir
00007 #include <stdair/bom/AirlineFeatureKey.hpp>

```



```

00008
00009 namespace stdair {
00010
00011 // //////////////////////////////////////
00012 AirlineFeatureKey::AirlineFeatureKey (const AirlineCode_T& iAirlineCode)
00013 : _airlineCode (iAirlineCode) {
00014 }
00015
00016 // //////////////////////////////////////
00017 AirlineFeatureKey::~AirlineFeatureKey () {
00018 }
00019
00020 // //////////////////////////////////////
00021 void AirlineFeatureKey::toStream (std::ostream& ioOut) const {
00022     ioOut << "AirlineFeatureKey: " << toString() << std::endl;
00023 }
00024
00025 // //////////////////////////////////////
00026 void AirlineFeatureKey::fromStream (std::istream& ioIn) {
00027 }
00028
00029 // //////////////////////////////////////
00030 const std::string AirlineFeatureKey::toString() const {
00031     std::ostringstream oStr;
00032     oStr << _airlineCode;
00033     return oStr.str();
00034 }
00035
00036 }

```

### 35.133 stdair/bom/AirlineFeatureKey.hpp File Reference

```

#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::AirlineFeatureKey](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.134 AirlineFeatureKey.hpp

```

00001 #ifndef __STDAIR_BOM_AIRLINEFEATUREKEY_HPP
00002 #define __STDAIR_BOM_AIRLINEFEATUREKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section

```

```

00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/KeyAbstract.hpp>
00012
00013 namespace stdair {
00015     struct AirlineFeatureKey : public KeyAbstract {
00016
00017     public:
00018         // ////////////////////////////////// Construction //////////////////////////////////
00020         AirlineFeatureKey (const AirlineCode_T& iAirlineCode);
00021
00023         ~AirlineFeatureKey ();
00024
00025         // ////////////////////////////////// Getters //////////////////////////////////
00027         const AirlineCode_T& getAirlineCode() const { return _airlineCode; }
00028
00029         // ////////////////////////////////// Display support methods //////////////////////////////////
00032         void toStream (std::ostream& ioOut) const;
00033
00036         void fromStream (std::istream& ioIn);
00037
00043         const std::string toString() const;
00044
00045     private:
00046         // Attributes
00048         AirlineCode_T _airlineCode;
00049     };
00050
00051 }
00052 #endif // __STDAIR_BOM_AIRLINEFEATUREKEY_HPP

```

### 35.135 stdair/bom/AirlineFeatureTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< AirlineFeature \* > [stdair::AirlineFeatureList\\_T](#)
- typedef std::map< const MapKey\_T, AirlineFeature \* > [stdair::AirlineFeatureMap\\_T](#)

**35.136 AirlineFeatureTypes.hpp**

```

00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_AIRLINEFEATURETYPES_HPP
00003 #define __STDAIR_BOM_AIRLINEFEATURETYPES_HPP
00004
00005 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00006 // Import section
00007 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class AirlineFeature;
00018
00019     typedef std::list<AirlineFeature*> AirlineFeatureList_T;
00020
00021     typedef std::map<const MapKey_T, AirlineFeature*> AirlineFeatureMap_T;
00022
00023 }
00024 #endif // __STDAIR_BOM_AIRLINEFEATURETYPES_HPP
00025

```

**35.137 stdair/bom/AirlineStruct.cpp File Reference**

```

#include <cassert>
#include <istream>
#include <ostream>
#include <sstream>
#include <stdair/bom/AirlineStruct.hpp>

```

**Namespaces**

- namespace `stdair`  
Handle on the StdAir library context.

**35.138 AirlineStruct.cpp**

```

00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 // Import section
00003 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <istream>
00007 #include <ostream>
00008 #include <sstream>
00009 // StdAir

```

```

00010 #include <stdair/bom/AirlineStruct.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 AirlineStruct::AirlineStruct () {
00016 }
00017
00018 // //////////////////////////////////////
00019 AirlineStruct::AirlineStruct (const AirlineStruct& iAirlineStruct)
00020 : _code (iAirlineStruct._code), _name (iAirlineStruct._name) {
00021 }
00022
00023 // //////////////////////////////////////
00024 AirlineStruct::AirlineStruct (const AirlineCode_T& iAirlineCode,
00025                               const std::string& iAirlineName)
00026 : _code (iAirlineCode), _name (iAirlineName) {
00027 }
00028
00029 // //////////////////////////////////////
00030 AirlineStruct::~AirlineStruct () {
00031 }
00032
00033 // //////////////////////////////////////
00034 void AirlineStruct::toStream (std::ostream& ioOut) const {
00035     ioOut << describe();
00036 }
00037
00038 // //////////////////////////////////////
00039 void AirlineStruct::fromStream (std::istream& ioIn) {
00040 }
00041
00042 // //////////////////////////////////////
00043 const std::string AirlineStruct::describe() const {
00044     std::ostringstream oStr;
00045     oStr << _code << " " << _name;
00046     return oStr.str();
00047 }
00048
00049 }

```

### 35.139 stdair/bom/AirlineStruct.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <vector>

#include <stdair/stdair_inventory_types.hpp>

#include <stdair/basic/StructAbstract.hpp>

```

#### Classes

- struct [stdair::AirlineStruct](#)

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.140 AirlineStruct.hpp

```

00001 #ifndef __STDAIR_BOM_AIRLINESTRUCT_HPP
00002 #define __STDAIR_BOM_AIRLINESTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_inventory_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014
00015 namespace stdair {
00016
00017     struct AirlineStruct : public StructAbstract {
00018     public:
00019         // ////////////////////////////////// Getters //////////////////////////////////
00020         const AirlineCode_T& getAirlineCode() const {
00021             return _code;
00022         }
00023
00024         const std::string& getAirlineName() const {
00025             return _name;
00026         }
00027
00028         // ////////////////////////////////// Setters //////////////////////////////////
00029         void setAirlineCode (const AirlineCode_T& iAirlineCode) {
00030             _code = iAirlineCode;
00031         }
00032
00033         void setAirlineName (const std::string& iAirlineName) {
00034             _name = iAirlineName;
00035         }
00036
00037     public:
00038         // ////////////////////////////////// Display support method //////////////////////////////////
00039         void toStream (std::ostream& ioOut) const;
00040
00041         void fromStream (std::istream& ioIn);
00042
00043         const std::string describe() const;
00044
00045     public:
00046         // ////////////////////////////////// Constructors & Destructor //////////////////////////////////
00047         AirlineStruct (const AirlineCode_T&, const std::string& iAirlineName);
00048         AirlineStruct ();
00049         AirlineStruct (const AirlineStruct&);
00050         ~AirlineStruct ();
00051
00052
00053
00054
00055
00056
00057
00058
00059
00060
00061
00062
00063
00064
00065
00066
00067

```

```

00068
00069     private:
00070         // ////////////////////////////////// Attributes //////////////////////////////////
00072         AirlineCode_T _code;
00073
00075         std::string _name;
00076     };
00077
00078 }
00079 #endif // __STDAIR_BOM_AIRLINESTRUCT_HPP

```

### 35.141 stdair/bom/AirportPair.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/AirportPair.hpp>

```

#### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.142 AirportPair.cpp

```

00001 // //////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/AirportPair.hpp>
00011
00012 namespace stdair {
00013
00014     // //////////////////////////////////
00015     AirportPair::AirportPair()
00016         : _key (DEFAULT_ORIGIN, DEFAULT_DESTINATION),
00017           _parent (NULL) {
00018         // That constructor is used by the serialisation process
00019     }
00020
00021     // //////////////////////////////////
00022     AirportPair::AirportPair (const AirportPair& iAirportPair)
00023         : _key (iAirportPair.getKey()), _parent (NULL) {
00024         assert (false);
00025     }
00026

```

```

00027 // //////////////////////////////////////
00028 AirportPair::AirportPair (const Key_T& iKey)
00029     : _key (iKey), _parent (NULL)  {
00030 }
00031
00032 // //////////////////////////////////////
00033 AirportPair::~AirportPair () {
00034 }
00035
00036 // //////////////////////////////////////
00037 std::string AirportPair::toString() const {
00038     std::ostringstream ostr;
00039     ostr << describeKey();
00040     return ostr.str();
00041 }
00042 }
00043
00044

```

### 35.143 stdair/bom/AirportPair.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/AirportPairKey.hpp>
#include <stdair/bom/AirportPairTypes.hpp>

```

#### Classes

- class [stdair::AirportPair](#)  
*Class representing the actual attributes for an airport-pair.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.144 AirportPair.hpp

```

00001 #ifndef __STDAIR_BOM_AIRPORTPAIR_HPP
00002 #define __STDAIR_BOM_AIRPORTPAIR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/AirportPairKey.hpp>
00010 #include <stdair/bom/AirportPairTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00018     class AirportPair : public BomAbstract {

```

```

00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022     public:
00023         // //////////// Type definitions ////////////
00027         typedef AirportPairKey Key_T;
00028
00029     public:
00030         // //////////// Display support methods ////////////
00036         void toStream (std::ostream& ioOut) const {
00037             ioOut << toString();
00038         }
00039
00045         void fromStream (std::istream& ioIn) {
00046         }
00047
00051         std::string toString() const;
00052
00056         const std::string describeKey() const {
00057             return _key.toString();
00058         }
00059
00060     public:
00061         // //////////// Getters ////////////
00065         const Key_T& getKey() const {
00066             return _key;
00067         }
00068
00072         const AirportCode_T& getBoardingPoint() const {
00073             return _key.getBoardingPoint();
00074         }
00075
00079         const AirportCode_T& getOffPoint() const {
00080             return _key.getOffPoint();
00081         }
00082
00086         BomAbstract* const getParent() const {
00087             return _parent;
00088         }
00089
00093         const HolderMap_T& getHolderMap() const {
00094             return _holderMap;
00095         }
00096
00097     protected:
00098         // //////////// Constructors and destructors ////////////
00102         AirportPair (const Key_T&);
00106         virtual ~AirportPair();
00107
00108     private:
00112         AirportPair();
00116         AirportPair (const AirportPair&);
00117
00118     protected:
00119         // //////////// Attributes ////////////
00123         Key_T _key;
00124
00128         BomAbstract* _parent;
00129
00133         HolderMap_T _holderMap;
00134
00135     };

```



```

00136
00137 }
00138 #endif // __STDAIR_BOM_AIRPORTPAIR_HPP
00139

```

### 35.145 stdair/bom/AirportPairKey.cpp File Reference

```

#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/AirportPairKey.hpp>

```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.146 AirportPairKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_BomDisplay.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/bom/AirportPairKey.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 AirportPairKey::AirportPairKey ()
00016 : _boardingPoint (DEFAULT_ORIGIN),
00017   _offPoint (DEFAULT_DESTINATION) {
00018     assert (false);
00019 }
00020
00021 // //////////////////////////////////////
00022 AirportPairKey::AirportPairKey (const AirportCode_T& iBoardingPoint,
00023                                const AirportCode_T& iOffPoint)
00024 : _boardingPoint (iBoardingPoint), _offPoint (iOffPoint) {
00025 }
00026
00027 // //////////////////////////////////////
00028 AirportPairKey::AirportPairKey (const AirportPairKey& iKey)
00029 : _boardingPoint (iKey._boardingPoint),
00030   _offPoint (iKey._offPoint) {
00031 }
00032

```

```

00033 // //////////////////////////////////////
00034 AirportPairKey::~AirportPairKey () {
00035 }
00036
00037 // //////////////////////////////////////
00038 void AirportPairKey::toStream (std::ostream& ioOut) const {
00039     ioOut << "AirportPairKey: " << toString() << std::endl;
00040 }
00041
00042 // //////////////////////////////////////
00043 void AirportPairKey::fromStream (std::istream& ioIn) {
00044 }
00045
00046 // //////////////////////////////////////
00047 const std::string AirportPairKey::toString() const {
00048     std::ostringstream oStr;
00049     oStr << _boardingPoint << DEFAULT_KEY_SUB_FLD_DELIMITER
00050     << " " << _offPoint;
00051     return oStr.str();
00052 }
00053
00054 }

```

### 35.147 stdair/bom/AirportPairKey.hpp File Reference

```

#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_basic_types.hpp>

```

#### Classes

- struct [stdair::AirportPairKey](#)  
*Key of airport-pair.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.148 AirportPairKey.hpp

```

00001 #ifndef __STDAIR_BOM_AIRPORTPAIRKEY_HPP
00002 #define __STDAIR_BOM_AIRPORTPAIRKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_basic_types.hpp>
00010
00011 namespace stdair {
00012

```

```

00016 struct AirportPairKey : public KeyAbstract {
00017
00018 public:
00019     // ////////// Construction //////////
00021     AirportPairKey (const stdair::AirportCode_T&,
00022                   const stdair::AirportCode_T&);
00024     AirportPairKey (const AirportPairKey&);
00026     ~AirportPairKey ();
00027 private:
00029     AirportPairKey ();
00030
00031 public:
00032     // ////////// Getters //////////
00036     const stdair::AirportCode_T& getBoardingPoint() const {
00037         return _boardingPoint;
00038     }
00039
00043     const stdair::AirportCode_T& getOffPoint() const {
00044         return _offPoint;
00045     }
00046
00047     // ////////// Display support methods //////////
00053     void toStream (std::ostream& ioOut) const;
00054
00060     void fromStream (std::istream& ioIn);
00061
00067     const std::string toString() const;
00068
00069 private:
00070     // ////////////////////////////////// Attributes //////////////////////////////////
00074     AirportCode_T _boardingPoint;
00075
00079     AirportCode_T _offPoint;
00080 };
00081
00082 }
00083 #endif // __SIMFQT_BOM_AIRPORTPAIRKEY_HPP

```

### 35.149 stdair/bom/AirportPairTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

#### Typedefs

- typedef `std::list< AirportPair * >` `stdair::AirportPairList_T`
- typedef `std::map< const MapKey_T, AirportPair * >` `stdair::AirportPairMap_T`
- typedef `std::pair< MapKey_T, AirportPair * >` `stdair::AirportPairWithKey_T`

- typedef std::list< AirportPairWithKey\_T > [stdair::AirportPairDetailedList\\_T](#)

### 35.150 AirportPairTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_AIRPORTPAIRTYPES_HPP
00003 #define __STDAIR_BOM_AIRPORTPAIRTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class AirportPair;
00018
00019     typedef std::list<AirportPair*> AirportPairList_T;
00020
00021     typedef std::map<const MapKey_T, AirportPair*> AirportPairMap_T;
00022
00023     typedef std::pair<MapKey_T, AirportPair*> AirportPairWithKey_T;
00024     typedef std::list<AirportPairWithKey_T> AirportPairDetailedList_T;
00025 }
00026
00027 #endif // __STDAIR_BOM_AIRPORTPAIRTYPES_HPP
00028
00029
00030

```

### 35.151 stdair/bom/BomAbstract.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <map>

#include <typeinfo>

```

#### Classes

- class [stdair::BomAbstract](#)  
*Base class for the Business Object Model (BOM) layer.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## Typedefs

- typedef std::map< const std::type\_info \*, BomAbstract \* > [stdair::HolderMap\\_T](#)

## Functions

- template<class charT , class traits >  
std::basic\_ostream< charT, traits > & [operator<<](#) (std::basic\_ostream< charT, traits > &ioOut, const [stdair::BomAbstract](#) &iBom)
- template<class charT , class traits >  
std::basic\_istream< charT, traits > & [operator>>](#) (std::basic\_istream< charT, traits > &ioln, [stdair::BomAbstract](#) &iBom)

### 35.151.1 Function Documentation

**35.151.1.1** template<class charT , class traits > std::basic\_ostream<charT, traits>&  
operator<< ( std::basic\_ostream< charT, traits > & *ioOut*, const  
[stdair::BomAbstract](#) & *iBom* ) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 59 of file [BomAbstract.hpp](#).

References [stdair::BomAbstract::toStream\(\)](#).

**35.151.1.2** template<class charT , class traits > std::basic\_istream<charT, traits>&  
operator>> ( std::basic\_istream< charT, traits > & *ioln*, [stdair::BomAbstract](#)  
& *ioBom* ) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 87 of file [BomAbstract.hpp](#).

References [stdair::BomAbstract::fromStream\(\)](#).

## 35.152 BomAbstract.hpp

```
00001
00006 #ifndef __STDAIR_BOM_BOMABSTRACT_HPP
00007 #define __STDAIR_BOM_BOMABSTRACT_HPP
00008
00009 // //////////////////////////////////////
00010 // Import section
00011 // //////////////////////////////////////
00012 // STL
00013 #include <iosfwd>
00014 #include <string>
00015 #include <map>
```

```

00016 #include <typeinfo>
00017
00018 namespace stdair {
00019
00023     class BomAbstract {
00024     public:
00025         // //////////// Display support methods ////////////
00028         virtual void toStream (std::ostream& ioOut) const = 0;
00029
00032         virtual void fromStream (std::istream& ioIn) = 0;
00033
00035         virtual std::string toString() const = 0;
00036
00037
00038     protected:
00040         BomAbstract() {}
00041         BomAbstract(const BomAbstract&) {}
00042     public:
00044         virtual ~BomAbstract() {}
00045     };
00046
00047     /* Define the map of object holder type. */
00048     typedef std::map<const std::type_info*, BomAbstract*> HolderMap_T;
00049 }
00050
00056 template <class charT, class traits>
00057 inline
00058 std::basic_ostream<charT, traits>&
00059 operator<< (std::basic_ostream<charT, traits>& ioOut,
00060           const stdair::BomAbstract& iBom) {
00066     std::basic_ostringstream<charT, traits> ostr;
00067     ostr.copyfmt (ioOut);
00068     ostr.width (0);
00069
00070     // Fill string stream
00071     iBom.toStream (ostr);
00072
00073     // Print string stream
00074     ioOut << ostr.str();
00075
00076     return ioOut;
00077 }
00078
00084 template <class charT, class traits>
00085 inline
00086 std::basic_istream<charT, traits>&
00087 operator>> (std::basic_istream<charT, traits>& ioIn,
00088           stdair::BomAbstract& ioBom) {
00089     // Fill Bom object with input stream
00090     ioBom.fromStream (ioIn);
00091     return ioIn;
00092 }
00093
00094 #endif // __STDAIR_BOM_BOMABSTRACT_HPP

```

### 35.153 stdair/bom/BomArchive.cpp File Reference

```

#include <cassert>

#include <sstream>

```

```

#include <boost/archive/tmpdir.hpp>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/base_object.hpp>
#include <boost/serialization/utility.hpp>
#include <boost/serialization/list.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomArchive.hpp>

```

#### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

#### 35.154 BomArchive.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/tmpdir.hpp>
00009 #include <boost/archive/text_iarchive.hpp>
00010 #include <boost/archive/text_oarchive.hpp>
00011 #include <boost/serialization/base_object.hpp>
00012 #include <boost/serialization/utility.hpp>
00013 #include <boost/serialization/list.hpp>
00014 // #include <boost/serialization/assume_abstract.hpp>
00015 // StdAir
00016 #include <stdair/bom/BomRoot.hpp>
00017 #include <stdair/bom/Inventory.hpp>

```

```

00018 #include <stdair/bom/FlightDate.hpp>
00019 #include <stdair/bom/LegDate.hpp>
00020 #include <stdair/bom/SegmentDate.hpp>
00021 #include <stdair/bom/LegCabin.hpp>
00022 #include <stdair/bom/SegmentCabin.hpp>
00023 #include <stdair/bom/FareFamily.hpp>
00024 #include <stdair/bom/BookingClass.hpp>
00025 #include <stdair/bom/BookingRequestStruct.hpp>
00026 #include <stdair/bom/BomManager.hpp>
00027 #include <stdair/bom/BomArchive.hpp>
00028
00029 namespace stdair {
00030
00031 // //////////////////////////////////////
00032 void BomArchive::archive (const BomRoot& iBomRoot) {
00033 }
00034
00035 // //////////////////////////////////////
00036 std::string BomArchive::archive (const Inventory& iInventory) {
00037     std::ostringstream oStr;
00038     boost::archive::text_oarchive oa (oStr);
00039     oa << iInventory;
00040     return oStr.str();
00041 }
00042
00043 // //////////////////////////////////////
00044 void BomArchive::restore (const std::string& iArchive,
00045                          Inventory& ioInventory) {
00046     std::istringstream iStr;
00047     boost::archive::text_iarchive ia (iStr);
00048     ia >> ioInventory;
00049 }
00050
00051 // //////////////////////////////////////
00052 void BomArchive::archive (const FlightDate& iFlightDate) {
00053 }
00054
00055 }

```

### 35.155 stdair/bom/BomArchive.hpp File Reference

```
#include <iosfwd>
```

#### Classes

- class [stdair::BomArchive](#)  
*Utility class to archive/restore BOM objects with Boost serialisation.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*



## 35.156 BomArchive.hpp

```

00001 #ifndef __STDAIR_BOM_BOMARCHIVE_HPP
00002 #define __STDAIR_BOM_BOMARCHIVE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009
00010 namespace stdair {
00011
00012     class BomRoot;
00013     class Inventory;
00014     class FlightDate;
00015     class LegDate;
00016     class SegmentDate;
00017     class LegCabin;
00018     class SegmentCabin;
00019     class FareFamily;
00020     class BookingClass;
00021     struct BookingRequestStruct;
00022
00023     class BomArchive {
00024     public:
00025         static void archive (const BomRoot&);
00026
00027         static std::string archive (const Inventory&);
00028
00029         static void restore (const std::string& iArchive, Inventory&);
00030
00031         static void archive (const FlightDate&);
00032     };
00033 }
00034 #endif // __STDAIR_BOM_BOMARCHIVE_HPP

```

## 35.157 stdair/bom/BomDisplay.cpp File Reference

## 35.158 BomDisplay.cpp

```

00001
00002 // //////////////////////////////////////
00003 // Import section
00004 // //////////////////////////////////////
00005 // STL
00006 #include <cassert>
00007 #include <ostream>
00008 // StdAir
00009 #include <stdair/basic/BasConst_BomDisplay.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/BomRoot.hpp>
00012 #include <stdair/bom/EventQueue.hpp>
00013 #include <stdair/bom/Inventory.hpp>
00014 #include <stdair/bom/FlightDate.hpp>
00015 #include <stdair/bom/LegDate.hpp>
00016 #include <stdair/bom/SegmentDate.hpp>
00017 #include <stdair/bom/LegCabin.hpp>

```

```

00021 #include <stdair/bom/SegmentCabin.hpp>
00022 #include <stdair/bom/FareFamily.hpp>
00023 #include <stdair/bom/BookingClass.hpp>
00024 #include <stdair/bom/AirportPair.hpp>
00025 #include <stdair/bom/PosChannel.hpp>
00026 #include <stdair/bom/DatePeriod.hpp>
00027 #include <stdair/bom/TimePeriod.hpp>
00028 #include <stdair/bom/FareFeatures.hpp>
00029 #include <stdair/bom/YieldFeatures.hpp>
00030 #include <stdair/bom/AirlineClassList.hpp>
00031 #include <stdair/bom/Bucket.hpp>
00032 #include <stdair/bom/TravelSolutionTypes.hpp>
00033 #include <stdair/bom/TravelSolutionStruct.hpp>
00034 #include <stdair/bom/BomDisplay.hpp>
00035 #include <stdair/bom/OnDDate.hpp>
00036
00037 namespace stdair {
00038
00044     struct FlagSaver {
00045     public:
00047         FlagSaver (std::ostream& oStream)
00048             : _oStream (oStream), _streamFlags (oStream.flags()) {
00049         }
00050
00052         ~FlagSaver() {
00053             // Reset formatting flags of the given output stream
00054             _oStream.flags (_streamFlags);
00055         }
00056
00057     private:
00059         std::ostream& _oStream;
00061         std::ios::fmtflags _streamFlags;
00062     };
00063
00064     // //////////////////////////////////////
00065     std::string BomDisplay::csvDisplay (const EventQueue& iEventQueue) {
00066         std::ostringstream oStream;
00067
00071         oStream << std::endl;
00072         oStream << "=====
00073         << std::endl;
00074         oStream << "EventQueue: " << iEventQueue.describeKey() << std::endl;
00075         oStream << "=====
00076         << std::endl;
00077
00078         return oStream.str();
00079     }
00080
00081     // //////////////////////////////////////
00082     void BomDisplay::list (std::ostream& oStream, const BomRoot& iBomRoot,
00083                          const AirlineCode_T& iAirlineCode,
00084                          const FlightNumber_T& iFlightNumber) {
00085         // Save the formatting flags for the given STL output stream
00086         FlagSaver flagSaver (oStream);
00087
00088         // Check whether there are Inventory objects
00089         if (BomManager::hasList<Inventory> (iBomRoot) == false) {
00090             return;
00091         }
00092
00093         // Browse the inventories
00094         unsigned short invIdx = 1;

```

```

00095     const InventoryList_T& lInventoryList =
00096         BomManager::getList<Inventory> (iBomRoot);
00097     for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
00098         itInv != lInventoryList.end(); ++itInv, ++invIdx) {
00099         const Inventory* lInv_ptr = *itInv;
00100         assert (lInv_ptr != NULL);
00101
00102         // Retrieve the inventory key (airline code)
00103         const AirlineCode_T& lAirlineCode = lInv_ptr->getAirlineCode();
00104
00105         // Display only the requested inventories
00106         if (iAirlineCode == "all" || iAirlineCode == lAirlineCode) {
00107             // Get the list of flight-dates for that inventory
00108             list (oStream, *lInv_ptr, invIdx, iFlightNumber);
00109         }
00110     }
00111 }
00112
00113 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00114 void BomDisplay::list (std::ostream& oStream, const Inventory& iInventory,
00115                     const unsigned short iInventoryIndex,
00116                     const FlightNumber_T& iFlightNumber) {
00117     // Save the formatting flags for the given STL output stream
00118     FlagSaver flagSaver (oStream);
00119
00120     // Check whether there are FlightDate objects
00121     if (BomManager::hasMap<FlightDate> (iInventory) == false) {
00122         return;
00123     }
00124
00125     //
00126     const AirlineCode_T& lAirlineCode = iInventory.getAirlineCode();
00127     oStream << iInventoryIndex << ". " << lAirlineCode << std::endl;
00128
00129     // Browse the flight-dates
00130     unsigned short lCurrentFlightNumber = 0;
00131     unsigned short flightNumberIdx = 0;
00132     unsigned short departureDateIdx = 1;
00133     const FlightDateMap_T& lFlightDateList =
00134         BomManager::getMap<FlightDate> (iInventory);
00135     for (FlightDateMap_T::const_iterator itFD = lFlightDateList.begin();
00136         itFD != lFlightDateList.end(); ++itFD, ++departureDateIdx) {
00137         const FlightDate* lFD_ptr = itFD->second;
00138         assert (lFD_ptr != NULL);
00139
00140         // Retrieve the key of the flight-date
00141         const FlightNumber_T& lFlightNumber = lFD_ptr->getFlightNumber();
00142         const Date_T& lFlightDateDate = lFD_ptr->getDepartureDate();
00143
00144         // Display only the requested flight number
00145         if (iFlightNumber == 0 || iFlightNumber == lFlightNumber) {
00146             //
00147             if (lCurrentFlightNumber != lFlightNumber) {
00148                 lCurrentFlightNumber = lFlightNumber;
00149                 ++flightNumberIdx; departureDateIdx = 1;
00150                 oStream << " " << iInventoryIndex << "." << flightNumberIdx << ". "
00151                     << lAirlineCode << lFlightNumber << std::endl;
00152             }
00153
00154             oStream << " " << iInventoryIndex << "." << flightNumberIdx
00155                 << "." << departureDateIdx << ". "
00156                 << lAirlineCode << lFlightNumber << " / " << lFlightDateDate

```

```

00165         << std::endl;
00166     }
00167 }
00168 }
00169
00170 // //////////////////////////////////////
00171 void BomDisplay::listAirportPairDateRange (std::ostream& oStream,
00172                                           const BomRoot& iBomRoot) {
00173     // Save the formatting flags for the given STL output stream
00174     FlagSaver flagSaver (oStream);
00175
00176     // Check whether there are AirportPair objects
00177     if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
00178         return;
00179     }
00180
00181     const AirportPairList_T& lAirportPairList =
00182         BomManager::getList<AirportPair> (iBomRoot);
00183     for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
00184          itAir != lAirportPairList.end(); ++itAir) {
00185         const AirportPair* lAir_ptr = *itAir;
00186         assert (lAir_ptr != NULL);
00187
00188         // Check whether there are date-period objects
00189         assert (BomManager::hasList<DatePeriod> (*lAir_ptr) == true);
00190
00191         // Browse the date-period objects
00192         const DatePeriodList_T& lDatePeriodList =
00193             BomManager::getList<DatePeriod> (*lAir_ptr);
00194
00195         for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
00196              itDP != lDatePeriodList.end(); ++itDP) {
00197             const DatePeriod* lDP_ptr = *itDP;
00198             assert (lDP_ptr != NULL);
00199
00200             // Display the date-period object
00201             oStream << lAir_ptr->describeKey()
00202                 << " / " << lDP_ptr->describeKey() << std::endl;
00203         }
00204     }
00205 }
00206 }
00207
00208 // //////////////////////////////////////
00209 void BomDisplay::csvDisplay (std::ostream& oStream,
00210                             const BomRoot& iBomRoot) {
00211     // Save the formatting flags for the given STL output stream
00212     FlagSaver flagSaver (oStream);
00213
00214     oStream << std::endl;
00215     oStream << "===== "
00216         << std::endl;
00217     oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
00218     oStream << "===== "
00219         << std::endl;
00220
00221     // Check whether there are Inventory objects
00222     if (BomManager::hasList<Inventory> (iBomRoot) == false) {
00223         return;
00224     }
00225
00226     // Browse the inventories

```

```

00230     const InventoryList_T& lInventoryList =
00231         BomManager::getList<Inventory> (iBomRoot);
00232     for (InventoryList_T::const_iterator itInv = lInventoryList.begin();
00233         itInv != lInventoryList.end(); ++itInv) {
00234         const Inventory* lInv_ptr = *itInv;
00235         assert (lInv_ptr != NULL);
00236
00237         // Display the inventory
00238         csvDisplay (oStream, *lInv_ptr);
00239     }
00240 }
00241
00242 // //////////////////////////////////////
00243 void BomDisplay::csvDisplay (std::ostream& oStream,
00244                             const Inventory& iInventory) {
00245     // Save the formatting flags for the given STL output stream
00246     FlagSaver flagSaver (oStream);
00247
00251     oStream << "+++++" << std::endl;
00252     oStream << "Inventory: " << iInventory.describeKey() << std::endl;
00253     oStream << "+++++" << std::endl;
00254
00255     // Check whether there are FlightDate objects
00256     if (BomManager::hasList<FlightDate> (iInventory) == false) {
00257         return;
00258     }
00259
00260     // Browse the flight-dates
00261     const FlightDateList_T& lFlightDateList =
00262         BomManager::getList<FlightDate> (iInventory);
00263     for (FlightDateList_T::const_iterator itFD = lFlightDateList.begin();
00264         itFD != lFlightDateList.end(); ++itFD) {
00265         const FlightDate* lFD_ptr = *itFD;
00266         assert (lFD_ptr != NULL);
00267
00268         // Display the flight-date
00269         csvDisplay (oStream, *lFD_ptr);
00270     }
00271
00272     // Check if the inventory contains a list of partners
00273
00274     if (BomManager::hasList<Inventory> (iInventory)){
00275
00276         // Browse the partner's inventories
00277         const InventoryList_T& lPartnerInventoryList =
00278             BomManager::getList<Inventory> (iInventory);
00279
00280         for (InventoryList_T::const_iterator itInv = lPartnerInventoryList.begin();
00281
00282             itInv != lPartnerInventoryList.end(); ++itInv) {
00283             oStream << "-----" << std::en
dl;
00284             oStream << "Partner inventory:" << std::endl;
00285             oStream << "-----" << std::en
dl;
00286             const Inventory* lInv_ptr = *itInv;
00287             assert (lInv_ptr != NULL);
00288
00289             // Display the inventory
00290             csvDisplay (oStream, *lInv_ptr);
00291         }

```

```

00292         oStream << "*****" << std::endl;
00293         oStream << std::endl;
00294     }
00295
00296     // Check if the inventory contains a list of O&D dates
00297
00298     if (BomManager::hasList<OnDDate> (iInventory)){
00299
00300         //Browse the O&Ds
00301         const OnDDateList_T& lOnDDateList =
00302             BomManager::getList<OnDDate> (iInventory);
00303
00304         for (OnDDateList_T::const_iterator itOnD = lOnDDateList.begin();
00305             itOnD != lOnDDateList.end(); ++itOnD) {
00306             oStream << "*****" << std::endl;
00307             oStream << "O&D-Date:" << std::endl;
00308             oStream << "-----" << std::endl;
00309             oStream << "Airline, Date, Origin-Destination, Segments, " << std::endl;
00310
00311             const OnDDate* lOnDDate_ptr = *itOnD;
00312             assert (lOnDDate_ptr != NULL);
00313
00314             // Display the O&D date
00315             csvDisplay (oStream, *lOnDDate_ptr);
00316         }
00317         oStream << "*****" << std::endl;
00318     }
00319 }
00320
00321 // //////////////////////////////////////
00322 void BomDisplay::csvDisplay (std::ostream& oStream,
00323                             const OnDDate& iOnDDate) {
00324     // Save the formatting flags for the given STL output stream
00325     FlagSaver flagSaver (oStream);
00326
00327     const AirlineCode_T& lAirlineCode = iOnDDate.getAirlineCode();
00328     const Date_T& lDate = iOnDDate.getDate();
00329     const AirportCode_T& lOrigin = iOnDDate.getOrigin();
00330     const AirportCode_T& lDestination = iOnDDate.getDestination();
00331
00332     oStream << lAirlineCode << ", " << lDate << ", "<< lOrigin << "-"
00333         << lDestination << ", " << iOnDDate.describeKey() << ", "
00334         << std::endl;
00335
00336     const StringDemandStructMap_T& lDemandInfoMap =
00337         iOnDDate.getDemandInfoMap();
00338
00339     // Check if the map contains information.
00340     const bool isInfoMapEmpty = lDemandInfoMap.empty();
00341     if (isInfoMapEmpty) {
00342         return;
00343     }
00344     assert (lDemandInfoMap.empty() ==false);
00345
00346     oStream << "-----" << std::endl;
00347     oStream << "Cabin-Class path, Demand mean, Demand std dev, Yield, "
00348         << std::endl;
00349
00350     for (StringDemandStructMap_T::const_iterator itDI = lDemandInfoMap.begin();
00351         itDI != lDemandInfoMap.end(); ++itDI) {
00352         const std::string& lCabinClassPath = itDI->first;

```

```

00357     const YieldDemandPair_T lYieldDemandPair =
00358         itDI->second;
00359     const Yield_T lYield = lYieldDemandPair.first;
00360     const MeanStdDevPair_T lMeanStdDevPair =
00361         lYieldDemandPair.second;
00362     const MeanValue_T lDemandMean = lMeanStdDevPair.first;
00363     const StdDevValue_T lDemandStdDev = lMeanStdDevPair.second;
00364
00365     ostream << lCabinClassPath << ", "
00366         << lDemandMean << ", "
00367         << lDemandStdDev << ", "
00368         << lYield << ", "
00369         << std::endl;
00370 }
00371
00372 }
00373
00374 // //////////////////////////////////////
00375 void BomDisplay::csvDisplay (std::ostream& ostream,
00376                             const FlightDate& iFlightDate) {
00377     // Save the formatting flags for the given STL output stream
00378     FlagSaver flagSaver (ostream);
00379
00380     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00381     ostream << "*****" << std::endl;
00382     ostream << "FlightDate: " << lAirlineCode << iFlightDate.describeKey()
00383         << std::endl;
00384     ostream << "*****" << std::endl;
00385
00386     //
00387     csvSegmentDateDisplay (ostream, iFlightDate);
00388     //
00389     csvLegDateDisplay (ostream, iFlightDate);
00390
00391     //
00392     csvLegCabinDisplay (ostream, iFlightDate);
00393
00394     //
00395     csvBucketDisplay (ostream, iFlightDate);
00396
00397     //
00398     csvFareFamilyDisplay (ostream, iFlightDate);
00399
00400     //
00401     csvBookingClassDisplay (ostream, iFlightDate);
00402 }
00403
00404 // //////////////////////////////////////
00405 void BomDisplay::csvLegDateDisplay (std::ostream& ostream,
00406                                     const FlightDate& iFlightDate) {
00407     // Save the formatting flags for the given STL output stream
00408     FlagSaver flagSaver (ostream);
00409
00410     ostream << "*****" << std::endl;
00411     ostream << "Leg-Dates:" << std::endl
00412         << "-----" << std::endl;
00413     ostream << "Flight, Leg, BoardDate, BoardTime, "
00414         << "OffDate, OffTime, Date Offset, Time Offset, Elapsed, "
00415         << "Distance, Capacity, " << std::endl;
00416
00417     // Retrieve the key of the flight-date
00418     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();

```

```

00427     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00428     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00429
00430     // Check whether there are LegDate objects
00431     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00432         return;
00433     }
00434
00435     // Browse the leg-dates
00436     const LegDateList_T& lLegDateList =
00437         BomManager::getList<LegDate> (iFlightDate);
00438     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00439          itLD != lLegDateList.end(); ++itLD) {
00440         const LegDate* lLD_ptr = *itLD;
00441         assert (lLD_ptr != NULL);
00442
00443         oStream << lAirlineCode << lFlightNumber << " "
00444             << lFlightDateDate << ", ";
00445
00446         oStream << lLD_ptr->getBoardingPoint() << "-"
00447             << lLD_ptr->getOffPoint() << ", "
00448             << lLD_ptr->getBoardingDate() << ", "
00449             << lLD_ptr->getBoardingTime() << ", "
00450             << lLD_ptr->getOffDate() << ", "
00451             << lLD_ptr->getOffTime() << ", "
00452             << lLD_ptr->getElapsedTime() << ", "
00453             << lLD_ptr->getDateOffset().days() << ", "
00454             << lLD_ptr->getTimeOffset() << ", "
00455             << lLD_ptr->getDistance() << ", "
00456             << lLD_ptr->getCapacity() << ", " << std::endl;
00457     }
00458     oStream << "*****" << std::endl;
00459 }
00460
00461 // //////////////////////////////////////
00462 void BomDisplay::csvSegmentDateDisplay (std::ostream& oStream,
00463                                         const FlightDate& iFlightDate) {
00464     // Save the formatting flags for the given STL output stream
00465     FlagSaver flagSaver (oStream);
00466
00467     oStream << "*****" << std::endl;
00468     oStream << "SegmentDates:" << std::endl
00469         << "-----" << std::endl;
00470     oStream << "Flight, Segment, Date"
00471         << std::endl;
00472
00473     // Retrieve the key of the flight-date
00474     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00475     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00476     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00477
00478     // Check whether there are SegmentDate objects
00479     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00480         return;
00481     }
00482
00483     // Browse the segment-dates
00484     const SegmentDateList_T& lSegmentDateList =
00485         BomManager::getList<SegmentDate> (iFlightDate);
00486     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00487          itSD != lSegmentDateList.end(); ++itSD) {
00488         const SegmentDate* lSD_ptr = *itSD;

```



```

00492     assert (lSD_ptr != NULL);
00493
00494     // Retrieve the key of the segment-date, as well as its dates
00495     const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
00496     const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
00497     const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
00498     ostream << lAirlineCode << lFlightNumber << " " << lFlightDateDate << ", "
00499         << lBoardPoint << "-" << lOffPoint << ", " << lSegmentDateDate << s
td::endl;
00500
00501     // Check if the current segment has corresponding marketing segments.
00502     const bool isMarketingSDListEmpty = BomManager::hasList<SegmentDate>(*lSD_ptr);
00503     if (isMarketingSDListEmpty == false) {
00504         //
00505         const SegmentDateList_T& lMarketingSDList = BomManager::getList<SegmentDate>(*lSD_ptr);
00506
00507         ostream << " *** Marketed by ";
00508         for (SegmentDateList_T::const_iterator itMarketingSD = lMarketingSDList.begin();
00509             itMarketingSD != lMarketingSDList.end(); ++itMarketingSD) {
00510             SegmentDate* lMarketingSD_ptr = *itMarketingSD;
00511             FlightDate* lMarketingFD_ptr = BomManager::getParentPtr<FlightDate>(*lMarketingSD_ptr);
00512             Inventory* lMarketingInv_ptr = BomManager::getParentPtr<Inventory>(*lMarketingFD_ptr);
00513             ostream << lMarketingInv_ptr->toString() << lMarketingFD_ptr->toString() << " * ";
00514         }
00515     }
00516
00517     // Check if the current segment is operated by another segment date.
00518     const SegmentDate* lOperatingSD_ptr = lSD_ptr->getOperatingSegmentDate();
00519     if (lOperatingSD_ptr != NULL) {
00520
00521         const FlightDate* lOperatingFD_ptr = BomManager::getParentPtr<FlightDate>(*lOperatingSD_ptr);
00522         const Inventory* lOperatingInv_ptr = BomManager::getParentPtr<Inventory>(*lOperatingFD_ptr);
00523         ostream << " *** Operated by " << lOperatingInv_ptr->toString() << lOperatingFD_ptr->toString() << std::endl;
00524     }
00525 }
00526
00527 ostream << std::endl;
00528 }
00529 }
00530
00531 // //////////////////////////////////////
00532 void BomDisplay::csvLegCabinDisplay (std::ostream& ostream,
00533     const FlightDate& iFlightDate) {
00534     // Save the formatting flags for the given STL output stream
00535     FlagSaver flagSaver (ostream);
00536
00537     ostream << "*****" << std::endl;
00538     ostream << "LegCabins:" << std::endl;
00539     << "-----" << std::endl;
00540     ostream << "Flight, Leg, Cabin, "
00541         << "OffedCAP, PhyCAP, RgdADJ, AU, UPR, SS, Staff, WL, Group, "
00542         << "CommSpace, AvPool, Avl, NAV, GAV, ACP, ETB, BidPrice, "
00543         << std::endl;
00544 }

```

```

00548 // Retrieve the key of the flight-date
00549 const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00550 const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00551 const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00552
00553 // Check whether there are LegDate objects
00554 if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00555     return;
00556 }
00557
00558 // Browse the leg-dates
00559 const LegDateList_T& lLegDateList =
00560     BomManager::getList<LegDate> (iFlightDate);
00561 for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00562      itLD != lLegDateList.end(); ++itLD) {
00563     const LegDate* lLD_ptr = *itLD;
00564     assert (lLD_ptr != NULL);
00565
00566     // Retrieve the key of the leg-date, as well as its off point
00567     const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
00568     const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
00569     const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();
00570
00571     // Browse the leg-cabins
00572     const LegCabinList_T& lLegCabinList =
00573         BomManager::getList<LegCabin> (*lLD_ptr);
00574     for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00575          itLC != lLegCabinList.end(); ++itLC) {
00576         const LegCabin* lLC_ptr = *itLC;
00577         assert (lLC_ptr != NULL);
00578
00579         ostream << lAirlineCode << lFlightNumber << " "
00580             << lFlightDateDate << ", ";
00581
00582         ostream << lBoardPoint << "-" << lOffPoint
00583             << " " << lLegDateDate << ", ";
00584
00585         ostream << lLC_ptr->getCabinCode() << ", ";
00586
00587         ostream << lLC_ptr->getOfferedCapacity() << ", "
00588             << lLC_ptr->getPhysicalCapacity() << ", "
00589             << lLC_ptr->getRegradeAdjustment() << ", "
00590             << lLC_ptr->getAuthorizationLevel() << ", "
00591             << lLC_ptr->getUPR() << ", "
00592             << lLC_ptr->getSoldSeat() << ", "
00593             << lLC_ptr->getStaffNbOfSeats() << ", "
00594             << lLC_ptr->getWLNbOfSeats() << ", "
00595             << lLC_ptr->getGroupNbOfSeats() << ", "
00596             << lLC_ptr->getCommittedSpace() << ", "
00597             << lLC_ptr->getAvailabilityPool() << ", "
00598             << lLC_ptr->getAvailability() << ", "
00599             << lLC_ptr->getNetAvailability() << ", "
00600             << lLC_ptr->getGrossAvailability() << ", "
00601             << lLC_ptr->getAvgCancellationPercentage() << ", "
00602             << lLC_ptr->getETB() << ", "
00603             << lLC_ptr->getCurrentBidPrice() << ", "
00604             << std::endl;
00605     }
00606 }
00607 ostream << "*****" << std::endl;
00608 }
00609

```

```

00610 // //////////////////////////////////////
00611 void BomDisplay::csvSegmentCabinDisplay (std::ostream& oStream,
00612                                         const FlightDate& iFlightDate) {
00613     // Save the formatting flags for the given STL output stream
00614     FlagSaver flagSaver (oStream);
00615 }
00616 }
00617 // //////////////////////////////////////
00618 void BomDisplay::csvFareFamilyDisplay (std::ostream& oStream,
00619                                       const FlightDate& iFlightDate) {
00620     // Save the formatting flags for the given STL output stream
00621     FlagSaver flagSaver (oStream);
00622
00623     oStream << "*****" << std::endl;
00624     oStream << "SegmentCabins:" << std::endl;
00625     << "-----" << std::endl;
00626     oStream << "Flight, Segment, Cabin, FF, Bkgs, MIN, UPR, "
00627             << "CommSpace, AvPool, BP, " << std::endl;
00628
00629     // Retrieve the key of the flight-date
00630     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00631     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00632     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00633
00634     // Check whether there are SegmentDate objects
00635     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00636         return;
00637     }
00638
00639     // Browse the segment-dates
00640     const SegmentDateList_T& lSegmentDateList =
00641         BomManager::getList<SegmentDate> (iFlightDate);
00642     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00643          itSD != lSegmentDateList.end(); ++itSD) {
00644         const SegmentDate* lSD_ptr = *itSD;
00645         assert (lSD_ptr != NULL);
00646
00647         // Retrieve the key of the segment-date, as well as its dates
00648         const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
00649         const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
00650         const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
00651
00652         // Browse the segment-cabins
00653         const SegmentCabinList_T& lSegmentCabinList =
00654             BomManager::getList<SegmentCabin> (*lSD_ptr);
00655         for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00656              itSC != lSegmentCabinList.end(); ++itSC) {
00657             const SegmentCabin* lSC_ptr = *itSC;
00658             assert (lSC_ptr != NULL);
00659
00660             // Retrieve the key of the segment-cabin
00661             const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();
00662
00663             // Check whether there are fare family objects
00664             if (BomManager::hasList<FareFamily> (*lSC_ptr) == false) {
00665                 continue;
00666             }
00667
00668             // Browse the fare families
00669             const FareFamilyList_T& lFareFamilyList =
00670                 BomManager::getList<FareFamily> (*lSC_ptr);

```

```

00679         for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00680              itFF != lFareFamilyList.end(); ++itFF) {
00681             const FareFamily* lFF_ptr = *itFF;
00682             assert (lFF_ptr != NULL);
00683
00684             oStream << lAirlineCode << lFlightNumber << " "
00685                  << lFlightDateDate << ", ";
00686
00687             oStream << lBoardPoint << "-" << lOffPoint << " "
00688                  << lSegmentDateDate << ", ";
00689
00690             oStream << lCabinCode << ", " << lFF_ptr->getFamilyCode() << ", ";
00691
00692             oStream << lSC_ptr->getBookingCounter() << ", "
00693                  << lSC_ptr->getMIN() << ", "
00694                  << lSC_ptr->getUPR() << ", "
00695                  << lSC_ptr->getCommittedSpace() << ", "
00696                  << lSC_ptr->getAvailabilityPool() << ", "
00697                  << lSC_ptr->getCurrentBidPrice() << ", "
00698                  << std::endl;
00699         }
00700     }
00701 }
00702 oStream << "*****" << std::endl;
00703 }
00704
00705 // //////////////////////////////////////
00706 void BomDisplay::csvBucketDisplay (std::ostream& oStream,
00707                                   const FlightDate& iFlightDate) {
00708     // Save the formatting flags for the given STL output stream
00709     FlagSaver flagSaver (oStream);
00710
00711     oStream << "*****" << std::endl;
00712     oStream << "Buckets:" << std::endl
00713          << "-----" << std::endl;
00714     oStream << "Flight, Leg, Cabin, Yield, AU/SI, SS, AV, "
00715          << std::endl;
00716
00717     // Retrieve the key of the flight-date
00718     const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00719     const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00720     const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00721
00722     // Check whether there are LegDate objects
00723     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00724         return;
00725     }
00726
00727     // Browse the leg-dates
00728     const LegDateList_T& lLegDateList =
00729         BomManager::getList<LegDate> (iFlightDate);
00730     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00731          itLD != lLegDateList.end(); ++itLD) {
00732         const LegDate* lLD_ptr = *itLD;
00733         assert (lLD_ptr != NULL);
00734
00735         // Retrieve the key of the leg-date, as well as its off point
00736         const Date_T& lLegDateDate = lLD_ptr->getBoardingDate();
00737         const AirportCode_T& lBoardPoint = lLD_ptr->getBoardingPoint();
00738         const AirportCode_T& lOffPoint = lLD_ptr->getOffPoint();
00739
00740         // Browse the leg-cabins

```

```

00744     const LegCabinList_T& lLegCabinList =
00745         BomManager::getList<LegCabin> (*lLD_ptr);
00746     for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00747         itLC != lLegCabinList.end(); ++itLC) {
00748         const LegCabin* lLC_ptr = *itLC;
00749         assert (lLC_ptr != NULL);
00750
00751         // Check whether there are bucket objects
00752         if (BomManager::hasList<Bucket> (*lLC_ptr) == false) {
00753             continue;
00754         }
00755
00756         // Retrieve the key of the leg-cabin
00757         const CabinCode_T& lCabinCode = lLC_ptr->getCabinCode();
00758
00759         // Browse the buckets
00760         const BucketList_T& lBucketList = BomManager::getList<Bucket> (*lLC_ptr);
00761
00762         for (BucketList_T::const_iterator itBuck = lBucketList.begin();
00763             itBuck != lBucketList.end(); ++itBuck) {
00764             const Bucket* lBucket_ptr = *itBuck;
00765             assert (lBucket_ptr != NULL);
00766
00767             oStream << lAirlineCode << lFlightNumber << " "
00768                 << lFlightDate << ", ";
00769
00770             oStream << lBoardPoint << "-" << lOffPoint << " "
00771                 << lLegDate << ", " << lCabinCode << ", ";
00772
00773             oStream << lBucket_ptr->getYieldRangeUpperValue() << ", "
00774                 << lBucket_ptr->getSeatIndex() << ", "
00775                 << lBucket_ptr->getSoldSeats() << ", "
00776                 << lBucket_ptr->getAvailability() << ", ";
00777             oStream << std::endl;
00778         }
00779     }
00780     oStream << "*****" << std::endl;
00781 }
00782
00783 // //////////////////////////////////////
00784 void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
00785     const BookingClass& iBookingClass,
00786     const std::string& iLeadingString) {
00787     // Save the formatting flags for the given STL output stream
00788     FlagSaver flagSaver (oStream);
00789
00790     oStream << iLeadingString << iBookingClass.getClassCode();
00791
00792     if (iBookingClass.getSubclassCode() == 0) {
00793         oStream << ", ";
00794     } else {
00795         oStream << iBookingClass.getSubclassCode() << ", ";
00796     }
00797
00798     oStream << iBookingClass.getAuthorizationLevel() << " ("
00799         << iBookingClass.getProtection() << "), "
00800         << iBookingClass.getNegotiatedSpace() << ", "
00801         << iBookingClass.getNoShowPercentage() << ", "
00802         << iBookingClass.getCancellationPercentage() << ", "
00803         << iBookingClass.getNbOfBookings() << ", "
00804         << iBookingClass.getNbOfGroupBookings() << " ("
00805         << iBookingClass.getNbOfPendingGroupBookings() << "), "

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```

00811         << iBookingClass.getNbOfStaffBookings() << ", "
00812         << iBookingClass.getNbOfWLBookings() << ", "
00813         << iBookingClass.getETB() << ", "
00814         << iBookingClass.getNetClassAvailability() << ", "
00815         << iBookingClass.getNetRevenueAvailability() << ", "
00816         << iBookingClass.getSegmentAvailability() << ", "
00817         << std::endl;
00818     }
00819
00820     // ////////////////////////////////////////
00821     void BomDisplay::csvBookingClassDisplay (std::ostream& oStream,
00822                                             const FlightDate& iFlightDate) {
00823         // Save the formatting flags for the given STL output stream
00824         FlagSaver flagSaver (oStream);
00825
00826         // Headers
00827         oStream << "*****" << std::endl;
00828         oStream << "Subclasses:" << std::endl
00829         << "-----" << std::endl;
00830         oStream << "Flight, Segment, Cabin, FF, Subclass, MIN/AU (Prot), "
00831         << "Nego, NS%, OB%, "
00832         << "Bkgs, GrpBks (pdg), StfBkgs, WLBkgs, ETB, "
00833         << "ClassAvl, RevAvl, SegAvl, "
00834         << std::endl;
00835
00836         // Retrieve the key of the flight-date
00837         const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00838         const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00839         const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00840
00841         // Check whether there are SegmentDate objects
00842         if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00843             return;
00844         }
00845
00846         // Browse the segment-dates
00847         const SegmentDateList_T& lSegmentDateList =
00848             BomManager::getList<SegmentDate> (iFlightDate);
00849         for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00850             itSD != lSegmentDateList.end(); ++itSD) {
00851             const SegmentDate* lSD_ptr = *itSD;
00852             assert (lSD_ptr != NULL);
00853
00854             // Retrieve the key of the segment-date, as well as its dates
00855             const Date_T& lSegmentDateDate = lSD_ptr->getBoardingDate();
00856             const AirportCode_T& lBoardPoint = lSD_ptr->getBoardingPoint();
00857             const AirportCode_T& lOffPoint = lSD_ptr->getOffPoint();
00858
00859             // Browse the segment-cabins
00860             const SegmentCabinList_T& lSegmentCabinList =
00861                 BomManager::getList<SegmentCabin> (*lSD_ptr);
00862             for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00863                 itSC != lSegmentCabinList.end(); ++itSC) {
00864                 const SegmentCabin* lSC_ptr = *itSC;
00865                 assert (lSC_ptr != NULL);
00866
00867                 // Retrieve the key of the segment-cabin
00868                 const CabinCode_T& lCabinCode = lSC_ptr->getCabinCode();
00869
00870                 // Build the leading string to be displayed
00871                 std::ostringstream oSCLeadingStr;
00872                 oSCLeadingStr << lAirlineCode << lFlightNumber << " "

```

```

00873         << lFlightDateDate << ", "
00874         << lBoardPoint << "-" << lOffPoint << " "
00875         << lSegmentDateDate << ", "
00876         << lCabinCode << ", ";
00877
00878     // Default Fare Family code, when there are no FF
00879     FamilyCode_T lFamilyCode ("NoFF");
00880
00881     // Check whether there are FareFamily objects
00882     if (BomManager::hasList<FareFamily> (*lSC_ptr) == true) {
00883
00884         // Browse the fare families
00885         const FareFamilyList_T& lFareFamilyList =
00886             BomManager::getList<FareFamily> (*lSC_ptr);
00887         for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00888             itFF != lFareFamilyList.end(); ++itFF) {
00889             const FareFamily* lFF_ptr = *itFF;
00890             assert (lFF_ptr != NULL);
00891
00892             // Retrieve the key of the segment-cabin
00893             lFamilyCode = lFF_ptr->getFamilyCode();
00894
00895             // Complete the leading string to be displayed
00896             std::ostringstream oFFLeadingStr;
00897             oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";
00898
00899             // Browse the booking-classes
00900             const BookingClassList_T& lBookingClassList =
00901                 BomManager::getList<BookingClass> (*lFF_ptr);
00902             for (BookingClassList_T::const_iterator itBC =
00903                 lBookingClassList.begin();
00904                 itBC != lBookingClassList.end(); ++itBC) {
00905                 const BookingClass* lBC_ptr = *itBC;
00906                 assert (lBC_ptr != NULL);
00907
00908                 //
00909                 csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
00910             }
00911         }
00912
00913         // Go on to the next segment-cabin
00914         continue;
00915     }
00916     assert (BomManager::hasList<FareFamily> (*lSC_ptr) == false);
00917
00918     // The fare family code is a fake one ('NoFF'), and therefore
00919     // does not vary
00920     std::ostringstream oFFLeadingStr;
00921     oFFLeadingStr << oSCLeadingStr.str() << lFamilyCode << ", ";
00922
00923     // Browse the booking-classes, directly from the segment-cabin object
00924     const BookingClassList_T& lBookingClassList =
00925         BomManager::getList<BookingClass> (*lSC_ptr);
00926     for (BookingClassList_T::const_iterator itBC =
00927         lBookingClassList.begin();
00928         itBC != lBookingClassList.end(); ++itBC) {
00929         const BookingClass* lBC_ptr = *itBC;
00930         assert (lBC_ptr != NULL);
00931
00932         //
00933         csvBookingClassDisplay (oStream, *lBC_ptr, oFFLeadingStr.str());
00934     }

```

```

00935     }
00936 }
00937 oStream << "*****" << std::endl;
00938 }
00939
00940 // //////////////////////////////////////
00941 void BomDisplay::
00942 csvDisplay (std::ostream& oStream,
00943             const TravelSolutionList_T& iTravelSolutionList) {
00944
00945     // Save the formatting flags for the given STL output stream
00946     FlagSaver flagSaver (oStream);
00947
00948     oStream << "Travel solutions:";
00949     unsigned short idx = 0;
00950     for (TravelSolutionList_T::const_iterator itTS =
00951          iTravelSolutionList.begin();
00952          itTS != iTravelSolutionList.end(); ++itTS, ++idx) {
00953         const TravelSolutionStruct& lTS = *itTS;
00954
00955         oStream << std::endl;
00956         oStream << "    [" << idx << "] " << lTS.display();
00957     }
00958 }
00959
00960 // //////////////////////////////////////
00961 void BomDisplay::
00962 csvDisplay (std::ostream& oStream,
00963             const DatePeriodList_T& iDatePeriodList) {
00964
00965     // Save the formatting flags for the given STL output stream
00966     FlagSaver flagSaver (oStream);
00967
00968     // Browse the date-period objects
00969     for (DatePeriodList_T::const_iterator itDP = iDatePeriodList.begin();
00970          itDP != iDatePeriodList.end(); ++itDP) {
00971         const DatePeriod* lDP_ptr = *itDP;
00972         assert (lDP_ptr != NULL);
00973
00974         // Display the date-period object
00975         csvDateDisplay (oStream, *lDP_ptr);
00976     }
00977 }
00978
00979 // //////////////////////////////////////
00980 void BomDisplay::csvSimFQTAirRACDisplay (std::ostream& oStream,
00981                                          const BomRoot& iBomRoot) {
00982     // Save the formatting flags for the given STL output stream
00983     FlagSaver flagSaver (oStream);
00984
00985     oStream << std::endl;
00986     oStream << "=====
00987     << std::endl;
00988     oStream << "BomRoot: " << iBomRoot.describeKey() << std::endl;
00989     oStream << "=====
00990     << std::endl;
00991
00992     // Check whether there are airport-pair objects
00993     if (BomManager::hasList<AirportPair> (iBomRoot) == false) {
00994         return;
00995     }
00996 }
00997
00998 }
00999

```



```

01000 // Browse the airport-pair objects
01001 const AirportPairList_T& lAirportPairList =
01002     BomManager::getList<AirportPair> (iBomRoot);
01003 for (AirportPairList_T::const_iterator itAir = lAirportPairList.begin();
01004     itAir != lAirportPairList.end(); ++itAir ) {
01005     const AirportPair* lAir_ptr = *itAir;
01006     assert (lAir_ptr != NULL);
01007
01008     // Display the airport pair object
01009     csvAirportPairDisplay (oStream, *lAir_ptr);
01010 }
01011 }
01012
01013 // //////////////////////////////////////
01014 void BomDisplay::csvAirportPairDisplay (std::ostream& oStream,
01015     const AirportPair& iAirportPair) {
01016     // Save the formatting flags for the given STL output stream
01017     FlagSaver flagSaver (oStream);
01018
01019     oStream << "++++++" << std::endl;
01020     oStream << "AirportPair: " << iAirportPair.describeKey() << std::endl;
01021     oStream << "++++++" << std::endl;
01022
01023     // Check whether there are date-period objects
01024     if (BomManager::hasList<DatePeriod> (iAirportPair) == false) {
01025         return;
01026     }
01027
01028     // Browse the date-period objects
01029     const DatePeriodList_T& lDatePeriodList =
01030         BomManager::getList<DatePeriod> (iAirportPair);
01031     for (DatePeriodList_T::const_iterator itDP = lDatePeriodList.begin();
01032         itDP != lDatePeriodList.end(); ++itDP) {
01033         const DatePeriod* lDP_ptr = *itDP;
01034         assert (lDP_ptr != NULL);
01035
01036         // Display the date-period object
01037         csvDateDisplay (oStream, *lDP_ptr);
01038     }
01039 }
01040
01041 // //////////////////////////////////////
01042 void BomDisplay::csvDateDisplay (std::ostream& oStream,
01043     const DatePeriod& iDatePeriod) {
01044     // Save the formatting flags for the given STL output stream
01045     FlagSaver flagSaver (oStream);
01046
01047     oStream << "-----" << std::endl;
01048     oStream << "DatePeriod: " << iDatePeriod.describeKey() << std::endl;
01049     oStream << "-----" << std::endl;
01050
01051     // Check whether there are pos-channel objects
01052     if (BomManager::hasList<PosChannel> (iDatePeriod) == false) {
01053         return;
01054     }
01055
01056     // Browse the pos-channel objects
01057     const PosChannelList_T& lPosChannelList =
01058         BomManager::getList<PosChannel> (iDatePeriod);
01059     for (PosChannelList_T::const_iterator itPC = lPosChannelList.begin();
01060         itPC != lPosChannelList.end(); ++itPC) {

```

```

01068     const PosChannel* lPC_ptr = *itPC;
01069     assert (lPC_ptr != NULL);
01070
01071     // Display the pos-channel object
01072     csvPosChannelDisplay (oStream, *lPC_ptr);
01073 }
01074 }
01075
01076 // //////////////////////////////////////
01077 void BomDisplay::csvPosChannelDisplay (std::ostream& oStream,
01078                                     const PosChannel& iPosChannel) {
01079     // Save the formatting flags for the given STL output stream
01080     FlagSaver flagSaver (oStream);
01081
01082     oStream << "*****" << std::endl;
01083     oStream << "PosChannel: " << iPosChannel.describeKey() << std::endl;
01084     oStream << "*****" << std::endl;
01085
01086     // Check whether there are time-period objects
01087     if (BomManager::hasList<TimePeriod> (iPosChannel) == false) {
01088         return;
01089     }
01090
01091     // Browse the time-period objects
01092     const TimePeriodList_T& lTimePeriodList =
01093         BomManager::getList<TimePeriod> (iPosChannel);
01094     for (TimePeriodList_T::const_iterator itTP = lTimePeriodList.begin();
01095          itTP != lTimePeriodList.end(); ++itTP) {
01096         const TimePeriod* lTP_ptr = *itTP;
01097         assert (lTP_ptr != NULL);
01098
01099         // Display the time-period object
01100         csvTimeDisplay (oStream, *lTP_ptr);
01101     }
01102 }
01103
01104 // //////////////////////////////////////
01105 void BomDisplay::csvTimeDisplay (std::ostream& oStream,
01106                                const TimePeriod& iTimePeriod) {
01107     // Save the formatting flags for the given STL output stream
01108     FlagSaver flagSaver (oStream);
01109
01110     oStream << "-----" << std::endl;
01111     oStream << "TimePeriod: " << iTimePeriod.describeKey() << std::endl;
01112     oStream << "-----" << std::endl;
01113
01114     // Only one of the fare/yield feature list exists. Each of the following
01115     // two methods will check for the existence of the list. So, only the
01116     // existing list will be actually displayed.
01117     csvFeatureListDisplay<FareFeatures> (oStream, iTimePeriod);
01118     csvFeatureListDisplay<YieldFeatures> (oStream, iTimePeriod);
01119 }
01120
01121 // //////////////////////////////////////
01122 template <typename FEATURE_TYPE>
01123 void BomDisplay::csvFeatureListDisplay (std::ostream& oStream,
01124                                       const TimePeriod& iTimePeriod) {
01125     // Check whether there are fare/yield-feature objects
01126     if (BomManager::hasList<FEATURE_TYPE> (iTimePeriod) == false) {
01127         return;

```

```

01136     }
01137
01138     // Browse the fare/yield-feature objects
01139     typedef typename BomHolder<FEATURE_TYPE>::BomList_T FeaturesList_T;
01140     const FeaturesList_T& lFeaturesList =
01141         BomManager::getList<FEATURE_TYPE> (iTimePeriod);
01142     for (typename FeaturesList_T::const_iterator itFF = lFeaturesList.begin();
01143          itFF != lFeaturesList.end(); ++itFF) {
01144         const FEATURE_TYPE* lFF_ptr = *itFF;
01145         assert (lFF_ptr != NULL);
01146
01147         // Display the fare-features object
01148         csvFeaturesDisplay (oStream, *lFF_ptr);
01149     }
01150 }
01151
01152 // //////////////////////////////////////
01153 template <typename FEATURE_TYPE>
01154 void BomDisplay::csvFeaturesDisplay (std::ostream& oStream,
01155                                     const FEATURE_TYPE& iFeatures) {
01156     // Save the formatting flags for the given STL output stream
01157     FlagSaver flagSaver (oStream);
01158
01159     oStream << "-----" << std::endl;
01160     oStream << "Fare/yield-Features: " << iFeatures.describeKey() << std::endl;
01161     oStream << "-----" << std::endl;
01162
01163     // Check whether there are airlineClassList objects
01164     if (BomManager::hasList<AirlineClassList> (iFeatures) == false) {
01165         return;
01166     }
01167
01168     // Browse the airlineClassList objects
01169     const AirlineClassListList_T& lAirlineClassListList =
01170         BomManager::getList<AirlineClassList> (iFeatures);
01171     for (AirlineClassListList_T::const_iterator itACL =
01172          lAirlineClassListList.begin();
01173          itACL != lAirlineClassListList.end(); ++itACL) {
01174         const AirlineClassList* lACL_ptr = *itACL;
01175         assert (lACL_ptr != NULL);
01176
01177         // Display the airlineClassList object
01178         csvAirlineClassDisplay (oStream, *lACL_ptr);
01179     }
01180 }
01181
01182 // //////////////////////////////////////
01183 void BomDisplay::
01184 csvAirlineClassDisplay (std::ostream& oStream,
01185                        const AirlineClassList& iAirlineClassList) {
01186     // Save the formatting flags for the given STL output stream
01187     FlagSaver flagSaver (oStream);
01188
01189     oStream << "-----" << std::endl;
01190     oStream << "AirlineClassList: "
01191             << iAirlineClassList.describeKey() << std::endl;
01192     oStream << "-----" << std::endl;
01193 }
01194
01195
01196
01197
01198
01199
01200
01201 }
01202

```

## 35.159 stdair/bom/BomDisplay.hpp File Reference

```
#include <iosfwd>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/bom/DatePeriodTypes.hpp>
```

## Classes

- class [stdair::BomDisplay](#)  
*Utility class to display StdAir objects with a pretty format.*

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.160 BomDisplay.hpp

```
00001 #ifndef __STDAIR_BOM_BOMDISPLAY_HPP
00002 #define __STDAIR_BOM_BOMDISPLAY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/bom/TravelSolutionTypes.hpp>
00011 #include <stdair/bom/DatePeriodTypes.hpp>
00012
00013 namespace stdair {
00014
00016     class BomRoot;
00017     class EventQueue;
00018     class Inventory;
00019     class FlightDate;
00020     class LegDate;
00021     class SegmentDate;
00022     class LegCabin;
00023     class SegmentCabin;
00024     class FareFamily;
00025     class BookingClass;
00026     class AirportPair;
00027     class PosChannel;
00028     class DatePeriod;
00029     class TimePeriod;
00030     class FareFeatures;
00031     class YieldFeatures;
00032     class AirlineClassList;
00033     class OnDDate;
00034
00039     class BomDisplay {
00040     public:
```

```

00041 // ////////////////////////////////// Display support methods //////////////////////////////////
00050 static std::string csvDisplay (const EventQueue&);
00051
00066 static void list (std::ostream&, const BomRoot&,
00067                  const AirlineCode_T& iAirlineCode = "all",
00068                  const FlightNumber_T& iFlightNumber = 0);
00069
00083 static void list (std::ostream&, const Inventory&,
00084                  const unsigned short iInventoryIndex = 0,
00085                  const FlightNumber_T& iFlightNumber = 0);
00086
00095 static void listAirportPairDateRange (std::ostream&,
00096                                       const BomRoot&);
00097
00106 static void csvDisplay (std::ostream&, const BomRoot&);
00107
00116 static void csvDisplay (std::ostream&, const Inventory&);
00117
00125 static void csvDisplay (std::ostream&, const OnDDate&);
00126
00135 static void csvDisplay (std::ostream&, const FlightDate&);
00136
00145 static void csvLegDateDisplay (std::ostream&, const FlightDate&);
00146
00155 static void csvSegmentDateDisplay (std::ostream&, const FlightDate&);
00156
00165 static void csvLegCabinDisplay (std::ostream&, const FlightDate&);
00166
00175 static void csvSegmentCabinDisplay (std::ostream&, const FlightDate&);
00176
00185 static void csvFareFamilyDisplay (std::ostream&, const FlightDate&);
00186
00195 static void csvBucketDisplay (std::ostream&, const FlightDate&);
00196
00206 static void csvBookingClassDisplay (std::ostream&, const BookingClass&,
00207                                     const std::string& iLeadingString);
00216 static void csvBookingClassDisplay (std::ostream&, const FlightDate&);
00217
00226 static void csvDisplay (std::ostream&, const TravelSolutionList_T&);
00227
00236 static void csvDisplay (std::ostream&, const DatePeriodList_T&);
00237
00246 static void csvSimFQTAirRACDisplay (std::ostream&, const BomRoot&);
00247
00257 static void csvAirportPairDisplay (std::ostream&, const AirportPair&);
00258
00268 static void csvDateDisplay (std::ostream&, const DatePeriod&);
00269
00279 static void csvPosChannelDisplay (std::ostream&, const PosChannel&);
00280
00290 static void csvTimeDisplay (std::ostream&, const TimePeriod&);
00291
00300 template <typename FEATURE_TYPE>
00301 static void csvFeatureListDisplay (std::ostream& oStream, const TimePeriod&);
00302
00311 template <typename FEATURE_TYPE>
00312 static void csvFeaturesDisplay (std::ostream& oStream, const FEATURE_TYPE&);
00313
00322 static void csvAirlineClassDisplay (std::ostream&, const AirlineClassList&);
00323 };
00324

```

```
00325 }
00326 #endif // __STDAIR_BOM_BOMDISPLAY_HPP
```

### 35.161 stdair/bom/BomHolder.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <list>
#include <map>
#include <stdair/bom/key_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BomHolderKey.hpp>
```

#### Classes

- class [stdair::BomHolder< BOM >](#)  
Class representing the holder of BOM object containers (list and map).

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.162 BomHolder.hpp

```
00001 #ifndef __STDAIR_BOM_BOMHOLDER_HPP
00002 #define __STDAIR_BOM_BOMHOLDER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <list>
00011 #include <map>
00012 // StdAir
00013 #include <stdair/bom/key_types.hpp>
00014 #include <stdair/bom/BomAbstract.hpp>
00015 #include <stdair/bom/BomHolderKey.hpp>
00016
00017 namespace stdair {
00018
00023     template <typename BOM>
00024     class BomHolder : public stdair::BomAbstract {
00026         template <typename> friend class FacBom;
00027         friend class FacBomManager;
00028     }
```

```

00029 public:
00030     // //////////////// Type definitions ////////////////
00034     typedef stdair::BomHolderKey Key_T;
00035
00039     typedef std::list<BOM*> BomList_T;
00040
00044     typedef std::map<const MapKey_T, BOM*> BomMap_T;
00045
00046
00047 public:
00048     // //////////////// Display support methods ////////////////
00054     void toStream (std::ostream& ioOut) const {
00055         ioOut << toString();
00056     }
00057
00063     void fromStream (std::istream& ioIn) {
00064     }
00065
00069     std::string toString() const {
00070         return "BomHolder";
00071     }
00072
00076     const std::string describeKey() const {
00077         return "BomHolder";
00078     }
00079
00080 protected:
00084     BomHolder();
00085
00089     BomHolder (const BomHolder&);
00090
00094     BomHolder (const Key_T& iKey) : _key (iKey) { }
00095
00099     ~BomHolder() { };
00100
00101 public:
00102     // //////////////// Attributes ////////////////
00106     Key_T _key;
00107
00111     BomList_T _bomList;
00112
00116     BomMap_T _bomMap;
00117 };
00118
00119 }
00120 #endif // __STDAIR_BOM_BOMHOLDER_HPP

```

### 35.163 stdair/bom/BomHolderKey.cpp File Reference

```

#include <ostream>

#include <sstream>

#include <stdair/bom/BomHolderKey.hpp>

```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.164 BomHolderKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/BomHolderKey.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 BomHolderKey::BomHolderKey () {
00014 }
00015
00016 // //////////////////////////////////////
00017 BomHolderKey::~BomHolderKey () {
00018 }
00019
00020 // //////////////////////////////////////
00021 void BomHolderKey::toStream (std::ostream& ioOut) const {
00022     ioOut << "BomHolderKey: " << toString() << std::endl;
00023 }
00024
00025 // //////////////////////////////////////
00026 void BomHolderKey::fromStream (std::istream& ioIn) {
00027 }
00028
00029 // //////////////////////////////////////
00030 const std::string BomHolderKey::toString() const {
00031     std::ostringstream oStr;
00032     oStr << " -- HOLDER -- ";
00033     return oStr.str();
00034 }
00035
00036 }

```

### 35.165 stdair/bom/BomHolderKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
```

#### Classes

- struct [stdair::BomHolderKey](#)

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*



**35.166 BomHolderKey.hpp**

```

00001 #ifndef __STDAIR_BOM_BOMHOLDERKEY_HPP
00002 #define __STDAIR_BOM_BOMHOLDERKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009
00010 namespace stdair {
00012     struct BomHolderKey : public KeyAbstract {
00013
00014     public:
00015         // ////////////////////////////////// Construction //////////////////////////////////
00017         BomHolderKey ();
00019         ~BomHolderKey ();
00020
00021         // ////////////////////////////////// Display support methods //////////////////////////////////
00024         void toStream (std::ostream& ioOut) const;
00025
00028         void fromStream (std::istream& ioIn);
00029
00035         const std::string toString() const;
00036
00038         const std::string describe() const;
00039
00040     };
00041
00042 }
00043 #endif // __STDAIR_BOM_BOMHOLDERKEY_HPP

```

**35.167 stdair/bom/BomJSONExport.cpp File Reference**

```

#include <cassert>
#include <ostream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/Bucket.hpp>

```

```
#include <stdair/bom/BomJSONExport.hpp>
```

#### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

#### 35.168 BomJSONExport.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <ostream>
00007 #if BOOST_VERSION >= 103400
00008 // Boost ForEach
00009 #include <boost/foreach.hpp>
00010 #endif // BOOST_VERSION >= 103400
00011 // StdAir
00012 #include <stdair/basic/BasConst_BomDisplay.hpp>
00013 #include <stdair/bom/BomManager.hpp>
00014 #include <stdair/bom/BomRoot.hpp>
00015 #include <stdair/bom/Inventory.hpp>
00016 #include <stdair/bom/FlightDate.hpp>
00017 #include <stdair/bom/LegDate.hpp>
00018 #include <stdair/bom/SegmentDate.hpp>
00019 #include <stdair/bom/LegCabin.hpp>
00020 #include <stdair/bom/SegmentCabin.hpp>
00021 #include <stdair/bom/FareFamily.hpp>
00022 #include <stdair/bom/BookingClass.hpp>
00023 #include <stdair/bom/Bucket.hpp>
00024 #include <stdair/bom/BomJSONExport.hpp>
00025
00026 namespace stdair {
00027
00028 // //////////////////////////////////////
00029 void BomJSONExport::jsonExport (std::ostream& oStream,
00030                                 const FlightDate& iFlightDate) {
00031
00032     // Create an empty property tree object
00033     bpt::ptree pt;
00034
00035     #if BOOST_VERSION >= 104100
00036
00037         const AirlineCode_T& lAirlineCode = iFlightDate.getAirlineCode();
00038         const FlightNumber_T& lFlightNumber = iFlightDate.getFlightNumber();
00039         const Date_T& lFlightDateDate = iFlightDate.getDepartureDate();
00040
00041         // Put airline code in property tree
00042         pt.put ("flight_date.airline_code", lAirlineCode);
00043
00044         // Put flight number level in property tree
00045         pt.put ("flight_date.flight_number", lFlightNumber);
00046
00047         // Put the flight departure date in property tree
00048         const std::string& lDepartureDateStr =
00049             boost::gregorian::to_simple_string (lFlightDateDate);
00050
00051     #endif
00052 }
```

```

00052     pt.put ("flight_date.departure_date", lDepartureDateStr);
00053 #endif // BOOST_VERSION >= 104100
00054
00055     //
00056     jsonLegDateExport (pt, iFlightDate);
00057
00058     //
00059     jsonLegCabinExport (pt, iFlightDate);
00060
00061     //
00062     jsonBucketExport (pt, iFlightDate);
00063
00064     //
00065     jsonSegmentDateExport (pt, iFlightDate);
00066
00067     //
00068     jsonSegmentCabinExport (pt, iFlightDate);
00069
00070     //
00071     jsonFareFamilyExport (pt, iFlightDate);
00072
00073     //
00074     jsonBookingClassExport (pt, iFlightDate);
00075
00076 #if BOOST_VERSION >= 104100
00077     // Write the property tree into the JSON stream.
00078     write_json (oStream, pt);
00079 #endif // BOOST_VERSION >= 104100
00080 }
00081
00082 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00083 void BomJSONExport::jsonLegDateExport (bpt::ptree& ioPropertyTree,
00084                                         const FlightDate& iFlightDate) {
00085     // Check whether there are LegDate objects
00086     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00087         return;
00088     }
00089
00090     // Browse the leg-dates
00091     const LegDateList_T& lLegDateList =
00092         BomManager::getList<LegDate> (iFlightDate);
00093     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00094          itLD != lLegDateList.end(); ++itLD) {
00095         const LegDate* lLD_ptr = *itLD;
00096         assert (lLD_ptr != NULL);
00097
00098         #if BOOST_VERSION >= 104100
00099
00100             //
00101             bpt::ptree lLegDateArray;
00102
00103             // Put boarding point in property tree
00104             lLegDateArray.put ("BoardPoint", lLD_ptr->getBoardingPoint());
00105             // Put off point in property tree
00106             lLegDateArray.put ("OffPoint", lLD_ptr->getOffPoint());
00107             // Put boarding date in property tree
00108             lLegDateArray.put ("BoardDate", lLD_ptr->getBoardingDate());
00109             // Put off date in property tree
00110             lLegDateArray.put ("OffDate", lLD_ptr->getOffDate());
00111             // Put boarding time in property tree
00112             lLegDateArray.put ("BoardTime", lLD_ptr->getBoardingTime());
00113             // Put off time in property tree

```

```

00118     lLegDateArray.put ("OffTime", lLD_ptr->getOffTime());
00119     // Put elapsed time in property tree
00120     lLegDateArray.put ("Elapsed", lLD_ptr->getElapsedTime());
00121     // Put date offset in property tree
00122     lLegDateArray.put ("Date_Offset", lLD_ptr->getDateOffset());
00123     // Put time offset in property tree
00124     lLegDateArray.put ("Time_Offset", lLD_ptr->getTimeOffset());
00125     // Put distance in property tree
00126     lLegDateArray.put ("Distance", lLD_ptr->getDistance());
00127     // Put capacity in property tree
00128     lLegDateArray.put ("Capacity", lLD_ptr->getCapacity());
00129
00130     // Put leg date array in property tree
00131     std::ostream oStream;
00132     oStream << "flight_date.leg_" << lLD_ptr->getBoardingPoint();
00133     ioPropertyTree.put_child(oStream.str(), lLegDateArray);
00134
00135 #endif // BOOST_VERSION >= 104100
00136     }
00137 }
00138
00139 // //////////////////////////////////////
00140 void BomJSONExport::jsonLegCabinExport (bpt::ptree& ioPropertyTree,
00141                                         const FlightDate& iFlightDate) {
00142     // Check whether there are LegDate objects
00143     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00144         return;
00145     }
00146
00147     const LegDateList_T& lLegDateList =
00148         BomManager::getList<LegDate> (iFlightDate);
00149     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00150          itLD != lLegDateList.end(); ++itLD) {
00151         const LegDate* lLD_ptr = *itLD;
00152         assert (lLD_ptr != NULL);
00153
00154         // Browse the leg-cabins
00155         const LegCabinList_T& lLegCabinList =
00156             BomManager::getList<LegCabin> (*lLD_ptr);
00157         for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00158              itLC != lLegCabinList.end(); ++itLC) {
00159             const LegCabin* lLC_ptr = *itLC;
00160             assert (lLC_ptr != NULL);
00161
00162 #if BOOST_VERSION >= 104100
00163             //
00164             bpt::ptree lLegCabinArray;
00165
00166             // Put the offered capacity in property tree
00167             lLegCabinArray.put ("OfferedCAP", lLC_ptr->getOfferedCapacity());
00168             // Put the physical capacity in property tree
00169             lLegCabinArray.put ("PhyCAP", lLC_ptr->getPhysicalCapacity());
00170             // Put regrade adjustment in property tree
00171             lLegCabinArray.put ("RgdADJ", lLC_ptr->getRegradeAdjustment());
00172             // Put authorization level in property tree
00173             lLegCabinArray.put ("AU", lLC_ptr->getAuthorizationLevel());
00174             // Put UPR in property tree
00175             lLegCabinArray.put ("UPR", lLC_ptr->getUPR());
00176             // Put sold seats in property tree
00177             lLegCabinArray.put ("SS", lLC_ptr->getSoldSeat());
00178             // Put staff nb of seats in property tree

```

```

00184         lLegCabinArray.put ("Staff", lLC_ptr->getStaffNbOfSeats());
00185         // Put waiting list nb of seats in property tree
00186         lLegCabinArray.put ("WL", lLC_ptr->getWLNbOfSeats());
00187         // Put group nb of seats in property tree
00188         lLegCabinArray.put ("Group", lLC_ptr->getGroupNbOfSeats());
00189         // Put committed space in property tree
00190         lLegCabinArray.put ("CommSpace", lLC_ptr->getCommittedSpace());
00191         // Put availability pool in property tree
00192         lLegCabinArray.put ("AvPool", lLC_ptr->getAvailabilityPool());
00193         // Put availability in property tree
00194         lLegCabinArray.put ("Avl", lLC_ptr->getAvailability());
00195         // Put net availability in property tree
00196         lLegCabinArray.put ("NAV", lLC_ptr->getNetAvailability());
00197         // Put gross availability in property tree
00198         lLegCabinArray.put ("GAV", lLC_ptr->getGrossAvailability());
00199         // Put avg cancellation percentage in property tree
00200         lLegCabinArray.put ("ACP", lLC_ptr->getAvgCancellationPercentage());
00201         // Put ETB in property tree
00202         lLegCabinArray.put ("ETB", lLC_ptr->getETB());
00203         // Put current bid price in property tree
00204         lLegCabinArray.put ("BidPrice", lLC_ptr->getCurrentBidPrice());
00205
00206         // Put leg cabin array in property tree
00207         std::ostream oStream;
00208         oStream << "flight_date"
00209                 << ".leg_" << lLD_ptr->getBoardingPoint()
00210                 << ".cabin_" << lLC_ptr->toString();
00211         ioPropertyTree.put_child (oStream.str(), lLegCabinArray);
00212
00213 #endif // BOOST_VERSION >= 104100
00214     }
00215 }
00216 }
00217
00218 // //////////////////////////////////////
00219 void BomJSONExport::jsonBucketExport (bpt::ptree& ioPropertyTree,
00220                                       const FlightDate& iFlightDate) {
00225     // Check whether there are LegDate objects
00226     if (BomManager::hasList<LegDate> (iFlightDate) == false) {
00227         return;
00228     }
00229
00230     // Browse the leg-dates
00231     const LegDateList_T& lLegDateList =
00232         BomManager::getList<LegDate> (iFlightDate);
00233     for (LegDateList_T::const_iterator itLD = lLegDateList.begin();
00234          itLD != lLegDateList.end(); ++itLD) {
00235         const LegDate* lLD_ptr = *itLD;
00236         assert (lLD_ptr != NULL);
00237
00238         // Browse the leg-cabins
00239         const LegCabinList_T& lLegCabinList =
00240             BomManager::getList<LegCabin> (*lLD_ptr);
00241         for (LegCabinList_T::const_iterator itLC = lLegCabinList.begin();
00242              itLC != lLegCabinList.end(); ++itLC) {
00243             const LegCabin* lLC_ptr = *itLC;
00244             assert (lLC_ptr != NULL);
00245
00246             // Check whether there are bucket objects
00247             if (BomManager::hasList<Bucket> (*lLC_ptr) == false) {
00248                 return;
00249             }

```

```

00250
00251         // Browse the buckets
00252         const BucketList_T& lBucketList = BomManager::getList<Bucket> (*lLC_ptr);

00253         for (BucketList_T::const_iterator itBuck = lBucketList.begin();
00254              itBuck != lBucketList.end(); ++itBuck) {
00255             const Bucket* lBucket_ptr = *itBuck;
00256             assert (lBucket_ptr != NULL);
00257
00258 #if BOOST_VERSION >= 104100
00259             //
00260             bpt::ptree lLegBucketArray;
00261
00262             // Put yield in property tree
00263             lLegBucketArray.put ("Yield", lBucket_ptr->getYieldRangeUpperValue());
00264
00265             // Put seat_index in property tree
00266             lLegBucketArray.put ("SI", lBucket_ptr->getSeatIndex());
00267             // Put sold_seats in property tree
00268             lLegBucketArray.put ("SS", lBucket_ptr->getSoldSeats());
00269             // Put availability in property tree
00270             lLegBucketArray.put ("AV", lBucket_ptr->getAvailability());
00271
00272             // Put bucket array in property tree
00273             std::ostringstream oStream;
00274             oStream << "flight_date"
00275                     << ".leg_" << lLD_ptr->getBoardingPoint()
00276                     << ".cabin_" << lLC_ptr->toString()
00277                     << ".bucket_" << lBucket_ptr->toString();
00278             ioPropertyTree.put_child (oStream.str(), lLegBucketArray);
00279
00280 #endif // BOOST_VERSION >= 104100
00281         }
00282     }
00283 }
00284 }
00285
00286 // //////////////////////////////////////
00287 void BomJSONExport::jsonSegmentDateExport (bpt::ptree& ioPropertyTree,
00288                                             const FlightDate& iFlightDate)
00289 {
00290     // Check whether there are SegmentDate objects
00291     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00292         return;
00293     }
00294
00295     // Browse the segment-dates
00296     unsigned short idx = 0;
00297     const SegmentDateList_T& lSegmentDateList =
00298         BomManager::getList<SegmentDate> (iFlightDate);
00299     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00300          itSD != lSegmentDateList.end(); ++itSD, ++idx) {
00301         const SegmentDate* lSD_ptr = *itSD;
00302         assert (lSD_ptr != NULL);
00303
00304 #if BOOST_VERSION >= 104100
00305         //
00306         bpt::ptree lSegmentDateArray;
00307
00308         // Put yield in property tree
00309         lSegmentDateArray.put ("Yield", lSD_ptr->getYieldRangeUpperValue());
00310         // Put seat_index in property tree
00311         lSegmentDateArray.put ("SI", lSD_ptr->getSeatIndex());
00312         // Put sold_seats in property tree
00313         lSegmentDateArray.put ("SS", lSD_ptr->getSoldSeats());
00314         // Put availability in property tree
00315         lSegmentDateArray.put ("AV", lSD_ptr->getAvailability());
00316
00317         // Put bucket array in property tree
00318         std::ostringstream oStream;
00319         oStream << "flight_date"
00320                 << ".leg_" << lLD_ptr->getBoardingPoint()
00321                 << ".cabin_" << lLC_ptr->toString()
00322                 << ".bucket_" << lSD_ptr->toString();
00323         ioPropertyTree.put_child (oStream.str(), lSegmentDateArray);
00324
00325 #endif // BOOST_VERSION >= 104100
00326     }
00327 }

```

```

00313         // Put boarding point in property tree
00314         lSegmentDateArray.put ("BoardPoint", lSD_ptr->getBoardingPoint());
00315         // Put off point in property tree
00316         lSegmentDateArray.put ("OffPoint", lSD_ptr->getOffPoint());
00317         // Put boarding date in property tree
00318         lSegmentDateArray.put ("BoardDate", lSD_ptr->getBoardingDate());
00319         // Put off date in property tree
00320         lSegmentDateArray.put ("OffDate", lSD_ptr->getOffDate());
00321         // Put boarding time in property tree
00322         lSegmentDateArray.put ("BoardTime", lSD_ptr->getBoardingTime());
00323         // Put off time in property tree
00324         lSegmentDateArray.put ("OffTime", lSD_ptr->getOffTime());
00325         // Put elapsed time in property tree
00326         lSegmentDateArray.put ("Elapsed", lSD_ptr->getElapsedTime());
00327         // Put date offset in property tree
00328         lSegmentDateArray.put ("Date_Offset", lSD_ptr->getDateOffset());
00329         // Put time offset in property tree
00330         lSegmentDateArray.put ("Time_Offset", lSD_ptr->getTimeOffset());
00331         // Put distance in property tree
00332         lSegmentDateArray.put ("Distance", lSD_ptr->getDistance());
00333
00334         // Put segment date array in property tree
00335         std::ostringstream oStream;
00336         oStream << "flight_date.segment_" << lSD_ptr->getBoardingPoint()
00337             << "_" << lSD_ptr->getOffPoint();
00338         ioPropertyTree.put_child(oStream.str(), lSegmentDateArray);
00339
00340 #endif // BOOST_VERSION >= 104100
00341     }
00342 }
00343
00344 // //////////////////////////////////////
00345 void BomJSONExport::jsonSegmentCabinExport (bpt::ptree& ioPropertyTree,
00346                                             const FlightDate& iFlightDate) {
00347 }
00348
00349 // //////////////////////////////////////
00350 void BomJSONExport::jsonFareFamilyExport (bpt::ptree& ioPropertyTree,
00351                                           const FlightDate& iFlightDate) {
00352     // Check whether there are SegmentDate objects
00353     if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00354         return;
00355     }
00356
00357     // Browse the segment-dates
00358     unsigned short idx = 0;
00359     const SegmentDateList_T& lSegmentDateList =
00360         BomManager::getList<SegmentDate> (iFlightDate);
00361     for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00362          itSD != lSegmentDateList.end(); ++itSD, ++idx) {
00363         const SegmentDate* lSD_ptr = *itSD;
00364         assert (lSD_ptr != NULL);
00365
00366         // Browse the segment-cabins
00367         const SegmentCabinList_T& lSegmentCabinList =
00368             BomManager::getList<SegmentCabin> (*lSD_ptr);
00369         for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00370              itSC != lSegmentCabinList.end(); ++itSC) {
00371             const SegmentCabin* lSC_ptr = *itSC;
00372             assert (lSC_ptr != NULL);
00373
00374             // Check whether there are fare family objects

```

```

00382         if (BomManager::hasList<FareFamily> (*lSC_ptr) == false) {
00383             continue;
00384         }
00385
00386         // Browse the fare families
00387         unsigned short ffIdx = 0;
00388         const FareFamilyList_T& lFareFamilyList =
00389             BomManager::getList<FareFamily> (*lSC_ptr);
00390         for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00391             itFF != lFareFamilyList.end(); ++itFF, ++ffIdx) {
00392             const FareFamily* lFF_ptr = *itFF;
00393             assert (lFF_ptr != NULL);
00394
00395 #if BOOST_VERSION >= 104100
00396             //
00397             bpt::ptree lFFArray;
00398
00399             // Put cabin in property tree
00400             lFFArray.put ("cabin", lSC_ptr->toString());
00401             // Put fare family in property tree
00402             lFFArray.put ("code", lFF_ptr->getFamilyCode());
00403             // Put MIN in property tree
00404             lFFArray.put ("MIN", lSC_ptr->getMIN());
00405             // Put UPR in property tree
00406             lFFArray.put ("UPR", lSC_ptr->getUPR());
00407             // Put committed Sspace in property tree
00408             lFFArray.put ("CommSpace", lSC_ptr->getCommittedSpace());
00409             // Put availability pool in property tree
00410             lFFArray.put ("AvPool", lSC_ptr->getAvailabilityPool());
00411             // Put current bid price in property tree
00412             lFFArray.put ("BP", lSC_ptr->getCurrentBidPrice());
00413
00414             std::ostringstream oStream;
00415             oStream << "flight_date.segment_" << lSD_ptr->getBoardingPoint()
00416                 << "_" << lSD_ptr->getOffPoint()
00417                 << ".fare_family_" << lFF_ptr->toString();
00418             ioPropertyTree.put_child (oStream.str(), lFFArray);
00419 #endif // BOOST_VERSION >= 104100
00420         }
00421     }
00422 }
00423 }
00424
00425 // //////////////////////////////////////
00426 void BomJSONExport::jsonBookingClassExport (bpt::ptree& ioPropertyTree,
00427                                             const BookingClass& iBookingClass,
00428                                             const std::string& iLeadingString)
00429 {
00430     std::ostringstream oStream;
00431     oStream << iLeadingString;
00432     oStream << ".class_" << iBookingClass.toString();
00433
00434 #if BOOST_VERSION >= 104100
00435     bpt::ptree lBookingClassArray;
00436
00437     // Put sub class in property tree
00438     lBookingClassArray.put ("Subclass", iBookingClass.getSubclassCode());
00439     // Put authorization level in property tree
00440     std::ostringstream oAUProtStr;
00441     oAUProtStr << iBookingClass.getAuthorizationLevel()
00442         << " (" << iBookingClass.getProtection()

```



```

00449         << " ) ";
00450         lBookingClassArray.put ("MIN/AU (Prot)", oAUProtStr.str());
00451         // Put negotiated space in property tree
00452         lBookingClassArray.put ("Nego", iBookingClass.getNegotiatedSpace());
00453         // Put no show percentage in property tree
00454         lBookingClassArray.put ("NS%", iBookingClass.getNoShowPercentage());
00455         // Put cancellation percentage in property tree
00456         lBookingClassArray.put ("OB%", iBookingClass.getCancellationPercentage());
00457         // Put sub nb of bookings in property tree
00458         lBookingClassArray.put ("Bkgs", iBookingClass.getNbOfBookings());
00459         // Put nb of group bookings in property tree
00460         lBookingClassArray.put ("GrpBks (pdg)", iBookingClass.getNbOfGroupBookings());
00461         // Put nb of staff bookings in property tree
00462         lBookingClassArray.put ("StfBkgs", iBookingClass.getNbOfStaffBookings());
00463         // Put nb of WL bookings in property tree
00464         lBookingClassArray.put ("WLBkgs", iBookingClass.getNbOfWLBookings());
00465         // Put ETB in property tree
00466         lBookingClassArray.put ("ETB", iBookingClass.getETB());
00467         // Put net class availability in property tree
00468         lBookingClassArray.put ("ClassAvl", iBookingClass.getNetClassAvailability());

00469         // Put segment availability in property tree
00470         lBookingClassArray.put ("SegAvl", iBookingClass.getSegmentAvailability());
00471         // Put net revenue availability in property tree
00472         lBookingClassArray.put ("RevAvl", iBookingClass.getNetRevenueAvailability());

00473
00474         //
00475         ioPropertyTree.put_child (oStream.str(), lBookingClassArray);
00476
00477 #endif // BOOST_VERSION >= 104100
00478     }
00479
00480     // //////////////////////////////////////
00481     void BomJSONExport::jsonBookingClassExport (bpt::ptree& ioPropertyTree,
00482         const FlightDate& iFlightDate) {
00483         // Check whether there are SegmentDate objects
00484         if (BomManager::hasList<SegmentDate> (iFlightDate) == false) {
00485             return;
00486         }
00487
00488         // Browse the segment-dates
00489         const SegmentDateList_T& lSegmentDateList =
00490             BomManager::getList<SegmentDate> (iFlightDate);
00491         for (SegmentDateList_T::const_iterator itSD = lSegmentDateList.begin();
00492             itSD != lSegmentDateList.end(); ++itSD) {
00493             const SegmentDate* lSD_ptr = *itSD;
00494             assert (lSD_ptr != NULL);
00495
00496             // Build the leading string to be displayed
00497             std::ostringstream oLeadingStr;
00498             // Begin completed the leading string to be displayed
00499             oLeadingStr << "flight_date.segment_" << lSD_ptr->getBoardingPoint()
00500                 << "_" << lSD_ptr->getOffPoint();
00501
00502             // Browse the segment-cabins
00503             const SegmentCabinList_T& lSegmentCabinList =
00504                 BomManager::getList<SegmentCabin> (*lSD_ptr);
00505             for (SegmentCabinList_T::const_iterator itSC = lSegmentCabinList.begin();
00506                 itSC != lSegmentCabinList.end(); ++itSC) {
00507                 const SegmentCabin* lSC_ptr = *itSC;

```

```

00508         assert (lSC_ptr != NULL);
00509
00510         // Check whether there are FareFamily objects
00511         if (BomManager::hasList<FareFamily> (*lSC_ptr) == true) {
00512
00513             // Browse the fare families
00514             const FareFamilyList_T& lFareFamilyList =
00515                 BomManager::getList<FareFamily> (*lSC_ptr);
00516             for (FareFamilyList_T::const_iterator itFF = lFareFamilyList.begin();
00517                 itFF != lFareFamilyList.end(); ++itFF) {
00518                 const FareFamily* lFF_ptr = *itFF;
00519                 assert (lFF_ptr != NULL);
00520
00521                 oLeadingStr << ".fare_family_" << lFF_ptr->toString();
00522
00523                 // Browse the booking-classes
00524                 const BookingClassList_T& lBookingClassList =
00525                     BomManager::getList<BookingClass> (*lFF_ptr);
00526                 for (BookingClassList_T::const_iterator itBC =
00527                     lBookingClassList.begin();
00528                     itBC != lBookingClassList.end(); ++itBC) {
00529                     const BookingClass* lBC_ptr = *itBC;
00530                     assert (lBC_ptr != NULL);
00531
00532                     //
00533                     jsonBookingClassExport (ioPropertyTree, *lBC_ptr,
00534                                             oLeadingStr.str());
00535                 }
00536             }
00537         } else {
00538
00539             // The fare family code is a fake one ('NoFF'), and therefore
00540             // does not vary
00541             FamilyCode_T lDefaultFamilyCode ("NoFF");
00542             oLeadingStr << ".fare_family_" << lDefaultFamilyCode ;
00543
00544             // Browse the booking-classes, directly from the segment-cabin object
00545             const BookingClassList_T& lBookingClassList =
00546                 BomManager::getList<BookingClass> (*lSC_ptr);
00547             for (BookingClassList_T::const_iterator itBC =
00548                 lBookingClassList.begin();
00549                 itBC != lBookingClassList.end(); ++itBC) {
00550                 const BookingClass* lBC_ptr = *itBC;
00551                 assert (lBC_ptr != NULL);
00552
00553                 //
00554                 jsonBookingClassExport (ioPropertyTree, *lBC_ptr, oLeadingStr.str());
00555             }
00556         }
00557     }
00558 }
00559 }
00560 }

```

### 35.169 stdair/bom/BomJSONExport.hpp File Reference

```
#include <iosfwd>
```

```
#include <stdair/bom/BookingClass.hpp>
```

## Classes

- class `stdair::BomJSONExport`

*Utility class to export StdAir objects in a JSON format.*

## Namespaces

- namespace `bpt`
- namespace `stdair`

*Handle on the StdAir library context.*

## Typedefs

- typedef char `bpt::ptree`

## 35.170 BomJSONExport.hpp

```

00001 #ifndef __STDAIR_BOM_BOMJSONEXPORT_HPP
00002 #define __STDAIR_BOM_BOMJSONEXPORT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // Boost Property Tree
00010 #if BOOST_VERSION >= 104100
00011 #include <boost/property_tree/ptree.hpp>
00012 #include <boost/property_tree/json_parser.hpp>
00013 #endif // BOOST_VERSION >= 104100
00014 // StdAir
00015 #include <stdair/bom/BookingClass.hpp>
00016
00017 #if BOOST_VERSION >= 104100
00018     namespace bpt = boost::property_tree;
00019 #else // BOOST_VERSION >= 104100
00020     namespace bpt {
00021         typedef char ptree;
00022     }
00023 #endif // BOOST_VERSION >= 104100
00024
00025 namespace stdair {
00026
00027     class FlightDate;
00028
00029     class BomJSONExport {
00030     public:
00031         // ////////////////////////////////// Export support methods //////////////////////////////////
00032         static void jsonExport (std::ostream&, const FlightDate&);
00033
00034     private:
00035
00036         static void jsonLegDateExport (bpt::ptree&, const FlightDate&);
00037
00038         static void jsonLegCabinExport (bpt::ptree&, const FlightDate&);
00039     };
00040
00041 }
00042
00043 #endif

```

```

00052
00053     static void jsonBucketExport (bpt::ptree&, const FlightDate&);
00054
00055     static void jsonSegmentDateExport (bpt::ptree&, const FlightDate&);
00056
00057     static void jsonSegmentCabinExport (bpt::ptree&, const FlightDate&);
00058
00059     static void jsonFareFamilyExport (bpt::ptree&, const FlightDate&);
00060
00061     static void jsonBookingClassExport (bpt::ptree&,
00062                                         const BookingClass&,
00063                                         const std::string&);
00064
00065     static void jsonBookingClassExport (bpt::ptree&, const FlightDate&);
00066
00067 };
00068
00069 }
00070 #endif // __STDAIR_BOM_BOMJSONEXPORT_HPP

```

### 35.171 stdair/bom/BomJSONImport.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/bom/BomJSONImport.hpp>

```

#### Namespaces

- namespace [bpt](#)
- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.172 BomJSONImport.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 #if BOOST_VERSION >= 104100
00008 // Boost Property Tree
00009 #include <boost/property_tree/ptree.hpp>
00010 #include <boost/property_tree/json_parser.hpp>
00011 #endif // BOOST_VERSION >= 104100
00012 // StdAir
00013 #include <stdair/bom/BomJSONImport.hpp>
00014
00015 #if BOOST_VERSION >= 104100
00016 namespace bpt = boost::property_tree;
00017 #else // BOOST_VERSION >= 104100
00018 namespace bpt {
00019     typedef char ptree;
00020 }

```

```

00021 #endif // BOOST_VERSION >= 104100
00022
00023 namespace stdair {
00024
00025     // //////////////////////////////////////
00026     bool BomJSONImport::jsonImportInventoryKey (const std::string& iBomTree,
00027                                                 AirlineCode_T& ioAirlineCode) {
00028         bool hasKeyBeenSuccessfullyRetrieved = true;
00029
00030         #if BOOST_VERSION >= 104100
00031             // Create an empty property tree object
00032             bpt::ptree pt;
00033
00034             try {
00035
00036                 // Load the JSON formatted string into the property tree.
00037                 // If reading fails (cannot open stream, parse error), an
00038                 // exception is thrown.
00039                 std::istringstream iStr (iBomTree);
00040                 read_json (iStr, pt);
00041
00042                 // Get the airline_code and build an InventoryKey structure.
00043                 // If the flight_date.airline_code key is not found, an
00044                 // exception is thrown.
00045                 ioAirlineCode = pt.get<AirlineCode_T> ("flight_date.airline_code");
00046
00047             } catch (bpt::ptree_error& bptException) {
00048                 hasKeyBeenSuccessfullyRetrieved = false;
00049             }
00050         #endif // BOOST_VERSION >= 104100
00051
00052         return hasKeyBeenSuccessfullyRetrieved;
00053     }
00054
00055     // //////////////////////////////////////
00056     bool BomJSONImport::jsonImportFlightDateKey (const std::string& iBomTree,
00057                                                  FlightNumber_T& ioFlightNumber,
00058                                                  Date_T& ioDepartureDate) {
00059         bool hasKeyBeenSuccessfullyRetrieved = false;
00060
00061         #if BOOST_VERSION >= 104100
00062             // Create an empty property tree object
00063             bpt::ptree pt;
00064
00065             try {
00066
00067                 // Load the JSON formatted string into the property tree.
00068                 // If reading fails (cannot open stream, parse error), an
00069                 // exception is thrown.
00070                 std::istringstream iStr (iBomTree);
00071                 read_json (iStr, pt);
00072
00073                 // Get the flight_number and departure_date and build an
00074                 // FlightDateKey structure.
00075                 ioFlightNumber = pt.get<FlightNumber_T> ("flight_date.flight_number");
00076
00077                 const std::string& lDepartureDateStr =
00078                     pt.get<std::string> ("flight_date.departure_date");
00079                 ioDepartureDate = boost::gregorian::from_simple_string (lDepartureDateStr);
00080
00081             } catch (bpt::ptree_error& bptException) {

```

```

00082         hasKeyBeenSuccessfullyRetrieved = false;
00083     }
00084 #endif // BOOST_VERSION >= 104100
00085
00086     return hasKeyBeenSuccessfullyRetrieved;
00087 }
00088
00089 }
```

### 35.173 stdair/bom/BomJSONImport.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

#### Classes

- class [stdair::BomJSONImport](#)  
*Utility class to import StdAir objects in a JSON format.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.174 BomJSONImport.hpp

```

00001 #ifndef __STDAIR_BOM_BOMJSONIMPORT_HPP
00002 #define __STDAIR_BOM_BOMJSONIMPORT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/stdair_date_time_types.hpp>
00012
00013 namespace stdair {
00014
00015     class BomJSONImport {
00016     public:
00020         // ////////////////////////////////// Import support methods //////////////////////////////////
00028         static bool jsonImportInventoryKey (const std::string& iBomKey,
00029                                             AirlineCode_T&);
00030
00039         static bool jsonImportFlightDateKey (const std::string& iBomKey,
00040                                             FlightNumber_T&,
00041                                             Date_T& ioDepartureDate);
00042     };
00043
```

```
00044 }
00045 #endif // __STDAIR_BOM_BOMJSONIMPORT_HPP
```

### 35.175 stdair/bom/BomKeyManager.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
#include <boost/date_time/gregorian/parsers.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/InventoryKey.hpp>
#include <stdair/bom/FlightDateKey.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
#include <stdair/bom/ParsedKey.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/service/Logger.hpp>
```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef boost::tokenizer< boost::char\_separator< char > > [stdair::Tokeniser\\_T](#)

### 35.176 BomKeyManager.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/tokenizer.hpp>
00009 #include <boost/lexical_cast.hpp>
00010 #include <boost/date_time/gregorian/parsers.hpp>
00011 // StdAir
00012 #include <stdair/stdair_exceptions.hpp>
00013 #include <stdair/basic/BasConst_BomDisplay.hpp>
00014 #include <stdair/bom/InventoryKey.hpp>
```

```

00015 #include <stdair/bom/FlightDateKey.hpp>
00016 #include <stdair/bom/SegmentDateKey.hpp>
00017 #include <stdair/bom/ParsedKey.hpp>
00018 #include <stdair/bom/BomKeyManager.hpp>
00019 #include <stdair/service/Logger.hpp>
00020
00021 namespace stdair {
00022
00023     // ////////////////// Tokenising support //////////////////
00027     typedef boost::tokenizer<boost::char_separator<char> > Tokeniser_T;
00028
00029     // //////////////////////////////////////
00030     ParsedKey BomKeyManager::extractKeys (const std::string& iFullKeyStr) {
00031         ParsedKey oParsedKey;
00032         oParsedKey._fullKey = iFullKeyStr;
00033
00034         // Token-ise the full key string
00035         Tokeniser_T lTokens (iFullKeyStr, DEFAULT_KEY_TOKEN_DELIMITER);
00036         Tokeniser_T::iterator itToken = lTokens.begin();
00037
00038         // Airline code
00039         if (itToken != lTokens.end()) {
00040             oParsedKey._airlineCode = *itToken;
00041
00042             // Flight number
00043             ++itToken;
00044             if (itToken != lTokens.end()) {
00045                 oParsedKey._flightNumber = *itToken;
00046
00047                 // Departure date
00048                 ++itToken;
00049                 if (itToken != lTokens.end()) {
00050                     oParsedKey._departureDate = *itToken;
00051
00052                     // Origin
00053                     ++itToken;
00054                     if (itToken != lTokens.end()) {
00055                         oParsedKey._boardingPoint = *itToken;
00056
00057                         // Destination
00058                         ++itToken;
00059                         if (itToken != lTokens.end()) {
00060                             oParsedKey._offPoint = *itToken;
00061
00062                             // Boarding time
00063                             ++itToken;
00064                             if (itToken != lTokens.end()) {
00065                                 oParsedKey._boardingTime = *itToken;
00066                             }
00067                         }
00068                     }
00069                 }
00070             }
00071         }
00072
00073         return oParsedKey;
00074     }
00075
00076     // //////////////////////////////////////
00077     InventoryKey BomKeyManager::
00078     extractInventoryKey (const std::string& iFullKeyStr) {
00079         ParsedKey lParsedKey = extractKeys (iFullKeyStr);

```



```

00080
00081     return lParsedKey.getInventoryKey();
00082 }
00083
00084 // //////////////////////////////////////
00085 FlightDateKey BomKeyManager::
00086 extractFlightDateKey (const std::string& iFullKeyStr) {
00087     ParsedKey lParsedKey = extractKeys (iFullKeyStr);
00088
00089     return lParsedKey.getFlightDateKey();
00090 }
00091
00092 // //////////////////////////////////////
00093 SegmentDateKey BomKeyManager::
00094 extractSegmentDateKey (const std::string& iFullKeyStr) {
00095     ParsedKey lParsedKey = extractKeys (iFullKeyStr);
00096
00097     return lParsedKey.getSegmentKey();
00098 }
00099 }

```

### 35.177 stdair/bom/BomKeyManager.hpp File Reference

```

#include <iosfwd>
#include <stdair/stdair_basic_types.hpp>

```

#### Classes

- class [stdair::BomKeyManager](#)  
*Utility class to extract key structures from strings.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.178 BomKeyManager.hpp

```

00001 #ifndef __STDAIR_BOM_BOMKEYMANAGER_HPP
00002 #define __STDAIR_BOM_BOMKEYMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011
00012 namespace stdair {
00013
00014     struct BomRootKey;

```

```

00016  struct InventoryKey;
00017  struct FlightDateKey;
00018  struct LegDateKey;
00019  struct SegmentDateKey;
00020  struct LegCabinKey;
00021  struct SegmentCabinKey;
00022  struct FareFamilyKey;
00023  struct BookingClassKey;
00024  struct ParsedKey;
00025
00029  class BomKeyManager {
00030  public:
00031      // //////////////// Key management support methods ////////////////
00036      static ParsedKey extractKeys (const std::string& iFullKeyStr);
00037
00049      static InventoryKey extractInventoryKey (const std::string& iFullKeyStr);
00050
00062      static FlightDateKey extractFlightDateKey (const std::string& iFullKeyStr);
00063
00075      static SegmentDateKey extractSegmentDateKey (const std::string& iFullKeyStr);
00076  };
00077
00078 }
00079 #endif // __STDAIR_BOM_BOMKEYMANAGER_HPP

```

## 35.179 stdair/bom/BomManager.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <list>
#include <map>
#include <boost/static_assert.hpp>
#include <boost/type_traits/is_same.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BomHolder.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/SegmentDate.hpp>

```

### Classes

- class [stdair::BomManager](#)  
*Utility class for StdAir-based objects.*

### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.180 BomManager.hpp

```

00001 #ifndef __STDAIR_BOM_BOMMANAGER_HPP
00002 #define __STDAIR_BOM_BOMMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <list>
00011 #include <map>
00012 // Boost
00013 #include <boost/static_assert.hpp>
00014 #include <boost/type_traits/is_same.hpp>
00015 // StdAir
00016 #include <stdair/stdair_exceptions.hpp>
00017 #include <stdair/bom/BomAbstract.hpp>
00018 #include <stdair/bom/BomHolder.hpp>
00019 #include <stdair/service/Logger.hpp>
00020 // Stdair BOM Objects
00021 #include <stdair/bom/SegmentDate.hpp>
00022
00023 namespace stdair {
00024
00032     class BomManager {
00033     friend class FacBomManager;
00034
00035     public:
00039         template <typename OBJECT2, typename OBJECT1>
00040         static const typename BomHolder<OBJECT2>::BomList_T& getList (const OBJECT1&);
00041
00045         template <typename OBJECT2, typename OBJECT1>
00046         static const typename BomHolder<OBJECT2>::BomMap_T& getMap (const OBJECT1&);
00047
00051         template <typename OBJECT2, typename OBJECT1>
00052         static bool hasList (const OBJECT1&);
00053
00057         template <typename OBJECT2, typename OBJECT1>
00058         static bool hasMap (const OBJECT1&);
00059
00065         template <typename PARENT, typename CHILD>
00066         static PARENT* getParentPtr (const CHILD&);
00067
00071         template <typename PARENT, typename CHILD>
00072         static PARENT& getParent (const CHILD&);
00073
00079         template <typename OBJECT2, typename OBJECT1>
00080         static OBJECT2* getObjectPtr (const OBJECT1&, const MapKey_T&);
00081
00085         template <typename OBJECT2, typename OBJECT1>
00086         static OBJECT2& getObject (const OBJECT1&, const MapKey_T&);
00087
00088     private:
00089         template <typename OBJECT2, typename OBJECT1>

```

```

00095     static const BomHolder<OBJECT2>& getBomHolder (const OBJECT1&);
00096 };
00097
00098 // //////////////////////////////////////
00099 // Private method.
00100 template <typename OBJECT2, typename OBJECT1>
00101 const BomHolder<OBJECT2>& BomManager::getBomHolder (const OBJECT1& iObject1) {
00102     const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00103
00104     HolderMap_T::const_iterator itHolder = lHolderMap.find (&typeid (OBJECT2));
00105
00106     if (itHolder == lHolderMap.end()) {
00107         const std::string lName (typeid (OBJECT2).name());
00108         throw NonInitialisedContainerException ("Cannot find the holder of type "
00109             + lName + " within: "
00110             + iObject1.describeKey());
00111     }
00112
00113     const BomHolder<OBJECT2>* lBomHolder_ptr =
00114         static_cast<const BomHolder<OBJECT2>*> (itHolder->second);
00115     assert (lBomHolder_ptr != NULL);
00116
00117     return *lBomHolder_ptr;
00118 }
00119
00120 // //////////////////////////////////////
00121 // Public business method.
00122 // This method is specialized for the following couple types:
00123 // <SegmentDate, SegmentDate>
00124 template <typename OBJECT2, typename OBJECT1>
00125 const typename BomHolder<OBJECT2>::BomList_T& BomManager::
00126 getList (const OBJECT1& iObject1) {
00127     const BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (iObject1);
00128     return lBomHolder._bomList;
00129 }
00130
00131 // //////////////////////////////////////
00132 // Public business method.
00133 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00134 template <typename OBJECT2, typename OBJECT1>
00135 const typename BomHolder<OBJECT2>::BomMap_T& BomManager::
00136 getMap (const OBJECT1& iObject1) {
00137     //
00138     // Compile time assertion: this function must never be called with the
00139     // following list of couple types:
00140     // <SegmentDate, SegmentDate>
00141     //
00142     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00143         || boost::is_same<OBJECT2, SegmentDate>::value == false
00144     ));
00145
00146     const BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (iObject1);
00147     return lBomHolder._bomMap;
00148 }
00149
00150 // //////////////////////////////////////
00151 // Public business method.
00152 // This method is specialized for the following couple types:
00153 // <SegmentDate, SegmentDate>

```

```

00156     template <typename OBJECT2, typename OBJECT1>
00157     bool BomManager::hasList (const OBJECT1& iObject1) {
00158
00159         const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00160         HolderMap_T::const_iterator itHolder = lHolderMap.find (&typeid (OBJECT2));
00161
00162         if (itHolder == lHolderMap.end()) {
00163             return false;
00164         }
00165         const BomHolder<OBJECT2>* lBomHolder_ptr =
00166             static_cast<const BomHolder<OBJECT2>*> (itHolder->second);
00167         assert (lBomHolder_ptr != NULL);
00168
00169         return !lBomHolder_ptr->_bomList.empty();
00170     }
00171
00172     // //////////////////////////////////////
00173     // Public business method.
00174     // This method is specialized for the following couple types:
00175     // <SegmentDate, SegmentDate>
00176     template <typename OBJECT2, typename OBJECT1>
00177     bool BomManager::hasMap (const OBJECT1& iObject1) {
00178
00179         const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00180         HolderMap_T::const_iterator itHolder = lHolderMap.find (&typeid (OBJECT2));
00181
00182         if (itHolder == lHolderMap.end()) {
00183             return false;
00184         }
00185         const BomHolder<OBJECT2>* lBomHolder_ptr =
00186             static_cast<const BomHolder<OBJECT2>*> (itHolder->second);
00187         assert (lBomHolder_ptr != NULL);
00188
00189         return !lBomHolder_ptr->_bomMap.empty();
00190     }
00191
00192     // //////////////////////////////////////
00193     // Public business method valid for all PARENT and CHILD types.
00194     // (No compile time assertion to check PARENT and CHILD types.)
00195     template <typename PARENT, typename CHILD>
00196     PARENT* BomManager::getParentPtr (const CHILD& iChild) {
00197
00198         PARENT* const lParent_ptr = static_cast<PARENT* const> (iChild.getParent());
00199         return lParent_ptr;
00200     }
00201
00202     // //////////////////////////////////////
00203     // Public business method valid for all PARENT and CHILD types.
00204     // (No compile time assertion to check PARENT and CHILD types.)
00205     template <typename PARENT, typename CHILD>
00206     PARENT& BomManager::getParent (const CHILD& iChild) {
00207
00208         PARENT* const lParent_ptr = getParentPtr<PARENT> (iChild);
00209         assert (lParent_ptr != NULL);
00210         return *lParent_ptr;
00211     }
00212
00213     // //////////////////////////////////////
00214     // Public business method.
00215     // Compile time assertion to check OBJECT1 and OBJECT2 types.
00216     template <typename OBJECT2, typename OBJECT1>
00217     OBJECT2* BomManager::getObjectPtr (const OBJECT1& iObject1,

```

```

00218                                     const MapKey_T& iKey) {
00219
00220     //
00221     // Compile time assertion: this function must never be called with the
00222     // following list of couple types:
00223     // <SegmentDate, SegmentDate>
00224     //
00225     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00226                           || boost::is_same<OBJECT2, SegmentDate>::value == false
00227 ));
00228     OBJECT2* oBom_ptr = NULL;
00229
00230     const HolderMap_T& lHolderMap = iObject1.getHolderMap();
00231
00232     typename HolderMap_T::const_iterator itHolder =
00233         lHolderMap.find (&typeid (OBJECT2));
00234
00235     if (itHolder != lHolderMap.end()) {
00236
00237         BomHolder<OBJECT2>* const lBomHolder_ptr =
00238             static_cast<BomHolder<OBJECT2>* const> (itHolder->second);
00239         assert (lBomHolder_ptr != NULL);
00240
00241         //
00242         typedef typename BomHolder<OBJECT2>::BomMap_T BomMap_T;
00243         BomMap_T& lBomMap = lBomHolder_ptr->_bomMap;
00244         typename BomMap_T::iterator itBom = lBomMap.find (iKey);
00245
00246         if (itBom != lBomMap.end()) {
00247             oBom_ptr = itBom->second;
00248             assert (oBom_ptr != NULL);
00249         }
00250     }
00251
00252     return oBom_ptr;
00253 }
00254
00255 // //////////////////////////////////////
00256 // Public business method.
00257 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00258 template <typename OBJECT2, typename OBJECT1>
00259 OBJECT2& BomManager::getObject (const OBJECT1& iObject1,
00260                                 const MapKey_T& iKey) {
00261
00262     //
00263     // Compile time assertion: this function must never be called with the
00264     // following list of couple types:
00265     // <SegmentDate, SegmentDate>
00266     //
00267     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00268                           || boost::is_same<OBJECT2, SegmentDate>::value == false
00269 ));
00270     OBJECT2* oBom_ptr = NULL;
00271
00272     typedef std::map<const MapKey_T, OBJECT2*> BomMap_T;
00273     const BomMap_T& lBomMap = getMap<OBJECT2> (iObject1);
00274
00275     typename BomMap_T::const_iterator itBom = lBomMap.find (iKey);
00276
00277     if (itBom == lBomMap.end()) {

```

```

00278         const std::string lName (typeid (OBJECT2).name());
00279
00280         STDAIR_LOG_ERROR ("Cannot find the objet of type " << lName
00281             << " with key " << iKey << " within: "
00282             << iObject1.describeKey());
00283         assert (false);
00284     }
00285
00286     oBom_ptr = itBom->second;
00287     assert (oBom_ptr != NULL);
00288
00289     return *oBom_ptr;
00290 }
00291
00292 // //////////////////////////////////////
00293 //
00294 // Specialization of the template methods above for a segment
00295 // date and its corresponding marketing segment dates.
00296 //
00297 // //////////////////////////////////////
00298
00299 // Specialization of the template method hasList above for the types
00300 // <SegmentDate, SegmentDate>.
00301 // Add an element to the marketing segment date list of a segment date.
00302 template<>
00303 inline bool BomManager::hasList<SegmentDate,SegmentDate>
00304 (const SegmentDate& ioSegmentDate) {
00305
00306     const SegmentDateList_T& lMarketingSegmentDateList =
00307         ioSegmentDate.getMarketingSegmentDateList ();
00308     const bool isMarketingSegmentDateListEmpty =
00309         lMarketingSegmentDateList.empty();
00310     return isMarketingSegmentDateListEmpty;
00311 }
00312
00313 // Specialization of the template method hasList above for the types
00314 // <SegmentDate, SegmentDate>.
00315 // Return a boolean saying if the marketing segment date list is empty
00316 // or not.
00317 template<>
00318 inline const BomHolder<SegmentDate>::BomList_T&
00319 BomManager::getList<SegmentDate,SegmentDate> (const SegmentDate& ioSegmentDate)
00320 {
00321     const SegmentDateList_T& lMarketingSegmentDateList =
00322         ioSegmentDate.getMarketingSegmentDateList ();
00323     return lMarketingSegmentDateList;
00324 }
00325
00326 // Specialization of the template method hasMap above for the types
00327 // <SegmentDate, SegmentDate>.
00328 // A segment date does not have a Segment Date Map but it can have a
00329 // Segment Date list (containing its marketing segment dates).
00330 template<>
00331 inline bool BomManager::hasMap<SegmentDate,SegmentDate>
00332 (const SegmentDate& ioSegmentDate) {
00333
00334     const bool hasList = false;
00335     return hasList;
00336 }
00337
00338 }

```

```
00339 #endif // __STDAIR_BOM_BOMMANAGER_HPP
```

### 35.181 stdair/bom/BomRetriever.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/BookingClass.hpp>
#include <stdair/bom/BomRetriever.hpp>
#include <stdair/bom/ParsedKey.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/service/Logger.hpp>
```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.182 BomRetriever.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomKeyManager.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/BomRoot.hpp>
```



```

00012 #include <stdair/bom/Inventory.hpp>
00013 #include <stdair/bom/FlightDate.hpp>
00014 #include <stdair/bom/LegDate.hpp>
00015 #include <stdair/bom/SegmentDate.hpp>
00016 #include <stdair/bom/LegCabin.hpp>
00017 #include <stdair/bom/SegmentCabin.hpp>
00018 #include <stdair/bom/FareFamily.hpp>
00019 #include <stdair/bom/BookingClass.hpp>
00020 #include <stdair/bom/BomRetriever.hpp>
00021 #include <stdair/bom/ParsedKey.hpp>
00022 #include <stdair/bom/AirportPair.hpp>
00023 #include <stdair/service/Logger.hpp>
00024
00025 namespace stdair {
00026
00027 // //////////////////////////////////////
00028 Inventory* BomRetriever::
00029 retrieveInventoryFromLongKey (const BomRoot& iBomRoot,
00030                             const std::string& iFullKeyStr) {
00031     Inventory* oInventory_ptr = NULL;
00032
00033     // Extract the inventory key (i.e., airline code)
00034     const InventoryKey& lInventoryKey =
00035         BomKeyManager::extractInventoryKey (iFullKeyStr);
00036
00037     oInventory_ptr = iBomRoot.getInventory (lInventoryKey);
00038
00039     return oInventory_ptr;
00040 }
00041
00042 // //////////////////////////////////////
00043 Inventory* BomRetriever::retrieveInventoryFromKey (const BomRoot& iBomRoot,
00044                                                    const InventoryKey& iKey) {
00045     Inventory* oInventory_ptr = NULL;
00046
00047     //
00048     oInventory_ptr = iBomRoot.getInventory (iKey);
00049
00050     return oInventory_ptr;
00051 }
00052
00053 // //////////////////////////////////////
00054 Inventory* BomRetriever::
00055 retrieveInventoryFromKey (const BomRoot& iBomRoot,
00056                          const AirlineCode_T& iAirlineCode) {
00057     Inventory* oInventory_ptr = NULL;
00058
00059     //
00060     const InventoryKey lKey (iAirlineCode);
00061     oInventory_ptr = iBomRoot.getInventory (lKey);
00062
00063     return oInventory_ptr;
00064 }
00065
00066 // //////////////////////////////////////
00067 FlightDate* BomRetriever::
00068 retrieveFlightDateFromLongKey (const BomRoot& iBomRoot,
00069                               const std::string& iFullKeyStr) {
00070     FlightDate* oFlightDate_ptr = NULL;
00071
00072     // Retrieve the inventory
00073     Inventory* oInventory_ptr =

```

```

00074     BomRetriever::retrieveInventoryFromLongKey (iBomRoot, iFullKeyStr);
00075     if (oInventory_ptr == NULL) {
00076         return oFlightDate_ptr;
00077     }
00078     assert (oInventory_ptr != NULL);
00079
00080     // Extract the flight-date key (i.e., flight number and date)
00081     const FlightDateKey& lFlightDateKey =
00082         BomKeyManager::extractFlightDateKey (iFullKeyStr);
00083
00084     oFlightDate_ptr = oInventory_ptr->getFlightDate (lFlightDateKey);
00085
00086     return oFlightDate_ptr;
00087 }
00088
00089 // //////////////////////////////////////
00090 FlightDate* BomRetriever::
00091 retrieveFlightDateFromKeySet (const BomRoot& iBomRoot,
00092                             const AirlineCode_T& iAirlineCode,
00093                             const FlightNumber_T& iFlightNumber,
00094                             const Date_T& iFlightDateDate) {
00095     FlightDate* oFlightDate_ptr = NULL;
00096
00097     // Retrieve the inventory
00098     Inventory* oInventory_ptr =
00099         BomRetriever::retrieveInventoryFromKey (iBomRoot, iAirlineCode);
00100     if (oInventory_ptr == NULL) {
00101         return oFlightDate_ptr;
00102     }
00103     assert (oInventory_ptr != NULL);
00104
00105     //
00106     oFlightDate_ptr = retrieveFlightDateFromKey (*oInventory_ptr,
00107                                                iFlightNumber, iFlightDateDate);
00108
00109     return oFlightDate_ptr;
00110 }
00111
00112 // //////////////////////////////////////
00113 FlightDate* BomRetriever::
00114 retrieveFlightDateFromLongKey (const Inventory& iInventory,
00115                              const std::string& iFullKeyStr) {
00116     FlightDate* oFlightDate_ptr = NULL;
00117
00118     // Extract the flight-date key (i.e., flight number and date)
00119     const FlightDateKey& lFlightDateKey =
00120         BomKeyManager::extractFlightDateKey (iFullKeyStr);
00121
00122     oFlightDate_ptr = iInventory.getFlightDate (lFlightDateKey);
00123
00124     return oFlightDate_ptr;
00125 }
00126
00127 // //////////////////////////////////////
00128 FlightDate* BomRetriever::
00129 retrieveFlightDateFromKey (const Inventory& iInventory,
00130                          const FlightDateKey& iKey) {
00131     FlightDate* oFlightDate_ptr = NULL;
00132
00133     //
00134     oFlightDate_ptr = iInventory.getFlightDate (iKey);

```

```

00135         return oFlightDate_ptr;
00136     }
00137 }
00138
00139 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00140 FlightDate* BomRetriever::
00141 retrieveFlightDateFromKey (const Inventory& iInventory,
00142                          const FlightNumber_T& iFlightNumber,
00143                          const Date_T& iFlightDateDate) {
00144     FlightDate* oFlightDate_ptr = NULL;
00145
00146     //
00147     const FlightDateKey lKey (iFlightNumber, iFlightDateDate);
00148     oFlightDate_ptr = iInventory.getFlightDate (lKey);
00149
00150     return oFlightDate_ptr;
00151 }
00152
00153 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00154 SegmentDate* BomRetriever::
00155 retrieveSegmentDateFromLongKey (const BomRoot& iBomRoot,
00156                               const std::string& iFullKeyStr) {
00157     SegmentDate* oSegmentDate_ptr = NULL;
00158
00159     // Retrieve the flight-date
00160     FlightDate* oFlightDate_ptr =
00161         BomRetriever::retrieveFlightDateFromLongKey (iBomRoot, iFullKeyStr);
00162     if (oFlightDate_ptr == NULL) {
00163         return oSegmentDate_ptr;
00164     }
00165     assert (oFlightDate_ptr != NULL);
00166
00167     // Extract the segment-date key (i.e., origin and destination)
00168     const SegmentDateKey& lSegmentDateKey =
00169         BomKeyManager::extractSegmentDateKey (iFullKeyStr);
00170
00171     oSegmentDate_ptr = oFlightDate_ptr->getSegmentDate (lSegmentDateKey);
00172
00173     return oSegmentDate_ptr;
00174 }
00175
00176 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00177 SegmentDate* BomRetriever::
00178 retrieveSegmentDateFromLongKey (const Inventory& iInventory,
00179                               const std::string& iFullKeyStr) {
00180     SegmentDate* oSegmentDate_ptr = NULL;
00181
00182     ParsedKey lParsedKey = BomKeyManager::extractKeys (iFullKeyStr);
00183
00184     if (iInventory.getAirlineCode() != lParsedKey._airlineCode) {
00185         STDAIR_LOG_DEBUG ("Airline code: " << lParsedKey._airlineCode);
00186         return oSegmentDate_ptr;
00187     }
00188
00189     FlightDate* lFlightDate_ptr =
00190         retrieveFlightDateFromKey (iInventory, lParsedKey.getFlightDateKey());
00191     if (lFlightDate_ptr == NULL) {
00192         STDAIR_LOG_DEBUG ("Flight-date key: "
00193                         << lParsedKey.getFlightDateKey().toString());
00194         return oSegmentDate_ptr;
00195     }
00196 }

```

```

00197     oSegmentDate_ptr =
00198         retrieveSegmentDateFromKey (*lFlightDate_ptr, lParsedKey.getSegmentKey());
00199     if (oSegmentDate_ptr == NULL) {
00200         STDAIR_LOG_DEBUG ("Segment-date key: "
00201             << lParsedKey.getSegmentKey().toString());
00202         return oSegmentDate_ptr;
00203     }
00204
00205     return oSegmentDate_ptr;
00206 }
00207
00208 // //////////////////////////////////////
00209 SegmentDate* BomRetriever::
00210 retrieveSegmentDateFromLongKey (const FlightDate& iFlightDate,
00211     const std::string& iFullKeyStr) {
00212     SegmentDate* oSegmentDate_ptr = NULL;
00213
00214     // Extract the segment-date key (i.e., origin and destination)
00215     const SegmentDateKey& lSegmentDateKey =
00216         BomKeyManager::extractSegmentDateKey (iFullKeyStr);
00217
00218     oSegmentDate_ptr = iFlightDate.getSegmentDate (lSegmentDateKey);
00219
00220     return oSegmentDate_ptr;
00221 }
00222
00223 // //////////////////////////////////////
00224 SegmentDate* BomRetriever::
00225 retrieveSegmentDateFromKey (const FlightDate& iFlightDate,
00226     const SegmentDateKey& iKey) {
00227     SegmentDate* oSegmentDate_ptr = NULL;
00228
00229     //
00230     oSegmentDate_ptr = iFlightDate.getSegmentDate (iKey);
00231
00232     return oSegmentDate_ptr;
00233 }
00234
00235 // //////////////////////////////////////
00236 SegmentDate* BomRetriever::
00237 retrieveSegmentDateFromKey (const FlightDate& iFlightDate,
00238     const AirportCode_T& iOrigin,
00239     const AirportCode_T& iDestination) {
00240     SegmentDate* oSegmentDate_ptr = NULL;
00241
00242     //
00243     const SegmentDateKey lKey (iOrigin, iDestination);
00244     oSegmentDate_ptr = iFlightDate.getSegmentDate (lKey);
00245
00246     return oSegmentDate_ptr;
00247 }
00248
00249 // //////////////////////////////////////
00250 BookingClass* BomRetriever::
00251 retrieveBookingClassFromLongKey (const Inventory& iInventory,
00252     const std::string& iFullKeyStr,
00253     const ClassCode_T& iClassCode) {
00254     BookingClass* oBookingClass_ptr = NULL;
00255
00256     SegmentDate* lSegmentDate_ptr = retrieveSegmentDateFromLongKey (iInventory,
00257         iFullKeyStr);

```

```

00258
00259     if (lSegmentDate_ptr == NULL) {
00260         return oBookingClass_ptr;
00261     }
00262     assert (lSegmentDate_ptr != NULL);
00263
00264     //
00265     oBookingClass_ptr =
00266         BomManager::getObjectPtr<BookingClass> (*lSegmentDate_ptr, iClassCode);
00267
00268     return oBookingClass_ptr;
00269 }
00270
00271 // //////////////////////////////////////
00272 AirportPair* BomRetriever::
00273 retrieveAirportPairFromKeySet (const BomRoot& iBomRoot,
00274                               const stdair::AirportCode_T& iOrigin,
00275                               const stdair::AirportCode_T& iDestination) {
00276
00277     // Get the Airport pair stream of the segment path.
00278     const AirportPairKey lAirportPairKey (iOrigin, iDestination);
00279
00280     // Search for the fare rules having the same origin and
00281     // destination airport as the travel solution
00282     AirportPair* oAirportPair_ptr = BomManager::
00283         getObjectPtr<AirportPair> (iBomRoot, lAirportPairKey.toString());
00284
00285     return oAirportPair_ptr;
00286 }
00287
00288 // //////////////////////////////////////
00289 void BomRetriever::
00290 retrieveDatePeriodListFromKey (const AirportPair& iAirportPair,
00291                               const stdair::Date_T& iDepartureDate,
00292                               stdair::DatePeriodList_T& ioDatePeriodList) {
00293
00294     // Get the list of date-period
00295     const DatePeriodList_T& lFareDatePeriodList =
00296         BomManager::getList<DatePeriod> (iAirportPair);
00297
00298     // Browse the date-period list
00299     for (DatePeriodList_T::const_iterator itDateRange =
00300          lFareDatePeriodList.begin();
00301          itDateRange != lFareDatePeriodList.end(); ++itDateRange) {
00302
00303         DatePeriod* lCurrentFareDatePeriod_ptr = *itDateRange ;
00304         assert (lCurrentFareDatePeriod_ptr != NULL);
00305
00306         // Select the date-period objects having a corresponding date range
00307         const bool isDepartureDateValid =
00308             lCurrentFareDatePeriod_ptr->isDepartureDateValid (iDepartureDate);
00309
00310         // Add the date-period objects having a corresponding date range
00311         // to the list to display
00312         if (isDepartureDateValid == true) {
00313             ioDatePeriodList.push_back(lCurrentFareDatePeriod_ptr);
00314         }
00315     }
00316 }
00317
00318 }
00319

```

```

00320 // //////////////////////////////////////
00321 void BomRetriever::
00322 retrieveDatePeriodListFromKeySet (const BomRoot& iBomRoot,
00323                                   const stdair::AirportCode_T& iOrigin,
00324                                   const stdair::AirportCode_T& iDestination,
00325                                   const stdair::Date_T& iDepartureDate,
00326                                   stdair::DatePeriodList_T& ioDatePeriodList) {

00327
00328     // Retrieve the airport-pair
00329     AirportPair* oAirportPair_ptr =
00330         BomRetriever::retrieveAirportPairFromKeySet(iBomRoot, iOrigin,
00331                                                     iDestination);
00332     if (oAirportPair_ptr == NULL) {
00333         return;
00334     }
00335     assert (oAirportPair_ptr != NULL);
00336
00337     // Retrieve the flight date
00338     BomRetriever::retrieveDatePeriodListFromKey (*oAirportPair_ptr, iDepartureDate,
00339 e,
00340                                                     ioDatePeriodList);
00341 }
00342
00343 // //////////////////////////////////////
00344 LegCabin& BomRetriever::
00345 retrieveDummyLegCabin (stdair::BomRoot& iBomRoot) {
00346
00347     LegCabin* oLegCabin_ptr = NULL;
00348
00349     // Retrieve the Inventory
00350     const Inventory* lInventory_ptr = BomRetriever::
00351         retrieveInventoryFromKey (iBomRoot, DEFAULT_AIRLINE_CODE);
00352
00353     if (lInventory_ptr == NULL) {
00354         std::ostringstream oStr;
00355         oStr << "The inventory corresponding to the '"
00356             << DEFAULT_AIRLINE_CODE << "' airline can not be found";
00357         throw ObjectNotFoundException (oStr.str());
00358     }
00359
00360     // Retrieve the FlightDate
00361     const FlightDate* lFlightDate_ptr = BomRetriever::
00362         retrieveFlightDateFromKey (*lInventory_ptr, DEFAULT_FLIGHT_NUMBER,
00363                                   DEFAULT_DEPARTURE_DATE);
00364
00365     if (lFlightDate_ptr == NULL) {
00366         std::ostringstream oStr;
00367         oStr << "The flight-date corresponding to ("
00368             << DEFAULT_FLIGHT_NUMBER << ", "
00369             << DEFAULT_DEPARTURE_DATE << ") can not be found";
00370         throw ObjectNotFoundException (oStr.str());
00371     }
00372
00373     // Retrieve the LegDate
00374     const LegDateKey lLegDateKey (DEFAULT_ORIGIN);
00375     const LegDate* lLegDate_ptr =
00376         lFlightDate_ptr->getLegDate (lLegDateKey);
00377
00378     if (lLegDate_ptr == NULL) {
00379         std::ostringstream oStr;

```

```

00380         ostr << "The leg-date corresponding to the '"
00381             << DEFAULT_ORIGIN << "' origin can not be found";
00382         throw ObjectNotFoundException (ostr.str());
00383     }
00384
00385     // Retrieve the LegCabin
00386     const LegCabinKey lLegCabinKey (DEFAULT_CABIN_CODE);
00387     oLegCabin_ptr = lLegDate_ptr->getLegCabin (lLegCabinKey);
00388
00389     if (oLegCabin_ptr == NULL) {
00390         std::ostringstream ostr;
00391         ostr << "The leg-cabin corresponding to the '"
00392             << DEFAULT_CABIN_CODE << "' cabin code can not be found";
00393         throw ObjectNotFoundException (ostr.str());
00394     }
00395
00396     assert (oLegCabin_ptr != NULL);
00397     return *oLegCabin_ptr;
00398
00399 }
00400
00401 // //////////////////////////////////////
00402 SegmentCabin& BomRetriever::
00403 retrieveDummySegmentCabin (stdair::BomRoot& iBomRoot) {
00404
00405     SegmentCabin* oSegmentCabin_ptr = NULL;
00406
00407     // Retrieve the Inventory
00408     const Inventory* lInventory_ptr = BomRetriever::
00409         retrieveInventoryFromKey (iBomRoot, DEFAULT_AIRLINE_CODE);
00410
00411     if (lInventory_ptr == NULL) {
00412         std::ostringstream ostr;
00413         ostr << "The inventory corresponding to the '"
00414             << DEFAULT_AIRLINE_CODE << "' airline can not be found";
00415         throw ObjectNotFoundException (ostr.str());
00416     }
00417
00418     // Retrieve the FlightDate
00419     const FlightDate* lFlightDate_ptr = BomRetriever::
00420         retrieveFlightDateFromKey (*lInventory_ptr, DEFAULT_FLIGHT_NUMBER,
00421             DEFAULT_DEPARTURE_DATE);
00422
00423     if (lFlightDate_ptr == NULL) {
00424         std::ostringstream ostr;
00425         ostr << "The flight-date corresponding to ("
00426             << DEFAULT_FLIGHT_NUMBER << ", "
00427             << DEFAULT_DEPARTURE_DATE << ") can not be found";
00428         throw ObjectNotFoundException (ostr.str());
00429     }
00430
00431     // Retrieve the SegmentDate
00432     const SegmentDateKey lSegmentDateKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
00433     const SegmentDate* lSegmentDate_ptr =
00434         lFlightDate_ptr->getSegmentDate (lSegmentDateKey);
00435
00436     if (lSegmentDate_ptr == NULL) {
00437         std::ostringstream ostr;
00438         ostr << "The segment-date corresponding to the '"
00439             << DEFAULT_ORIGIN << "' origin and '"
00440             << DEFAULT_DESTINATION << "' destination can not be found";
00441         throw ObjectNotFoundException (ostr.str());

```

```

00442     }
00443
00444     // Retrieve the SegmentCabin
00445     const SegmentCabinKey lSegmentCabinKey (DEFAULT_CABIN_CODE);
00446     oSegmentCabin_ptr =
00447         BomManager::getObjectPtr<SegmentCabin> (*lSegmentDate_ptr, lSegmentCabinKey
00448         .toString());
00449
00448     if (oSegmentCabin_ptr == NULL) {
00450         std::ostringstream oStr;
00451         oStr << "The segment-cabin corresponding to the '"
00452             << DEFAULT_CABIN_CODE << "' cabin code can not be found";
00453         throw ObjectNotFoundException (oStr.str());
00454     }
00455
00456     assert (oSegmentCabin_ptr != NULL);
00457     return *oSegmentCabin_ptr;
00458 }
00459
00460 }
```

### 35.183 stdair/bom/BomRetriever.hpp File Reference

```

#include <iosfwd>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/DatePeriod.hpp>
```

#### Classes

- class [stdair::BomRetriever](#)  
*Utility class to retrieve StdAir objects.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.184 BomRetriever.hpp

```

00001 #ifndef __STDAIR_BOM_BOMRETRIEVER_HPP
00002 #define __STDAIR_BOM_BOMRETRIEVER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/stdair_date_time_types.hpp>
```



```
00012 #include <stdair/bom/DatePeriod.hpp>
00013
00014 namespace stdair {
00015
00016     class BomRoot;
00017     struct InventoryKey;
00018     class Inventory;
00019     struct FlightDateKey;
00020     class FlightDate;
00021     class LegDate;
00022     struct SegmentDateKey;
00023     class SegmentDate;
00024     class LegCabin;
00025     class SegmentCabin;
00026     class FareFamily;
00027     class BookingClass;
00028     class DatePeriod;
00029     class AirportPair;
00030
00031     class BomRetriever {
00032     public:
00033         // ////////////////////////////////// Key management support methods //////////////////////////////////
00034         static Inventory*
00035         retrieveInventoryFromLongKey (const BomRoot&,
00036                                     const std::string& iFullKeyStr);
00037
00038         static Inventory* retrieveInventoryFromKey (const BomRoot&,
00039                                                  const InventoryKey&);
00040
00041         static Inventory* retrieveInventoryFromKey (const BomRoot&,
00042                                                  const AirlineCode_T&);
00043
00044         static FlightDate*
00045         retrieveFlightDateFromLongKey (const BomRoot&,
00046                                       const std::string& iFullKeyStr);
00047
00048         static FlightDate*
00049         retrieveFlightDateFromKeySet (const BomRoot&,
00050                                     const AirlineCode_T&, const FlightNumber_T&,
00051                                     const Date_T& iFlightDateDate);
00052
00053         static FlightDate*
00054         retrieveFlightDateFromLongKey (const Inventory&,
00055                                       const std::string& iFullKeyStr);
00056
00057         static FlightDate* retrieveFlightDateFromKey (const Inventory&,
00058                                                     const FlightDateKey&);
00059
00060         static FlightDate* retrieveFlightDateFromKey (const Inventory&,
00061                                                     const FlightNumber_T&,
00062                                                     const Date_T& iFlightDateDate);
00063
00064         static SegmentDate*
00065         retrieveSegmentDateFromLongKey (const BomRoot&,
00066                                       const std::string& iFullKeyStr);
00067
00068         static SegmentDate*
00069         retrieveSegmentDateFromLongKey (const Inventory&,
00070                                       const std::string& iFullKeyStr);
00071
00072         static SegmentDate*
```

```

00187     retrieveSegmentDateFromLongKey (const FlightDate&,
00188                                     const std::string& iFullKeyStr);
00189
00197     static SegmentDate* retrieveSegmentDateFromKey (const FlightDate&,
00198                                                     const SegmentDateKey&);
00199
00208     static SegmentDate*
00209     retrieveSegmentDateFromKey (const FlightDate&,
00210                                 const AirportCode_T& iOrigin,
00211                                 const AirportCode_T& iDestination);
00212
00236     static BookingClass*
00237     retrieveBookingClassFromLongKey (const Inventory&,
00238                                     const std::string& iFullKeyStr,
00239                                     const ClassCode_T&);
00240
00241
00250     static AirportPair*
00251     retrieveAirportPairFromKeySet (const BomRoot& ,
00252                                   const stdair::AirportCode_T&,
00253                                   const stdair::AirportCode_T&);
00254
00264     static void
00265     retrieveDatePeriodListFromKey (const AirportPair&,
00266                                   const stdair::Date_T&,
00267                                   stdair::DatePeriodList_T&);
00268
00281     static void
00282     retrieveDatePeriodListFromKeySet (const BomRoot&,
00283                                       const stdair::AirportCode_T&,
00284                                       const stdair::AirportCode_T&,
00285                                       const stdair::Date_T&,
00286                                       stdair::DatePeriodList_T&);
00287
00293     static stdair::LegCabin& retrieveDummyLegCabin (stdair::BomRoot&);
00294
00300     static stdair::SegmentCabin& retrieveDummySegmentCabin (stdair::BomRoot&);
00301
00302 };
00303
00304 }
00305 #endif // __STDAIR_BOM_BOMRETRIEVER_HPP

```

### 35.185 stdair/bom/BomRoot.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/basic/BasConst_General.hpp>

#include <stdair/bom/BomManager.hpp>

#include <stdair/bom/BomRoot.hpp>

#include <stdair/bom/InventoryKey.hpp>

#include <stdair/bom/Inventory.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.186 BomRoot.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/BomRoot.hpp>
00011 #include <stdair/bom/InventoryKey.hpp>
00012 #include <stdair/bom/Inventory.hpp>
00013
00014 namespace stdair {
00015
00016 // //////////////////////////////////////
00017 BomRoot::BomRoot() {
00018     assert (false);
00019 }
00020
00021 // //////////////////////////////////////
00022 BomRoot::BomRoot (const BomRoot& iBomRoot) {
00023     assert (false);
00024 }
00025
00026 // //////////////////////////////////////
00027 BomRoot::BomRoot (const Key_T& iKey) : _key (iKey) {
00028 }
00029
00030 // //////////////////////////////////////
00031 BomRoot::~BomRoot() {
00032 }
00033
00034 // //////////////////////////////////////
00035 std::string BomRoot::toString() const {
00036     std::ostringstream oStr;
00037     oStr << _key.toString();
00038     return oStr.str();
00039 }
00040
00041 // //////////////////////////////////////
00042 Inventory* BomRoot::getInventory (const std::string& iInventoryKeyStr) const {
00043     Inventory* oInventory_ptr =
00044         BomManager::getObjectPtr<Inventory> (*this, iInventoryKeyStr);
00045     return oInventory_ptr;
00046 }
00047
00048 // //////////////////////////////////////
00049 Inventory* BomRoot::getInventory (const InventoryKey& iInventoryKey) const {
00050     return getInventory (iInventoryKey.toString());
00051 }
00052
00053 }

```

## 35.187 stdair/bom/BomRoot.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BomRootKey.hpp>
```

### Classes

- class [stdair::BomRoot](#)  
*Class representing the actual attributes for the Bom root.*

### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.188 BomRoot.hpp

```
00001 #ifndef __STDAIR_BOM_BOMROOT_HPP
00002 #define __STDAIR_BOM_BOMROOT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/BomRootKey.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00024     struct InventoryKey;
00025     class Inventory;
00026
00030     class BomRoot : public BomAbstract {
00031     public:
00032         template <typename BOM> friend class FacBom;
00033         friend class FacBomManager;
00034         friend class boost::serialization::access;
```

```

00035 public:
00039     typedef BomRootKey Key_T;
00040
00041
00042 public:
00043     // //////////// Getters ////////////
00045     const Key_T& getKey() const {
00046         return _key;
00047     }
00048
00050     const HolderMap_T& getHolderMap() const {
00051         return _holderMap;
00052     }
00053
00064     Inventory* getInventory (const std::string& iInventoryKeyStr) const;
00065
00076     Inventory* getInventory (const InventoryKey&) const;
00077
00078
00079 public:
00080     // //////////// Display support methods ////////////
00086     void toStream (std::ostream& ioOut) const {
00087         ioOut << toString();
00088     }
00089
00095     void fromStream (std::istream& ioIn) {
00096     }
00097
00101     std::string toString() const;
00102
00106     const std::string describeKey() const {
00107         return _key.toString();
00108     }
00109
00110
00111 public:
00112     // //////////// (Boost) Serialisation support methods ////////////
00123     template<class Archive>
00124     void serialize (Archive& ar, const unsigned int iFileVersion);
00125
00126 private:
00134     void serialisationImplementationExport() const;
00135     void serialisationImplementationImport();
00136
00137
00138 protected:
00139     // //////////// Constructors and destructors ////////////
00143     BomRoot();
00144
00148     BomRoot (const BomRoot&);
00149
00153     BomRoot (const Key_T& iKey);
00154
00158     ~BomRoot();
00159
00160
00161 protected:
00162     // //////////// Attributes ////////////
00166     Key_T _key;
00167
00171     HolderMap_T _holderMap;
00172 };

```

```

00173
00174 }
00175 #endif // __STDAIR_BOM_BOMROOT_HPP

```

### 35.189 stdair/bom/BomRootKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomRootKey.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Functions

- template void [stdair::BomRootKey::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [stdair::BomRootKey::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

### 35.190 BomRootKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/bom/BomRootKey.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 BomRootKey::BomRootKey()
00019 : _id (DEFAULT_BOM_ROOT_KEY) {
00020 }

```

```

00021
00022 // //////////////////////////////////////
00023 BomRootKey::BomRootKey (const BomRootKey& iBomRootKey)
00024     : _id (iBomRootKey._id) {
00025 }
00026
00027 // //////////////////////////////////////
00028 BomRootKey::BomRootKey (const std::string& iIdentification)
00029     : _id (iIdentification) {
00030 }
00031
00032 // //////////////////////////////////////
00033 BomRootKey::~BomRootKey() {
00034 }
00035
00036 // //////////////////////////////////////
00037 void BomRootKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "BomRootKey: " << toString() << std::endl;
00039 }
00040
00041 // //////////////////////////////////////
00042 void BomRootKey::fromStream (std::istream& ioIn) {
00043 }
00044
00045 // //////////////////////////////////////
00046 const std::string BomRootKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _id;
00049     return oStr.str();
00050 }
00051
00052 // //////////////////////////////////////
00053 void BomRootKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057 }
00058
00059 // //////////////////////////////////////
00060 void BomRootKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064 }
00065
00066 // //////////////////////////////////////
00067 template<class Archive>
00068 void BomRootKey::serialize (Archive& ioArchive,
00069                             const unsigned int iFileVersion) {
00070     ioArchive & _id;
00071 }
00072
00073 // //////////////////////////////////////
00074 // Explicit template instantiation
00075 namespace ba = boost::archive;
00076 template void BomRootKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00077                                                         unsigned int);
00078 template void BomRootKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00079                                                         unsigned int);
00080 // //////////////////////////////////////
00081
00082 }

```

## 35.191 stdair/bom/BomRootKey.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/bom/KeyAbstract.hpp>
```

## Classes

- struct [stdair::BomRootKey](#)  
*Key of the BOM structure root.*

## Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.192 BomRootKey.hpp

```
00001 #ifndef __STDAIR_BOM_BOMROOTKEY_HPP
00002 #define __STDAIR_BOM_BOMROOTKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/KeyAbstract.hpp>
00012
00014 namespace boost {
00015     namespace serialization {
00016         class access;
00017     }
00018 }
00019
00020 namespace stdair {
00021
00025     struct BomRootKey : public KeyAbstract {
00026         friend class boost::serialization::access;
00027
00028         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00029     public:
00033         BomRootKey ();
00034
00038         BomRootKey (const std::string& iIdentification);
00039
00043         BomRootKey (const BomRootKey&);
00044
```



```

00048     ~BomRootKey();
00049
00050
00051 public:
00052     // //////////// Getters ////////////
00056     const std::string& getID() const {
00057         return _id;
00058     }
00059
00060
00061 public:
00062     // //////////// Display support methods ////////////
00068     void toStream (std::ostream& ioOut) const;
00069
00075     void fromStream (std::istream& ioIn);
00076
00086     const std::string toString() const;
00087
00088
00089 public:
00090     // //////////// (Boost) Serialisation support methods ////////////
00094     template<class Archive>
00095     void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097 private:
00102     void serialisationImplementationExport() const;
00103     void serialisationImplementationImport();
00104
00105
00106 private:
00107     // //////////// Attributes ////////////
00111     std::string _id;
00112 };
00113
00114 }
00115 #endif // __STDAIR_BOM_BOMROOTKEY_HPP

```

### 35.193 stdair/bom/BookingClass.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/RandomGeneration.hpp>
#include <stdair/bom/BookingClass.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

## 35.194 BookingClass.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/RandomGeneration.hpp>
00011 #include <stdair/bom/BookingClass.hpp>
00012
00013 namespace stdair {
00014
00015     // //////////////////////////////////////
00016     BookingClass::BookingClass() : _key (DEFAULT_CLASS_CODE), _parent (NULL) {
00017         assert (false);
00018     }
00019
00020     // //////////////////////////////////////
00021     BookingClass::BookingClass (const BookingClass&)
00022     : _key (DEFAULT_CLASS_CODE), _parent (NULL) {
00023         assert (false);
00024     }
00025
00026     // //////////////////////////////////////
00027     BookingClass::BookingClass (const Key_T& iKey)
00028     : _key (iKey), _parent (NULL), _cumulatedProtection (0.0),
00029       _protection (0.0), _cumulatedBookingLimit (0.0), _au (0.0), _nego (0.0),
00030       _noShowPercentage (0.0), _cancellationPercentage (0.0),
00031       _nbOfBookings (0.0), _groupNbOfBookings (0.0),
00032       _groupPendingNbOfBookings (0.0), _staffNbOfBookings (0.0),
00033       _wlNbOfBookings (0.0), _nbOfCancellations (0.), _etb (0.0),
00034       _netClassAvailability (0.0), _segmentAvailability (0.0),
00035       _netRevenueAvailability (0.0), _yield (0.0), _mean (0.0), _stdDev (0.0) {
00036     }
00037
00038     // //////////////////////////////////////
00039     BookingClass::~BookingClass() {
00040     }
00041
00042     // //////////////////////////////////////
00043     std::string BookingClass::toString() const {
00044         std::ostringstream ostr;
00045         ostr << describeKey();
00046         return ostr.str();
00047     }
00048
00049     // //////////////////////////////////////
00050     void BookingClass::sell (const NbOfBookings_T& iNbOfBookings) {
00051         _nbOfBookings += iNbOfBookings;
00052     }
00053
00054     // //////////////////////////////////////
00055     void BookingClass::cancel (const NbOfBookings_T& iNbOfCancellations) {
00056         _nbOfBookings -= iNbOfCancellations;
00057         _nbOfCancellations += iNbOfCancellations;
00058     }
00059
00060     // //////////////////////////////////////

```

```

00061 void BookingClass::generateDemandSamples (const int& K) {
00062     _generatedDemandVector.clear();
00063     if (_stdDev > 0) {
00064         RandomGeneration lGenerator (DEFAULT_RANDOM_SEED);
00065         for (int i = 0; i < K; ++i) {
00066             RealNumber_T lDemandSample = lGenerator.generateNormal (_mean, _stdDev);
00067             _generatedDemandVector.push_back (lDemandSample);
00068         }
00069     }
00070 }
00071
00072 // //////////////////////////////////////
00073 void BookingClass::generateDemandSamples (const int& K,
00074                                           const RandomSeed_T& iSeed) {
00075     _generatedDemandVector.clear();
00076     if (_stdDev > 0) {
00077         RandomGeneration lGenerator (iSeed);
00078         for (int i = 0; i < K; ++i) {
00079             RealNumber_T lDemandSample = lGenerator.generateNormal (_mean, _stdDev);
00080             _generatedDemandVector.push_back (lDemandSample);
00081         }
00082     }
00083 }
00084
00085 }
00086

```

### 35.195 stdair/bom/BookingClass.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/BookingClassKey.hpp>
#include <stdair/bom/BookingClassTypes.hpp>

```

#### Classes

- class [stdair::BookingClass](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.196 BookingClass.hpp

```

00001 #ifndef __STDAIR_BOM_BOOKINGCLASS_HPP
00002 #define __STDAIR_BOM_BOOKINGCLASS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_maths_types.hpp>
00013 #include <stdair/stdair_rm_types.hpp>
00014 #include <stdair/bom/BomAbstract.hpp>
00015 #include <stdair/bom/BookingClassKey.hpp>
00016 #include <stdair/bom/BookingClassTypes.hpp>
00017
00018 namespace stdair {
00019
00020     class BookingClass : public BomAbstract {
00021     public:
00022         template <typename BOM> friend class FacBom;
00023         friend class FacBomManager;
00024
00025         // ////////////////////////////////// Type definitions //////////////////////////////////
00026         typedef BookingClassKey Key_T;
00027
00028     public:
00029         // ////////////////////////////////// Getters //////////////////////////////////
00030         const Key_T& getKey() const {
00031             return _key;
00032         }
00033
00034         const ClassCode_T& getClassCode() const {
00035             return _key.getClassCode();
00036         }
00037
00038         BomAbstract* const getParent() const {
00039             return _parent;
00040         }
00041
00042         const HolderMap_T& getHolderMap() const {
00043             return _holderMap;
00044         }
00045
00046         const SubclassCode_T& getSubclassCode() const {
00047             return _subclassCode;
00048         }
00049
00050         const AuthorizationLevel_T& getAuthorizationLevel() const {
00051             return _au;
00052         }
00053
00054         const ProtectionLevel_T& getProtection() const {
00055             return _protection;
00056         }
00057
00058         const ProtectionLevel_T& getCumulatedProtection() const {
00059             return _cumulatedProtection;
00060         }
00061     };
00062
00063 }
00064
00065 
```

```
00074
00076     const BookingLimit_T& getCumulatedBookingLimit() const {
00077         return _cumulatedBookingLimit;
00078     }
00079
00081     const NbOfSeats_T& getNegotiatedSpace() const {
00082         return _nego;
00083     }
00084
00086     const OverbookingRate_T& getNoShowPercentage() const {
00087         return _noShowPercentage;
00088     }
00089
00091     const OverbookingRate_T& getCancellationPercentage() const {
00092         return _cancellationPercentage;
00093     }
00094
00096     const NbOfBookings_T& getNbOfBookings() const {
00097         return _nbOfBookings;
00098     }
00099
00101     const NbOfBookings_T& getNbOfGroupBookings() const {
00102         return _groupNbOfBookings;
00103     }
00104
00106     const NbOfBookings_T& getNbOfPendingGroupBookings() const {
00107         return _groupPendingNbOfBookings;
00108     }
00109
00111     const NbOfBookings_T& getNbOfStaffBookings() const {
00112         return _staffNbOfBookings;
00113     }
00114
00116     const NbOfBookings_T& getNbOfWLBookings() const {
00117         return _wlNbOfBookings;
00118     }
00119
00121     const NbOfCancellations_T& getNbOfCancellations() const {
00122         return _nbOfCancellations;
00123     }
00124
00126     const NbOfBookings_T& getETB() const {
00127         return _etb;
00128     }
00129
00131     const Availability_T& getNetClassAvailability() const {
00132         return _netClassAvailability;
00133     }
00134
00136     const Availability_T& getSegmentAvailability() const {
00137         return _segmentAvailability;
00138     }
00139
00141     const Availability_T& getNetRevenueAvailability() const {
00142         return _netRevenueAvailability;
00143     }
00144
00146     const Yield_T& getYield () const { return _yield; }
00147
00149     const MeanValue_T& getMean () const { return _mean; }
00150     const StdDevValue_T& getStdDev () const {return _stdDev; }
00151
```

```

00153     const GeneratedDemandVector_T& getGeneratedDemandVector () const {
00154         return _generatedDemandVector;
00155     }
00156
00157 public:
00158     // //////////// Setters ////////////
00160     void setCumulatedProtection (const ProtectionLevel_T& iPL) {
00161         _cumulatedProtection = iPL;
00162     }
00163
00165     void setProtection (const ProtectionLevel_T& iPL) {
00166         _protection = iPL;
00167     }
00168
00170     void setCumulatedBookingLimit (const BookingLimit_T& iBL) {
00171         _cumulatedBookingLimit = iBL;
00172     }
00173
00175     void setAuthorizationLevel (const AuthorizationLevel_T& iAU) {
00176         _au = iAU;
00177     }
00178
00180     void setSegmentAvailability (const Availability_T& iAvl) {
00181         _segmentAvailability = iAvl;
00182     }
00183
00185     void setYield (const Yield_T& iYield) { _yield = iYield; }
00186
00188     void setMean (const MeanValue_T& iMean) { _mean = iMean; }
00189     void setStdDev (const StdDevValue_T& iStdDev) { _stdDev = iStdDev; }
00190
00191 public:
00192     // //////////// Display support methods ////////////
00195     void toStream (std::ostream& ioOut) const {
00196         ioOut << toString();
00197     }
00198
00201     void fromStream (std::istream& ioIn) {
00202     }
00203
00205     std::string toString() const;
00206
00208     const std::string describeKey() const {
00209         return _key.toString();
00210     }
00211
00212 public:
00213     // //////////// Business Methods ////////////
00215     void sell (const NbOfBookings_T&);
00216
00218     void cancel (const NbOfBookings_T&);
00219
00222     void generateDemandSamples (const int&);
00223
00226     void generateDemandSamples (const int&, const RandomSeed_T&);
00227
00228 protected:
00229     // //////////// Constructors and destructors ////////////
00231     BookingClass (const Key_T&);
00233     virtual ~BookingClass();
00234
00235 private:

```

```
00237     BookingClass();
00239     BookingClass (const BookingClass&);
00240
00241
00242 protected:
00243     // ////////// Attributes //////////
00245     Key_T _key;
00246
00248     BomAbstract* _parent;
00249
00251     HolderMap_T _holderMap;
00252
00254     SubclassCode_T _subclassCode;
00255
00257     ProtectionLevel_T _cumulatedProtection;
00258
00260     ProtectionLevel_T _protection;
00261
00263     BookingLimit_T _cumulatedBookingLimit;
00264
00266     AuthorizationLevel_T _au;
00267
00269     NbOfSeats_T _nego;
00270
00272     OverbookingRate_T _noShowPercentage;
00273
00275     OverbookingRate_T _cancellationPercentage;
00276
00278     NbOfBookings_T _nbOfBookings;
00279
00281     NbOfBookings_T _groupNbOfBookings;
00282
00284     NbOfBookings_T _groupPendingNbOfBookings;
00285
00287     NbOfBookings_T _staffNbOfBookings;
00288
00290     NbOfBookings_T _wlNbOfBookings;
00291
00293     NbOfCancellations_T _nbOfCancellations;
00294
00296     NbOfBookings_T _etb;
00297
00299     Availability_T _netClassAvailability;
00300
00302     Availability_T _segmentAvailability;
00303
00305     Availability_T _netRevenueAvailability;
00306
00308     Yield_T _yield;
00309
00311     MeanValue_T _mean;
00312     StdDevValue_T _stdDev;
00313
00315     GeneratedDemandVector_T _generatedDemandVector;
00316 };
00317
00318 }
00319 #endif // __STDAIR_BOM_BOOKINGCLASS_HPP
```

## 35.197 stdair/bom/BookingClassKey.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BookingClassKey.hpp>
```

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.198 BookingClassKey.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BookingClassKey.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 BookingClassKey::BookingClassKey() : _classCode (DEFAULT_CLASS_CODE) {
00015     assert (false);
00016 }
00017
00018 // //////////////////////////////////////
00019 BookingClassKey::BookingClassKey (const BookingClassKey& iKey)
00020 : _classCode (iKey._classCode) {
00021 }
00022
00023 // //////////////////////////////////////
00024 BookingClassKey::BookingClassKey (const ClassCode_T& iClassCode)
00025 : _classCode (iClassCode) {
00026 }
00027
00028 // //////////////////////////////////////
00029 BookingClassKey::~BookingClassKey () {
00030 }
00031
00032 // //////////////////////////////////////
00033 void BookingClassKey::toStream (std::ostream& ioOut) const {
00034     ioOut << "BookingClassKey: " << toString();
00035 }
00036
00037 // //////////////////////////////////////
00038 void BookingClassKey::fromStream (std::istream& ioIn) {
00039 }
00040
00041 // //////////////////////////////////////
```



```

00042     const std::string BookingClassKey::toString() const {
00043         std::ostringstream ostr;
00044         ostr << _classCode;
00045         return ostr.str();
00046     }
00047
00048 }
```

### 35.199 stdair/bom/BookingClassKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
```

```
#include <stdair/bom/KeyAbstract.hpp>
```

#### Classes

- struct [stdair::BookingClassKey](#)

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.200 BookingClassKey.hpp

```

00001 #ifndef __STDAIR_BOM_BOOKINGCLASSKEY_HPP
00002 #define __STDAIR_BOM_BOOKINGCLASSKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
00016     struct BookingClassKey : public KeyAbstract {
00017
00018         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00019     private:
00021         BookingClassKey();
00022
00023     public:
00025         BookingClassKey (const ClassCode_T& iClassCode);
00027         BookingClassKey (const BookingClassKey&);
00029         ~BookingClassKey();
00030
00031
00032         // ////////////////////////////////// Getters //////////////////////////////////
00034         const ClassCode_T& getClassCode () const {
00035             return _classCode;
00036         }
00037 }
```

```

00038
00039 // //////////// Display support methods ////////////
00042 void toStream (std::ostream& ioOut) const;
00043
00046 void fromStream (std::istream& ioIn);
00047
00053 const std::string toString() const;
00054
00055
00056 private:
00057 // //////////// Attributes ////////////
00059 ClassCode_T _classCode;
00060 };
00061
00062 }
00063 #endif // __STDAIR_BOM_BOOKINGCLASSTYPES_HPP

```

### 35.201 stdair/bom/BookingClassTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< BookingClass \* > [stdair::BookingClassList\\_T](#)
- typedef std::map< const MapKey\_T, BookingClass \* > [stdair::BookingClassMap\\_T](#)

### 35.202 BookingClassTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_BOOKINGCLASSTYPES_HPP
00003 #define __STDAIR_BOM_BOOKINGCLASSTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016 // Forward declarations.

```

```

00017     class BookingClass;
00018
00020     typedef std::list<BookingClass*> BookingClassList_T;
00021
00023     typedef std::map<const MapKey_T, BookingClass*> BookingClassMap_T;
00024 }
00025 #endif // __STDAIR_BOM_BOOKINGCLASSTYPES_HPP
00026

```

### 35.203 stdair/bom/BookingRequestStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Functions

- void [stdair::intDisplay](#) (std::ostream &oStream, const int &iInt)

### 35.204 BookingRequestStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 #include <boost/date_time/posix_time/posix_time.hpp>
00010 // StdAir
00011 #include <stdair/basic/BasConst_Inventory.hpp>
00012 #include <stdair/basic/BasConst_Request.hpp>
00013 #include <stdair/bom/BookingRequestStruct.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018     BookingRequestStruct::BookingRequestStruct ()
00019         : _origin (DEFAULT_ORIGIN), _destination (DEFAULT_DESTINATION),

```

```

00020     _pos (DEFAULT_POS),
00021     _preferredDepartureDate (DEFAULT_PREFERRED_DEPARTURE_DATE),
00022     _preferredDepartureTime (DEFAULT_PREFERRED_DEPARTURE_TIME),
00023     _requestDateTime (DEFAULT_REQUEST_DATE_TIME),
00024     _preferredCabin (DEFAULT_PREFERRED_CABIN),
00025     _partySize (DEFAULT_PARTY_SIZE),
00026     _channel (DEFAULT_CHANNEL),
00027     _tripType (TRIP_TYPE_ONE_WAY),
00028     _stayDuration (DEFAULT_STAY_DURATION),
00029     _frequentFlyerType (DEFAULT_FF_TIER),
00030     _wtp (DEFAULT_WTP),
00031     _valueOfTime (DEFAULT_VALUE_OF_TIME) {
00032     assert (false);
00033 }
00034
00035 // //////////////////////////////////////
00036 BookingRequestStruct::
00037 BookingRequestStruct (const BookingRequestStruct& iBookingRequest)
00038 : _generatorKey (iBookingRequest._generatorKey),
00039   _origin (iBookingRequest._origin),
00040   _destination (iBookingRequest._destination),
00041   _pos (iBookingRequest._pos),
00042   _preferredDepartureDate (iBookingRequest._preferredDepartureDate),
00043   _preferredDepartureTime (iBookingRequest._preferredDepartureTime),
00044   _requestDateTime (iBookingRequest._requestDateTime),
00045   _preferredCabin (iBookingRequest._preferredCabin),
00046   _partySize (iBookingRequest._partySize),
00047   _channel (iBookingRequest._channel),
00048   _tripType (iBookingRequest._tripType),
00049   _stayDuration (iBookingRequest._stayDuration),
00050   _frequentFlyerType (iBookingRequest._frequentFlyerType),
00051   _wtp (iBookingRequest._wtp),
00052   _valueOfTime (iBookingRequest._valueOfTime) {
00053 }
00054
00055 // //////////////////////////////////////
00056 BookingRequestStruct::
00057 BookingRequestStruct (const DemandGeneratorKey_T& iGeneratorKey,
00058                     const AirportCode_T& iOrigin,
00059                     const AirportCode_T& iDestination,
00060                     const CityCode_T& iPOS,
00061                     const Date_T& iDepartureDate,
00062                     const DateTime_T& iRequestDateTime,
00063                     const CabinCode_T& iPreferredCabin,
00064                     const NbOfSeats_T& iPartySize,
00065                     const ChannelLabel_T& iChannel,
00066                     const TripType_T& iTripType,
00067                     const DayDuration_T& iStayDuration,
00068                     const FrequentFlyer_T& iFrequentFlyerType,
00069                     const Duration_T& iPreferredDepartureTime,
00070                     const WTP_T& iWTP,
00071                     const PriceValue_T& iValueOfTime)
00072 : _generatorKey (iGeneratorKey), _origin (iOrigin),
00073   _destination (iDestination), _pos (iPOS),
00074   _preferredDepartureDate (iDepartureDate),
00075   _preferredDepartureTime (iPreferredDepartureTime),
00076   _requestDateTime (iRequestDateTime),
00077   _preferredCabin (iPreferredCabin), _partySize (iPartySize),
00078   _channel (iChannel), _tripType (iTripType),
00079   _stayDuration (iStayDuration), _frequentFlyerType (iFrequentFlyerType),
00080   _wtp (iWTP), _valueOfTime (iValueOfTime) {
00081 }

```

```

00082
00083 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00084 BookingRequestStruct::
00085 BookingRequestStruct (const AirportCode_T& iOrigin,
00086                      const AirportCode_T& iDestination,
00087                      const CityCode_T& iPOS,
00088                      const Date_T& iDepartureDate,
00089                      const DateTime_T& iRequestDateTime,
00090                      const CabinCode_T& iPreferredCabin,
00091                      const NbOfSeats_T& iPartySize,
00092                      const ChannelLabel_T& iChannel,
00093                      const TripType_T& iTripType,
00094                      const DayDuration_T& iStayDuration,
00095                      const FrequentFlyer_T& iFrequentFlyerType,
00096                      const Duration_T& iPreferredDepartureTime,
00097                      const WTP_T& iWTP,
00098                      const PriceValue_T& iValueOfTime)
00099 : _generatorKey (""), _origin (iOrigin),
00100   _destination (iDestination), _pos (iPOS),
00101   _preferredDepartureDate (iDepartureDate),
00102   _preferredDepartureTime (iPreferredDepartureTime),
00103   _requestDateTime (iRequestDateTime),
00104   _preferredCabin (iPreferredCabin), _partySize (iPartySize),
00105   _channel (iChannel), _tripType (iTripType),
00106   _stayDuration (iStayDuration), _frequentFlyerType (iFrequentFlyerType),
00107   _wtp (iWTP), _valueOfTime (iValueOfTime) {
00108 }
00109
00110 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00111 BookingRequestStruct::~BookingRequestStruct () {
00112 }
00113
00114 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00115 void BookingRequestStruct::toStream (std::ostream& ioOut) const {
00116     ioOut << describe();
00117 }
00118
00119 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00120 void BookingRequestStruct::fromStream (std::istream& ioIn) {
00121 }
00122
00123 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00124 const std::string BookingRequestStruct::describe() const {
00125     std::ostringstream oStr;
00126     oStr << "At " << _requestDateTime
00127         << ", for (" << _pos << ", " << _channel << ")"
00128         << " " << _origin << "-" << _destination << " (" << _tripType << ")"
00129         << " " << _preferredDepartureDate << " (" << _stayDuration << " days)"
00130         << " " << _preferredDepartureTime
00131         << " " << _preferredCabin << " " << _partySize
00132         << " " << _frequentFlyerType << " " << _wtp << " " << _valueOfTime;
00133     return oStr.str();
00134 }
00135
00136 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00137 void intDisplay (std::ostream& oStream, const int& iInt) {
00138     const int dInt = iInt - static_cast<int> (iInt / 100) * 100;
00139     if (dInt < 10) {
00140         oStream << "0" << dInt;
00141     } else {
00142         oStream << dInt;
00143     }

```

```

00144     }
00145
00146     // //////////////////////////////////////
00147     const std::string BookingRequestStruct::display() const {
00148         std::ostringstream oStr;
00149
00150         // Request date and time
00151         const Date_T& lRequestDate = _requestDateTime.date();
00152         oStr << boost::gregorian::to_iso_extended_string (lRequestDate);
00153
00154         const Duration_T& lRequestTime = _requestDateTime.time_of_day();
00155         oStr << ", " << boost::posix_time::to_simple_string (lRequestTime);
00156
00157         // POS
00158         oStr << ", " << _pos;
00159
00160         // Channel
00161         oStr << ", " << _channel;
00162
00163         // Origin
00164         oStr << ", " << _origin;
00165
00166         // Destination
00167         oStr << ", " << _destination;
00168
00169         // Preferred departure date
00170         oStr << ", "
00171             << boost::gregorian::to_iso_extended_string (_preferredDepartureDate);
00172
00173         // Preferred departure time
00174         oStr << ", "
00175             << boost::posix_time::to_simple_string (_preferredDepartureTime);
00176
00177         // MIN & MAX preferred departure time (hardcode)
00178         oStr << ", " << "00:00-23:59";
00179
00180         // Preferred arrival date (hardcode to the preferred departure date)
00181         oStr << ", "
00182             << boost::gregorian::to_iso_extended_string (_preferredDepartureDate);
00183
00184         // Preferred arrival time (hard-coded to 23:55)
00185         oStr << ", " << "23:55";
00186
00187         // Preferred cabin
00188         oStr << ", " << _preferredCabin;
00189
00190         // Trip type
00191         oStr << ", " << _tripType;
00192
00193         // Duration of stay
00194         oStr << ", ";
00195         if (_tripType == TRIP_TYPE_ONE_WAY) {
00196             oStr << "0";
00197         } else {
00198             oStr << _stayDuration;
00199         }
00200
00201         // Frequent flyer tier
00202         oStr << ", " << _frequentFlyerType;
00203
00204         // Willingness-to-pay
00205         oStr << ", " << _wtp;

```

```

00206
00207     // Disutility per stop (hardcode to 100, expressed as a monetary
00208     // unit per hour)
00209     oStr << ", " << "100";
00210
00211     // Value of time
00212     oStr << ", " << _valueOfTime;
00213
00214     return oStr.str();
00215 }
00216
00217 }
```

### 35.205 stdair/bom/BookingRequestStruct.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingRequestTypes.hpp>
```

#### Classes

- struct [stdair::BookingRequestStruct](#)  
Structure holding the elements of a booking request.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.206 BookingRequestStruct.hpp

```

00001 #ifndef __STDAIR_BOM_BOOKINGREQUESTSTRUCT_HPP
00002 #define __STDAIR_BOM_BOOKINGREQUESTSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/BookingRequestTypes.hpp>
00015
```

```
00016 namespace stdair {
00017
00021 struct BookingRequestStruct : public StructAbstract {
00022 public:
00023     // //////////// Getters ////////////
00025     const DemandGeneratorKey_T& getDemandGeneratorKey () const {
00026         return _generatorKey;
00027     }
00028
00030     const AirportCode_T& getOrigin() const {
00031         return _origin;
00032     }
00033
00035     const AirportCode_T& getDestination() const {
00036         return _destination;
00037     }
00038
00040     const CityCode_T& getPOS() const {
00041         return _pos;
00042     }
00043
00045     const Date_T& getPreferedDepartureDate() const {
00046         return _preferredDepartureDate;
00047     }
00048
00050     const Duration_T& getPreferredDepartureTime() const {
00051         return _preferredDepartureTime;
00052     }
00053
00055     const DateTime_T& getRequestDateTime() const {
00056         return _requestDateTime;
00057     }
00058
00060     const CabinCode_T& getPreferredCabin() const {
00061         return _preferredCabin;
00062     }
00063
00065     const NbOfSeats_T& getPartySize() const {
00066         return _partySize;
00067     }
00068
00070     const ChannelLabel_T& getBookingChannel() const {
00071         return _channel;
00072     }
00073
00075     const TripType_T& getTripType() const {
00076         return _tripType;
00077     }
00078
00080     const DayDuration_T& getStayDuration() const {
00081         return _stayDuration;
00082     }
00083
00085     const FrequentFlyer_T& getFrequentFlyerType() const {
00086         return _frequentFlyerType;
00087     }
00088
00090     const WTP_T& getWTP() const {
00091         return _wtp;
00092     }
00093
00095     const PriceValue_T& getValueOfTime () const {
```



```

00096         return _valueOfTime;
00097     }
00098
00099
00100 public:
00101     // //////////// Display support method ////////////
00102     void toStream (std::ostream& ioOut) const;
00103
00104     void fromStream (std::istream& ioIn);
00105
00106     const std::string describe() const;
00107
00108     const std::string display() const;
00109
00110
00111 public:
00112     // //////////// Constructors and Destructors ////////////
00113     BookingRequestStruct (const DemandGeneratorKey_T& iGeneratorKey,
00114                          const AirportCode_T& iOrigin,
00115                          const AirportCode_T& iDestination,
00116                          const CityCode_T& iPOS,
00117                          const Date_T& iDepartureDate,
00118                          const DateTime_T& iRequestDateTime,
00119                          const CabinCode_T& iPreferredCabin,
00120                          const NbOfSeats_T& iPartySize,
00121                          const ChannelLabel_T& iChannel,
00122                          const TripType_T& iTripType,
00123                          const DayDuration_T& iStayDuration,
00124                          const FrequentFlyer_T& iFrequentFlyerType,
00125                          const Duration_T& iPreferredDepartureTime,
00126                          const WTP_T& iWTP,
00127                          const PriceValue_T& iValueOfTime);
00128
00129     BookingRequestStruct (const AirportCode_T& iOrigin,
00130                          const AirportCode_T& iDestination,
00131                          const CityCode_T& iPOS,
00132                          const Date_T& iDepartureDate,
00133                          const DateTime_T& iRequestDateTime,
00134                          const CabinCode_T& iPreferredCabin,
00135                          const NbOfSeats_T& iPartySize,
00136                          const ChannelLabel_T& iChannel,
00137                          const TripType_T& iTripType,
00138                          const DayDuration_T& iStayDuration,
00139                          const FrequentFlyer_T& iFrequentFlyerType,
00140                          const Duration_T& iPreferredDepartureTime,
00141                          const WTP_T& iWTP,
00142                          const PriceValue_T& iValueOfTime);
00143
00144     BookingRequestStruct (const BookingRequestStruct&);
00145
00146     ~BookingRequestStruct ();
00147
00148 private:
00149     BookingRequestStruct ();
00150
00151 private:
00152     // //////////// Attributes ////////////
00153     const DemandGeneratorKey_T _generatorKey;
00154
00155     const AirportCode_T _origin;
00156
00157

```

```

00239     const AirportCode_T _destination;
00240
00242     const CityCode_T _pos;
00243
00245     const Date_T _preferredDepartureDate;
00246
00248     const Duration_T _preferredDepartureTime;
00249
00251     const DateTime_T _requestDateTime;
00252
00254     const CabinCode_T _preferredCabin;
00255
00257     const NbOfSeats_T _partySize;
00258
00260     const ChannelLabel_T _channel;
00261
00264     const TripType_T _tripType;
00265
00267     const DayDuration_T _stayDuration;
00268
00270     const FrequentFlyer_T _frequentFlyerType;
00271
00273     const WTP_T _wtp;
00274
00276     const PriceValue_T _valueOfTime;
00277 };
00278
00279 }
00280 #endif // __STDAIR_BOM_BOOKINGREQUESTSTRUCT_HPP

```

## 35.207 stdair/bom/BookingRequestTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### Typedefs

- typedef boost::shared\_ptr< BookingRequestStruct > [stdair::BookingRequestPtr\\_T](#)
- typedef std::string [stdair::DemandGeneratorKey\\_T](#)

## 35.208 BookingRequestTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_BOOKINGREQUESTTYPES_HPP
00003 #define __STDAIR_BOM_BOOKINGREQUESTTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section

```

```

00007 // //////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013     // Forward declarations
00014     struct BookingRequestStruct;
00015
00016     // ////////////////////////////////// Type definitions //////////////////////////////////
00017     typedef boost::shared_ptr<BookingRequestStruct> BookingRequestPtr_T;
00018
00019
00020     typedef std::string DemandGeneratorKey_T;
00021
00022
00023
00024 }
00025 #endif // __STDAIR_BOM_BOOKINGREQUESTTYPES_HPP
00026

```

### 35.209 stdair/bom/Bucket.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/Bucket.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.210 Bucket.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/Bucket.hpp>
00014
00015 namespace stdair {

```

```

00016
00017 ///////////////////////////////////////////////////////////////////
00018 Bucket::Bucket()
00019 : _key (DEFAULT_SEAT_INDEX), _parent (NULL) {
00020     assert (false);
00021 }
00022
00023 ///////////////////////////////////////////////////////////////////
00024 Bucket::Bucket (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00025 }
00026
00027 ///////////////////////////////////////////////////////////////////
00028 Bucket::~~Bucket() {
00029 }
00030
00031 ///////////////////////////////////////////////////////////////////
00032 std::string Bucket::toString() const {
00033     std::ostringstream oStr;
00034     oStr << describeKey();
00035     return oStr.str();
00036 }
00037
00038 ///////////////////////////////////////////////////////////////////
00039 void Bucket::serialisationImplementationExport() const {
00040     std::ostringstream oStr;
00041     boost::archive::text_oarchive oa (oStr);
00042     oa << *this;
00043 }
00044
00045 ///////////////////////////////////////////////////////////////////
00046 void Bucket::serialisationImplementationImport() {
00047     std::istringstream iStr;
00048     boost::archive::text_iarchive ia (iStr);
00049     ia >> *this;
00050 }
00051
00052 ///////////////////////////////////////////////////////////////////
00053 template<class Archive>
00054 void Bucket::serialize (Archive& ioArchive, const unsigned int iFileVersion) {
00055     ioArchive & _key;
00056 }
00057
00058 }
00059

```

### 35.211 stdair/bom/Bucket.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <stdair/stdair_inventory_types.hpp>

#include <stdair/bom/BomAbstract.hpp>

#include <stdair/bom/BucketKey.hpp>

#include <stdair/bom/BucketTypes.hpp>

```

## Classes

- class `stdair::Bucket`

*Class representing the actual attributes for an airline booking class.*

## Namespaces

- namespace `boost`  
*Forward declarations.*
- namespace `boost::serialization`
- namespace `stdair`

*Handle on the StdAir library context.*

## 35.212 Bucket.hpp

```

00001 #ifndef __STDAIR_BOM_BUCKET_HPP
00002 #define __STDAIR_BOM_BUCKET_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/BucketKey.hpp>
00014 #include <stdair/bom/BucketTypes.hpp>
00015
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023
00024     class Bucket : public BomAbstract {
00025     public:
00026         template <typename BOM> friend class FacBom;
00027         friend class FacBomManager;
00028         friend class boost::serialization::access;
00029
00030     public:
00031         // ////////////////////////////////// Type definitions //////////////////////////////////
00032         typedef BucketKey Key_T;
00033
00034     public:
00035         // ////////////////////////////////// Getters //////////////////////////////////
00036         const Key_T& getKey() const {
00037             return _key;
00038         }
00039
00040         BomAbstract* const getParent() const {
00041             return _parent;
00042         }
00043     };

```

```

00056
00058     const HolderMap_T& getHolderMap() const {
00059         return _holderMap;
00060     }
00061
00063     const SeatIndex_T& getSeatIndex() const {
00064         return _key.getSeatIndex();
00065     }
00066
00068     const Yield_T& getYieldRangeUpperValue() const {
00069         return _yieldRangeUpperValue;
00070     }
00071
00073     const CabinCapacity_T& getAvailability() const {
00074         return _availability;
00075     }
00076
00078     const NbOfSeats_T& getSoldSeats() const {
00079         return _soldSeats;
00080     }
00081
00082
00083     // //////////// Setters ////////////
00085     void setYieldRangeUpperValue (const Yield_T& iYield) {
00086         _yieldRangeUpperValue = iYield;
00087     }
00088
00090     void setAvailability (const CabinCapacity_T& iAvl) {
00091         _availability = iAvl;
00092     }
00093
00095     void setSoldSeats (const NbOfSeats_T& iSoldSeats) {
00096         _soldSeats = iSoldSeats;
00097     }
00098
00099
00100 public:
00101     // //////////// Display support methods ////////////
00107     void toStream (std::ostream& ioOut) const {
00108         ioOut << toString();
00109     }
00110
00116     void fromStream (std::istream& ioIn) {
00117     }
00118
00122     std::string toString() const;
00123
00127     const std::string describeKey() const {
00128         return _key.toString();
00129     }
00130
00131
00132 public:
00133     // //////////// (Boost) Serialisation support methods ////////////
00137     template<class Archive>
00138     void serialize (Archive& ar, const unsigned int iFileVersion);
00139
00140 private:
00145     void serialisationImplementationExport() const;
00146     void serialisationImplementationImport();
00147
00148

```

```

00149     protected:
00150         // ////////// Constructors and destructors //////////
00154         Bucket (const Key_T&);
00155
00159         virtual ~Bucket();
00160
00161     private:
00165         Bucket();
00166
00170         Bucket (const Bucket&);
00171
00172
00173     protected:
00174         // ////////// Children //////////
00178         Key_T _key;
00179
00183         BomAbstract* _parent;
00184
00188         HolderMap_T _holderMap;
00189
00190
00191     protected:
00192         // ////////// Attributes //////////
00196         Yield_T _yieldRangeUpperValue;
00197
00201         CabinCapacity_T _availability;
00202
00206         NbOfSeats_T _soldSeats;
00207     };
00208
00209 }
00210 #endif // __STDAIR_BOM_BUCKET_HPP
00211

```

### 35.213 stdair/bom/BucketKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/bom/BucketKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Functions

- template void `stdair::BucketKey::serialize< ba::text_oarchive >` (ba::text\_oarchive &, unsigned int)

- template void `stdair::BucketKey::serialize< ba::text_iarchive >` (`ba::text_iarchive &`, unsigned int)

### 35.214 BucketKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/bom/BucketKey.hpp>
00013
00014 namespace stdair {
00015
00016 // //////////////////////////////////////
00017 BucketKey::BucketKey() {
00018     assert (false);
00019 }
00020
00021 // //////////////////////////////////////
00022 BucketKey::BucketKey (const SeatIndex_T& iSeatIndex)
00023     : _seatIndex (iSeatIndex) {
00024 }
00025
00026 // //////////////////////////////////////
00027 BucketKey::BucketKey (const BucketKey& iBucketKey)
00028     : _seatIndex (iBucketKey._seatIndex) {
00029 }
00030
00031 // //////////////////////////////////////
00032 BucketKey::~BucketKey() {
00033 }
00034
00035 // //////////////////////////////////////
00036 void BucketKey::toStream (std::ostream& ioOut) const {
00037     ioOut << "BucketKey: " << toString() << std::endl;
00038 }
00039
00040 // //////////////////////////////////////
00041 void BucketKey::fromStream (std::istream& ioIn) {
00042 }
00043
00044 // //////////////////////////////////////
00045 const std::string BucketKey::toString() const {
00046     std::ostringstream oStr;
00047     oStr << _seatIndex;
00048     return oStr.str();
00049 }
00050
00051 // //////////////////////////////////////
00052 void BucketKey::serialisationImplementationExport() const {
00053     std::ostringstream oStr;
00054     boost::archive::text_oarchive oa (oStr);
00055     oa << *this;

```



```

00056     }
00057
00058     // //////////////////////////////////////
00059     void BucketKey::serialisationImplementationImport() {
00060         std::istringstream iStr;
00061         boost::archive::text_iarchive ia (iStr);
00062         ia >> *this;
00063     }
00064
00065     // //////////////////////////////////////
00066     template<class Archive>
00067     void BucketKey::serialize (Archive& ioArchive,
00068                               const unsigned int iFileVersion) {
00069         ioArchive & _seatIndex;
00070     }
00071
00072     // //////////////////////////////////////
00073     // Explicit template instantiation
00074     namespace ba = boost::archive;
00075     template void BucketKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00076                                                           unsigned int);
00077     template void BucketKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00078                                                           unsigned int);
00079     // //////////////////////////////////////
00080
00081 }

```

### 35.215 stdair/bom/BucketKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::BucketKey](#)  
*Key of booking-class.*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.216 BucketKey.hpp

```
00001 #ifndef __STDAIR_BOM_BUCKETKEY_HPP
```

```

00002 #define __STDAIR_BOM_BUCKETKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00026     struct BucketKey : public KeyAbstract {
00027         friend class boost::serialization::access;
00028
00029         // ////////// Constructors and destructors //////////
00030     private:
00034         BucketKey();
00035
00036     public:
00040         BucketKey (const SeatIndex_T&);
00044         BucketKey (const BucketKey&);
00048         ~BucketKey();
00049
00050
00051     public:
00052         // ////////// Getters //////////
00054         const SeatIndex_T& getSeatIndex() const {
00055             return _seatIndex;
00056         }
00057
00058
00059     public:
00060         // ////////// Display support methods //////////
00066         void toStream (std::ostream& ioOut) const;
00067
00073         void fromStream (std::istream& ioIn);
00074
00084         const std::string toString() const;
00085
00086
00087     public:
00088         // ////////// (Boost) Serialisation support methods //////////
00092         template<class Archive>
00093         void serialize (Archive& ar, const unsigned int iFileVersion);
00094
00095     private:
00100         void serialisationImplementationExport() const;
00101         void serialisationImplementationImport();
00102
00103
00104     private:
00105         // ////////// Attributes //////////
00109         SeatIndex_T _seatIndex;

```

```

00110     };
00111
00112 }
00113 #endif // __STDAIR_BOM_BUCKETKEY_HPP

```

### 35.217 stdair/bom/BucketTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

#### Typedefs

- typedef std::list< Bucket \* > [stdair::BucketList\\_T](#)
- typedef std::map< const MapKey\_T, Bucket \* > [stdair::BucketMap\\_T](#)

### 35.218 BucketTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_BUCKETTYPES_HPP
00003 #define __STDAIR_BOM_BUCKETTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations
00017     class Bucket;
00018
00019     typedef std::list<Bucket*> BucketList_T;
00020
00021     typedef std::map<const MapKey_T, Bucket*> BucketMap_T;
00022
00023
00024 }
00025 #endif // __STDAIR_BOM_BUCKETTYPES_HPP
00026
00027

```

## 35.219 stdair/bom/CancellationStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/bom/CancellationStruct.hpp>
```

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.220 CancellationStruct.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/bom/CancellationStruct.hpp>
00010
00011 namespace stdair {
00012 // //////////////////////////////////////
00013 CancellationStruct::CancellationStruct (const SegmentPath_T& iSegPath,
00014                                         const ClassList_String_T& iList,
00015                                         const PartySize_T& iSize,
00016                                         const DateTime_T& iDateTime)
00017     : _segmentPath (iSegPath), _classList (iList), _partySize (iSize),
00018       _datetime (iDateTime) {
00019 }
00020
00021 // //////////////////////////////////////
00022 CancellationStruct::~CancellationStruct () {
00023 }
00024
00025 // //////////////////////////////////////
00026 void CancellationStruct::toStream (std::ostream& ioOut) const {
00027     ioOut << describe();
00028 }
00029
00030 // //////////////////////////////////////
00031 void CancellationStruct::fromStream (std::istream& ioIn) {
00032 }
00033
00034 // //////////////////////////////////////
00035 const std::string CancellationStruct::describe() const {
00036     std::ostringstream oStr;
00037
00038     oStr << "Segment path: ";
00039     unsigned short idx = 0;
00040     for (SegmentPath_T::const_iterator lItSegmentPath = _segmentPath.begin();
00041          lItSegmentPath != _segmentPath.end(); ++lItSegmentPath, ++idx) {
```

```

00042         if (idx != 0) {
00043             ostr << "-";
00044         }
00045         const std::string& lSegmentKey = *lItSegmentPath;
00046         ostr << lSegmentKey;
00047     }
00048
00049     ostr << ";" << _classList << ";" << _partySize << ";" << _datetime;
00050     return ostr.str();
00051 }
00052
00053 // //////////////////////////////////////
00054 const std::string CancellationStruct::display() const {
00055     std::ostringstream ostr;
00056
00057     // List of segment keys (one per segment)
00058     unsigned short idx = 0;
00059     for (SegmentPath_T::const_iterator itSegPath = _segmentPath.begin();
00060          itSegPath != _segmentPath.end(); ++itSegPath, ++idx) {
00061         if (idx != 0) {
00062             ostr << " ";
00063         }
00064         const std::string& lSegmentKey = *itSegPath;
00065         ostr << "[" << idx << "] " << lSegmentKey;
00066     }
00067
00068     ostr << ";" << _classList << ";" << _partySize << ";" << _datetime;
00069     return ostr.str();
00070 }
00071 }

```

## 35.221 stdair/bom/CancellationStruct.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingClassTypes.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>

```

### Classes

- struct [stdair::CancellationStruct](#)  
Structure holding the elements of a travel solution.

### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.222 CancellationStruct.hpp

```

00001 #ifndef __STDAIR_BOM_CANCELLATIONSTRUCT_HPP
00002 #define __STDAIR_BOM_CANCELLATIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/BookingClassTypes.hpp>
00015 #include <stdair/bom/TravelSolutionTypes.hpp>
00016
00017 namespace stdair {
00018
00022     struct CancellationStruct : public StructAbstract {
00023     public:
00024         // //////////// Getters ////////////
00026         const SegmentPath_T& getSegmentPath() const {
00027             return _segmentPath;
00028         }
00029
00031         const ClassList_String_T& getClassList() const {
00032             return _classList;
00033         }
00034
00036         const PartySize_T& getPartySize() const {
00037             return _partySize;
00038         }
00039
00041         const DateTime_T& getCancellationDateTime() const {
00042             return _datetime;
00043         }
00044
00045     public:
00046         // //////////// Display support method ////////////
00052         void toStream (std::ostream& ioOut) const;
00053
00058         void fromStream (std::istream& ioIn);
00059
00063         const std::string describe() const;
00064
00068         const std::string display() const;
00069
00071     public:
00072         // //////////// Constructors & Destructor ////////////
00076         CancellationStruct (const SegmentPath_T&, const ClassList_String_T&,
00077                             const PartySize_T&, const DateTime_T&);
00078
00082         ~CancellationStruct ();
00083
00084     private:
00085         // //////////// Attributes ////////////
00086         SegmentPath_T _segmentPath;
00091

```

```

00095     ClassList_String_T _classList;
00096
00100     PartySize_T _partySize;
00101
00105     DateTime_T _datetime;
00106 };
00107
00108 }
00109 #endif // __STDAIR_BOM_CANCELLATIONSTRUCT_HPP

```

### 35.223 stdair/bom/CancellationTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

#### Typedefs

- typedef boost::shared\_ptr< CancellationStruct > [stdair::CancellationPtr\\_T](#)

### 35.224 CancellationTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_CANCELLATIONTYPES_HPP
00003 #define __STDAIR_BOM_CANCELLATIONTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013     // Forward declarations
00014     struct CancellationStruct;
00015
00016     // ////////////////////////////////// Type definitions //////////////////////////////////
00018     typedef boost::shared_ptr<CancellationStruct> CancellationPtr_T;
00019
00020 }
00021 #endif // __STDAIR_BOM_CANCELLATIONTYPES_HPP
00022

```

### 35.225 stdair/bom/DatePeriod.cpp File Reference

```

#include <cassert>

#include <sstream>

```

```
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/DatePeriod.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.226 DatePeriod.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/DatePeriod.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 DatePeriod::DatePeriod()
00016 : _key (BOOST_DEFAULT_DATE_PERIOD),
00017   _parent (NULL) {
00018     // That constructor is used by the serialisation process
00019 }
00020
00021 // //////////////////////////////////////
00022 DatePeriod::DatePeriod (const DatePeriod& iDatePeriod)
00023 : _key (iDatePeriod.getKey()), _parent (NULL) {
00024     assert (false);
00025 }
00026
00027 // //////////////////////////////////////
00028 DatePeriod::DatePeriod (const Key_T& iKey)
00029 : _key (iKey), _parent (NULL) {
00030 }
00031
00032 // //////////////////////////////////////
00033 DatePeriod::~DatePeriod () {
00034 }
00035
00036 // //////////////////////////////////////
00037 std::string DatePeriod::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
00040     return oStr.str();
00041 }
00042
00043 // //////////////////////////////////////
00044 bool DatePeriod::
00045 isDepartureDateValid (const Date_T& iFlightDate) const {
```



```

00046
00047     // Check if the departure date is within the date range.
00048     const DatePeriod_T& lPeriod = getDatePeriod ();
00049     if (lPeriod.contains (iFlightDate) == false) {
00050         return false;
00051     }
00052
00053     return true;
00054 }
00055
00056 }
00057

```

### 35.227 stdair/bom/DatePeriod.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/DatePeriodKey.hpp>
#include <stdair/bom/DatePeriodTypes.hpp>

```

#### Classes

- class [stdair::DatePeriod](#)  
Class representing the actual attributes for a fare date-period.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.228 DatePeriod.hpp

```

00001 #ifndef __STDAIR_BOM_DATEPERIOD_HPP
00002 #define __STDAIR_BOM_DATEPERIOD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/DatePeriodKey.hpp>
00010 #include <stdair/bom/DatePeriodTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00015     class DatePeriod : public BomAbstract {
00016     template <typename BOM> friend class FacBom;
00017     friend class FacBomManager;
00018
00019     public:
00020         // ////////////////////////////////// Type definitions //////////////////////////////////
00021         typedef DatePeriodKey Key_T;

```

```

00028
00029 public:
00030     // //////////// Display support methods ////////////
00036     void toStream (std::ostream& ioOut) const {
00037         ioOut << toString();
00038     }
00039
00045     void fromStream (std::istream& ioIn) {
00046     }
00047
00051     std::string toString() const;
00052
00056     const std::string describeKey() const {
00057         return _key.toString();
00058     }
00059
00060 public:
00061     // //////////// Getters ////////////
00065     const Key_T& getKey() const {
00066         return _key;
00067     }
00068
00072     BomAbstract* const getParent() const {
00073         return _parent;
00074     }
00075
00079     const HolderMap_T& getHolderMap() const {
00080         return _holderMap;
00081     }
00082
00086     const DatePeriod_T& getDatePeriod() const {
00087         return _key.getDatePeriod();
00088     }
00089
00090
00091 public:
00092     // //////////// Business methods ////////////
00097     bool isDepartureDateValid (const Date_T&) const;
00098
00099 protected:
00100     // //////////// Constructors and destructors ////////////
00104     DatePeriod (const Key_T&);
00108     virtual ~DatePeriod ();
00109
00110 private:
00114     DatePeriod ();
00118     DatePeriod (const DatePeriod&);
00119
00120 protected:
00121     // //////////// Attributes ////////////
00125     Key_T _key;
00126
00130     BomAbstract* _parent;
00131
00135     HolderMap_T _holderMap;
00136
00137 };
00138
00139 }
00140 #endif // __STDAIR_BOM_DATEPERIOD_HPP
00141

```

## 35.229 stdair/bom/DatePeriodKey.cpp File Reference

```
#include <ostream>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/DatePeriodKey.hpp>
```

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.230 DatePeriodKey.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // Boost Date-Time
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 // STDAIR
00010 #include <stdair/basic/BasConst_Period_BOM.hpp>
00011 #include <stdair/bom/DatePeriodKey.hpp>
00012
00013 namespace stdair {
00014
00015 // //////////////////////////////////////
00016 DatePeriodKey::DatePeriodKey()
00017 : _datePeriod (BOOST_DEFAULT_DATE_PERIOD) {
00018     assert (false);
00019 }
00020
00021 // //////////////////////////////////////
00022 DatePeriodKey::DatePeriodKey (const stdair::DatePeriod_T& iDatePeriod)
00023 : _datePeriod (iDatePeriod) {
00024 }
00025
00026 // //////////////////////////////////////
00027 DatePeriodKey::DatePeriodKey (const DatePeriodKey& iKey)
00028 : _datePeriod (iKey._datePeriod) {
00029 }
00030
00031 // //////////////////////////////////////
00032 DatePeriodKey::~DatePeriodKey () {
00033 }
00034
00035 // //////////////////////////////////////
00036 void DatePeriodKey::toStream (std::ostream& ioOut) const {
00037     ioOut << "DatePeriodKey: " << toString() << std::endl;
00038 }
00039
```

```

00040 // //////////////////////////////////////
00041 void DatePeriodKey::fromStream (std::istream& ioIn) {
00042 }
00043
00044 // //////////////////////////////////////
00045 const std::string DatePeriodKey::toString() const {
00046     std::ostringstream ostr;
00047     const stdair::Date_T lStart = _datePeriod.begin();
00048     const stdair::Date_T lEnd = _datePeriod.end();
00049     ostr << "[" << boost::gregorian::to_simple_string(lStart)
00050         << "/" << boost::gregorian::to_simple_string(lEnd)
00051         << "]";
00052     return ostr.str();
00053 }
00054
00055 }

```

### 35.231 stdair/bom/DatePeriodKey.hpp File Reference

```

#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>

```

#### Classes

- struct [stdair::DatePeriodKey](#)  
*Key of date-period.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.232 DatePeriodKey.hpp

```

00001 #ifndef __SIMFQT_BOM_DATEPERIODKEY_HPP
00002 #define __SIMFQT_BOM_DATEPERIODKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010
00011 namespace stdair {
00014     struct DatePeriodKey : public KeyAbstract {
00015
00016     public:
00017         // ////////////////////////////////// Construction //////////////////////////////////
00019         DatePeriodKey (const DatePeriod_T&);
00021         DatePeriodKey (const DatePeriodKey&);
00023         ~DatePeriodKey ();

```

```

00024
00025     private:
00027         DatePeriodKey();
00028
00029     public:
00030         // //////////// Getters ////////////
00032         const DatePeriod_T& getDatePeriod() const {
00033             return _datePeriod;
00034         }
00035
00036     public:
00037
00038         // //////////// Display support methods ////////////
00044         void toStream (std::ostream& ioOut) const;
00045
00051         void fromStream (std::istream& ioIn);
00052
00058         const std::string toString() const;
00059
00060     private:
00061         // ////////////////////////////////// Attributes //////////////////////////////////
00065         DatePeriod_T _datePeriod;
00066
00067     };
00068
00069 }
00070 #endif // __SIMFQT_BOM_DATEPERIODKEY_HPP

```

### 35.233 stdair/bom/DatePeriodTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef `std::list< DatePeriod * >` `stdair::DatePeriodList_T`
- typedef `std::map< const MapKey_T, DatePeriod * >` `stdair::DatePeriodMap_T`
- typedef `std::pair< MapKey_T, DatePeriod * >` `stdair::DatePeriodWithKey_T`
- typedef `std::list< DatePeriodWithKey_T >` `stdair::DatePeriodDetailedList_T`

### 35.234 DatePeriodTypes.hpp

```

00001 // ////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_DATEPERIODTYPES_HPP
00003 #define __STDAIR_BOM_DATEPERIODTYPES_HPP

```

```

00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class DatePeriod;
00018
00019     typedef std::list<DatePeriod*> DatePeriodList_T;
00020
00021     typedef std::map<const MapKey_T, DatePeriod*> DatePeriodMap_T;
00022
00023     typedef std::pair<MapKey_T, DatePeriod*> DatePeriodWithKey_T;
00024     typedef std::list<DatePeriodWithKey_T> DatePeriodDetailedList_T;
00025 }
00026
00027 #endif // __STDAIR_BOM_DATEPERIODTYPES_HPP
00028
00029
00030

```

### 35.235 stdair/bom/DoWStruct.cpp File Reference

```

#include <sstream>
#include <cassert>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/DoWStruct.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.236 DoWStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 #include <cassert>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/bom/DoWStruct.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     DoWStruct::DoWStruct () {

```

```

00015     for (unsigned short i = 0; i < 7; ++i) {
00016         _dowList.push_back (false);
00017     }
00018 }
00019
00020 // //////////////////////////////////////
00021 DoWStruct::DoWStruct (const std::string& iDowString) {
00022     const unsigned short lDowStringSize = iDowString.size();
00023     assert (lDowStringSize == 7);
00024
00025     _dowList.reserve (lDowStringSize);
00026     for (std::string::const_iterator itChar = iDowString.begin();
00027         itChar != iDowString.end(); ++itChar) {
00028         const bool isDoWSet = (*itChar == '1')?true:false;
00029         _dowList.push_back (isDoWSet);
00030     }
00031 }
00032
00033 // //////////////////////////////////////
00034 DoWStruct::DoWStruct (const DoWStruct& iDowStruct) :
00035     _dowList (iDowStruct._dowList) {
00036 }
00037 }
00038
00039 // //////////////////////////////////////
00040 const std::string DoWStruct::describeShort() const {
00041     std::ostringstream ostr;
00042     short i = 0;
00043     for (BooleanList_T::const_iterator itDoW = _dowList.begin();
00044         itDoW != _dowList.end(); ++itDoW, ++i) {
00045         const char lDoW = (*itDoW == true)?'1':'0';
00046         ostr << lDoW;
00047     }
00048     return ostr.str();
00049 }
00050
00051 // //////////////////////////////////////
00052 const std::string DoWStruct::describe() const {
00053     std::ostringstream ostr;
00054     short i = 0;
00055     for (BooleanList_T::const_iterator itDoW = _dowList.begin();
00056         itDoW != _dowList.end(); ++itDoW, ++i) {
00057         const bool lDoW = *itDoW;
00058         if (lDoW == true) {
00059             ostr << DOW_STR[i] << ".";
00060         }
00061     }
00062     return ostr.str();
00063 }
00064
00065 // //////////////////////////////////////
00066 bool DoWStruct::getDayOfWeek (const unsigned short i) const {
00067     return _dowList.at (i);
00068 }
00069
00070 // //////////////////////////////////////
00071 bool DoWStruct::getStandardDayOfWeek (const unsigned short i) const {
00072     unsigned short iStd = i;
00073     if (iStd == 0) {
00074         iStd = 6;
00075     } else {
00076         --iStd;

```

```

00077     }
00078     return _dowList.at (iStd);
00079 }
00080
00081 // //////////////////////////////////////
00082 void DoWStruct::setDayOfWeek (const unsigned short i, const bool iBool) {
00083     assert (i < 7);
00084     _dowList.at (i) = iBool;
00085 }
00086
00087 // //////////////////////////////////////
00088 DoWStruct DoWStruct::shift (const long& iNbOfDays) const {
00089     DoWStruct oDoW (DEFAULT_DOW_STRING);
00090
00091     for (short i = 0; i < 7; ++i) {
00092         const bool lDoWBool = _dowList.at (i);
00093         short lIndex = (i + iNbOfDays) % 7;
00094         if (lIndex < 0) {
00095             lIndex += 7;
00096         }
00097         oDoW.setDayOfWeek (lIndex, lDoWBool);
00098     }
00099
00100     return oDoW;
00101 }
00102
00103 // //////////////////////////////////////
00104 DoWStruct DoWStruct::intersection (const DoWStruct& iDoW) const {
00105     DoWStruct oDoW (DEFAULT_DOW_STRING);
00106     for (unsigned short i = 0; i < 7; ++i) {
00107         if (getDayOfWeek(i) && iDoW.getDayOfWeek(i)) {
00108             oDoW.setDayOfWeek (i, true);
00109         } else {
00110             oDoW.setDayOfWeek (i, false);
00111         }
00112     }
00113     return oDoW;
00114 }
00115
00116 // //////////////////////////////////////
00117 const bool DoWStruct::isValid () const {
00118     for (unsigned short i = 0; i < 7; ++i) {
00119         if (getDayOfWeek(i)) {
00120             return true;
00121         }
00122     }
00123     return false;
00124 }
00125
00126 }

```

### 35.237 stdair/bom/DoWStruct.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/basic/StructAbstract.hpp>

```



## Classes

- struct [stdair::DoWStruct](#)

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.238 DoWStruct.hpp

```

00001 #ifndef __STDAIR_BOM_DOWSTRUCT_HPP
00002 #define __STDAIR_BOM_DOWSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // STDAIR
00011 #include <stdair/basic/StructAbstract.hpp>
00012
00013 namespace stdair {
00014
00018     struct DoWStruct : public StructAbstract {
00019     public:
00021         typedef std::vector<bool> BooleanList_T;
00022
00023     public:
00024         // ////////////////////////////////// Getters //////////////////////////////////
00026         bool getDayOfWeek (const unsigned short i) const;
00027
00029         bool getStandardDayOfWeek (const unsigned short i) const;
00030
00031     public:
00032         // ////////////////////////////////// Setters //////////////////////////////////
00034         void setDayOfWeek (const unsigned short, const bool);
00035
00036     public:
00037         // ////////////////////////////////// Display methods //////////////////////////////////
00039         const std::string describe() const;
00040
00042         const std::string describeShort() const;
00043
00044     public:
00045         // ////////////////////////////////// Business Methods //////////////////////////////////
00047         DoWStruct shift (const long&) const;
00048
00050         DoWStruct intersection (const DoWStruct&) const;
00051
00053         const bool isValid () const;
00054
00055     public:
00058         DoWStruct (const std::string& iDowString);
00060         DoWStruct ();
00061         DoWStruct (const DoWStruct&);
00063         ~DoWStruct () { }
```

```

00064
00065     private:
00066         BooleanList_T _dowList;
00067     };
00068
00069
00070 }
00071 #endif // __STDAIR_BOM_DOWSTRUCT_HPP

```

### 35.239 stdair/bom/EventQueue.cpp File Reference

```

#include <cassert>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/service/Logger.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.240 EventQueue.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/stdair_exceptions.hpp>
00008 #include <stdair/basic/BasConst_Event.hpp>
00009 #include <stdair/bom/EventStruct.hpp>
00010 #include <stdair/bom/EventQueue.hpp>
00011 #include <stdair/service/Logger.hpp>
00012
00013 namespace stdair {
00014
00015     // //////////////////////////////////////
00016     EventQueue::EventQueue()
00017         : _key (DEFAULT_EVENT_QUEUE_ID), _parent (NULL),
00018           _progressStatus (stdair::DEFAULT_PROGRESS_STATUS,
00019                           stdair::DEFAULT_PROGRESS_STATUS) {
00020     }
00021
00022     // //////////////////////////////////////
00023     EventQueue::EventQueue (const Key_T& iKey)
00024         : _key (iKey), _parent (NULL),
00025           _progressStatus (stdair::DEFAULT_PROGRESS_STATUS,
00026                           stdair::DEFAULT_PROGRESS_STATUS) {
00027     }

```

```

00028
00029 ///////////////////////////////////////////////////////////////////
00030 EventQueue::EventQueue (const EventQueue& iEventQueue)
00031 : _key (DEFAULT_EVENT_QUEUE_ID), _parent (NULL),
00032   _progressStatus (stdair::DEFAULT_PROGRESS_STATUS,
00033                   stdair::DEFAULT_PROGRESS_STATUS) {
00034     assert (false);
00035 }
00036
00037 ///////////////////////////////////////////////////////////////////
00038 EventQueue::~EventQueue () {
00039   _eventList.clear();
00040 }
00041
00042 ///////////////////////////////////////////////////////////////////
00043 std::string EventQueue::toString() const {
00044   std::ostringstream oStr;
00045   oStr << "(" << _eventList.size() << " "
00046         << _progressStatus.getCurrentNb() << "/" << "{"
00047         << _progressStatus.getExpectedNb() << ", "
00048         << _progressStatus.getActualNb() << "}";
00049   return oStr.str();
00050 }
00051
00052 ///////////////////////////////////////////////////////////////////
00053 std::string EventQueue::display() const {
00054   std::ostringstream oStr;
00055
00056   oStr << toString();
00057
00058   return oStr.str();
00059 }
00060
00061 ///////////////////////////////////////////////////////////////////
00062 Count_T EventQueue::getQueueSize() const {
00063   return _eventList.size();
00064 }
00065
00066 ///////////////////////////////////////////////////////////////////
00067 bool EventQueue::isQueueEmpty() const {
00068   return _eventList.empty();
00069 }
00070
00071 ///////////////////////////////////////////////////////////////////
00072 bool EventQueue::isQueueDone() const {
00073   const bool isQueueEmpty = _eventList.empty();
00074   return isQueueEmpty;
00075 }
00076
00077 ///////////////////////////////////////////////////////////////////
00078 void EventQueue::reset () {
00079   // Reset only the current number of events, not the expected one
00080   _progressStatus.reset();
00081
00082   // Empty the list of events
00083   _eventList.clear();
00084
00085   // Reset the progress statuses for all the event types
00086   for (ProgressStatusMap_T::iterator itProgressStatus =
00087        _progressStatusMap.begin();
00088        itProgressStatus != _progressStatusMap.end(); ++itProgressStatus) {
00089     ProgressStatus& lProgressStatus = *itProgressStatus->second;

```

```

00090         lProgressStatus.reset();
00091     }
00092 }
00093 }
00094
00095 // //////////////////////////////////////
00096 const Count_T& EventQueue::
00097 getCurrentNbOfEvents (const EventType::EN_EventType& iType) const {
00098
00099     // Retrieve the ProgressStatus structure corresponding to the
00100     // given event type
00101     ProgressStatusMap_T::const_iterator itProgressStatus =
00102     _progressStatusMap.find (iType);
00103     if (itProgressStatus == _progressStatusMap.end()) {
00104         //
00105         STDAIR_LOG_ERROR ("No ProgressStatus structure can be retrieved in the "
00106             << "EventQueue: " << display());
00107         assert (false);
00108     }
00109
00110     const ProgressStatus& lProgressStatus = itProgressStatus->second;
00111     return lProgressStatus.getCurrentNb();
00112 }
00113
00114 // //////////////////////////////////////
00115 const Count_T& EventQueue::
00116 getExpectedTotalNbOfEvents (const EventType::EN_EventType& iType) const {
00117
00118     // Retrieve the ProgressStatus structure corresponding to the
00119     // given event type
00120     ProgressStatusMap_T::const_iterator itProgressStatus =
00121     _progressStatusMap.find (iType);
00122     if (itProgressStatus == _progressStatusMap.end()) {
00123         std::ostringstream ostr;
00124         ostr << "No ProgressStatus structure can be retrieved in the EventQueue '"
00125             << display() << "'. The EventQueue should be initialised, e.g., by "
00126             << "calling a buildSampleBom() method.";
00127         //
00128         STDAIR_LOG_ERROR (ostr.str());
00129         throw EventQueueException (ostr.str());
00130     }
00131
00132     const ProgressStatus& lProgressStatus = itProgressStatus->second;
00133     return lProgressStatus.getExpectedNb();
00134 }
00135
00136 // //////////////////////////////////////
00137 const Count_T& EventQueue::
00138 getActualTotalNbOfEvents (const EventType::EN_EventType& iType) const {
00139
00140     // Retrieve the ProgressStatus structure corresponding to the
00141     // given event type
00142     ProgressStatusMap_T::const_iterator itProgressStatus =
00143     _progressStatusMap.find (iType);
00144     if (itProgressStatus == _progressStatusMap.end()) {
00145         //
00146         STDAIR_LOG_ERROR ("No ProgressStatus structure can be retrieved in the "
00147             << "EventQueue: " << display());
00148         assert (false);
00149     }
00150
00151     const ProgressStatus& lProgressStatus = itProgressStatus->second;

```

```

00152     return lProgressStatus.getActualNb();
00153 }
00154
00155 // //////////////////////////////////////
00156 void EventQueue::updateStatus (const EventType::EN_EventType& iType,
00157                               const ProgressStatus& iProgressStatus) {
00158
00159     // Retrieve, if existing, the ProgressStatus structure
00160     // corresponding to the given event type
00161     ProgressStatusMap_T::iterator itProgressStatus =
00162         _progressStatusMap.find (iType);
00163     if (itProgressStatus == _progressStatusMap.end()) {
00164         const bool hasInsertBeenSuccessful =
00165             _progressStatusMap.insert (ProgressStatusMap_T::
00166                                     value_type (iType, iProgressStatus)).second;
00167
00168         if (hasInsertBeenSuccessful == false) {
00169             STDAIR_LOG_ERROR ("No progress_status can be inserted "
00170                             "<< "for the following event type: "
00171                             "<< EventType::getLabel(iType)
00172                             "<< ". EventQueue: " << toString());
00173             throw EventException ("No progress_status can be inserted for the "
00174                                 "following event type: "
00175                                 + EventType::getLabel(iType)
00176                                 + ". EventQueue: " + toString());
00177         }
00178     }
00179     return;
00180 }
00181
00182 ProgressStatus& lProgressStatus = itProgressStatus->second;
00183
00184 // Update the progress status
00185 const Count_T& lCurrentNb = iProgressStatus.getCurrentNb();
00186 lProgressStatus.setCurrentNb (lCurrentNb);
00187
00188 const Count_T& lExpectedNb = iProgressStatus.getExpectedNb();
00189 lProgressStatus.setExpectedNb(lProgressStatus.getExpectedNb() + lExpectedNb);
00190
00191 const Count_T& lActualNb = iProgressStatus.getActualNb();
00192 lProgressStatus.setActualNb (lProgressStatus.getActualNb() + lActualNb);
00193 }
00194
00195 // //////////////////////////////////////
00196 void EventQueue::
00197 addStatus (const EventType::EN_EventType& iType,
00198           const NbOfEvents_T& iExpectedTotalNbOfEvents) {
00199
00200     // Initialise the progress status object
00201     const Count_T lExpectedTotalNbOfEventsInt =
00202         static_cast<const Count_T> (std::floor (iExpectedTotalNbOfEvents));
00203     const ProgressStatus lProgressStatus (lExpectedTotalNbOfEventsInt);
00204
00205     // Update the progress status for the given event type
00206     updateStatus (iType, lProgressStatus);
00207
00208     // Update the overall progress status
00209     const Count_T lExpectedNb =
00210         static_cast<const Count_T> (_progressStatus.getExpectedNb()
00211                                     + iExpectedTotalNbOfEvents);
00212     _progressStatus.setExpectedNb (lExpectedNb);

```

```

00213
00214     const Count_T lActualNb =
00215         static_cast<const Count_T> (_progressStatus.getActualNb()
00216                                     + iExpectedTotalNbOfEvents);
00217     _progressStatus.setActualNb (lActualNb);
00218 }
00219
00220 // //////////////////////////////////////
00221 void EventQueue::updateStatus (const EventType::EN_EventType& iType,
00222                               const NbOfEvents_T& iActualNbOfEvents) {
00223
00224     // Initialise the progress status object for the type key
00225     Count_T lActualNbOfEventsInt =
00226         static_cast<const Count_T> (std::floor (iActualNbOfEvents));
00227
00228     // Update the progress status for the corresponding content type key
00229     ProgressStatusMap_T::iterator itProgressStatus =
00230         _progressStatusMap.find (iType);
00231     if (itProgressStatus != _progressStatusMap.end()) {
00232         ProgressStatus& lProgressStatus = itProgressStatus->second;
00233         //
00234         lActualNbOfEventsInt += lProgressStatus.getActualNb();
00235         //
00236         lProgressStatus.setActualNb (lActualNbOfEventsInt);
00237     }
00238 }
00239
00240 // //////////////////////////////////////
00241 void EventQueue::setStatus (const EventType::EN_EventType& iType,
00242                             const ProgressStatus& iProgressStatus) {
00243
00244     // Retrieve the ProgressStatus structure corresponding to the
00245     // given event type
00246     ProgressStatusMap_T::iterator itProgressStatus =
00247         _progressStatusMap.find (iType);
00248     // assert (itProgressStatus != _progressStatusMap.end());
00249     if (itProgressStatus != _progressStatusMap.end()) {
00250         // Update the ProgressStatus structure
00251         itProgressStatus->second = iProgressStatus;
00252     }
00253 }
00254
00255 // //////////////////////////////////////
00256 ProgressStatus EventQueue::
00257 getStatus (const EventType::EN_EventType& iType) const {
00258
00259     // Retrieve the ProgressStatus structure corresponding to the
00260     // given event type
00261     ProgressStatusMap_T::const_iterator itProgressStatus =
00262         _progressStatusMap.find (iType);
00263     if (itProgressStatus != _progressStatusMap.end()) {
00264         const ProgressStatus& oProgressStatus = itProgressStatus->second;
00265         return oProgressStatus;
00266     }
00267
00268     return ProgressStatus();
00269 }
00270
00271 // //////////////////////////////////////
00272 ProgressPercentage_T EventQueue::
00273 calculateProgress (const EventType::EN_EventType& iType) const {
00274

```

```

00275     // Retrieve the ProgressStatus structure corresponding to the
00276     // given event type
00277     ProgressStatusMap_T::const_iterator itProgressStatus =
00278     _progressStatusMap.find (iType);
00279     if (itProgressStatus == _progressStatusMap.end()) {
00280         //
00281         STDAIR_LOG_ERROR ("No ProgressStatus structure can be retrieved in the "
00282             << "EventQueue: " << display());
00283         assert (false);
00284     }
00285
00286     const ProgressStatus& lProgressStatus = itProgressStatus->second;
00287     return lProgressStatus.progress();
00288 }
00289
00290 // //////////////////////////////////////
00291 ProgressStatusSet EventQueue::popEvent (EventStruct& ioEventStruct) {
00292     assert (_eventList.empty() == false);
00293
00294     // Get an iterator on the first event (sorted by date-time stamps)
00295     EventList_T::iterator itEvent = _eventList.begin();
00296
00297     ioEventStruct = itEvent->second;
00298     // Retrieve the event type
00299     const EventType::EN_EventType& lEventType = ioEventStruct.getEventType();
00300     ProgressStatusSet oProgressStatusSet (lEventType);
00301
00302     // Update the (current number part of the) overall progress status,
00303     // to account for the event that is being popped out of the event
00304     // queue.
00305     ++_progressStatus;
00306
00307     // Remove the event, which has just been retrieved
00308     _eventList.erase (itEvent);
00309
00310     // Retrieve the progress status specific to that event type
00311     ProgressStatus lEventTypeProgressStatus = getStatus (lEventType);
00312
00313     // Increase the current number of events
00314     ++lEventTypeProgressStatus;
00315
00316     // Store back the progress status
00317     setStatus (lEventType, lEventTypeProgressStatus);
00318
00319     // Update the progress status of the progress status set, specific to
00320     // the event type.
00321     oProgressStatusSet.setTypeSpecificStatus (lEventTypeProgressStatus);
00322
00323     // Update the overall progress status of the progress status set.
00324     oProgressStatusSet.setOverallStatus (_progressStatus);
00325
00326     //
00327     return oProgressStatusSet;
00328 }
00329
00330 // //////////////////////////////////////
00331 bool EventQueue::addEvent (EventStruct& ioEventStruct) {
00332     bool insertionSucceeded =
00333         _eventList.insert (EventListElement_T (ioEventStruct._eventTimeStamp,
00334             ioEventStruct)).second;
00335 }

```

```

00368     const unsigned int idx = 0;
00369     while (insertionSucceeded == false && idx != 1e3) {
00370         // Retrieve the date-time stamp (expressed in milliseconds)
00371         LongDuration_T& lEventTimeStamp (ioEventStruct._eventTimeStamp);
00372         ++lEventTimeStamp;
00373
00374         // Retry to insert into the event queue
00375         insertionSucceeded =
00376             _eventList.insert (EventListElement_T (ioEventStruct._eventTimeStamp,
00377                                                    ioEventStruct)).second;
00378     }
00379     assert (idx != 1e3);
00380
00381     return insertionSucceeded;
00382 }
00383
00384 }
```

### 35.241 stdair/bom/EventQueue.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/ProgressStatusSet.hpp>
#include <stdair/basic/EventType.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/EventQueueKey.hpp>
#include <stdair/bom/EventQueueTypes.hpp>
#include <stdair/bom/EventTypes.hpp>
```

#### Classes

- class [stdair::EventQueue](#)  
*Class holding event structures.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.242 EventQueue.hpp

```

00001 #ifndef __STDAIR_BOM_EVENTQUEUE_HPP
00002 #define __STDAIR_BOM_EVENTQUEUE_HPP
00003
00004 // //////////////////////////////////////
```



```

00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/basic/ProgressStatusSet.hpp>
00013 #include <stdair/basic/EventType.hpp>
00014 #include <stdair/bom/BomAbstract.hpp>
00015 #include <stdair/bom/EventQueueKey.hpp>
00016 #include <stdair/bom/EventQueueTypes.hpp>
00017 #include <stdair/bom/EventTypes.hpp>
00018
00019 namespace stdair {
00020
00059     class EventQueue : public BomAbstract {
00060     template <typename BOM> friend class FacBom;
00061     friend class FacBomManager;
00062
00063     public:
00064         // ////////// Type definitions //////////
00068         typedef EventQueueKey Key_T;
00069
00075         typedef std::map<EventType::EN_EventType,
00076             ProgressStatus> ProgressStatusMap_T;
00077
00078
00079     public:
00080         // ////////// Getters //////////
00082         const Key_T& getKey() const {
00083             return _key;
00084         }
00085
00087         BomAbstract* const getParent() const {
00088             return _parent;
00089         }
00090
00092         const HolderMap_T& getHolderMap() const {
00093             return _holderMap;
00094         }
00095
00097         const ProgressStatus& getStatus() const {
00098             return _progressStatus;
00099         }
00101         const Count_T& getCurrentNbOfEvents() const {
00102             return _progressStatus.getCurrentNb();
00103         }
00105         const Count_T& getExpectedTotalNbOfEvents() const {
00106             return _progressStatus.getExpectedNb();
00107         }
00109         const Count_T& getActualTotalNbOfEvents() const {
00110             return _progressStatus.getActualNb();
00111         }
00112
00117         ProgressStatus getStatus (const EventType::EN_EventType&) const;
00118
00120         const Count_T& getCurrentNbOfEvents (const EventType::EN_EventType&) const;
00121
00123         const Count_T& getExpectedTotalNbOfEvents (const EventType::EN_EventType&) co
00124         nst;

```

```

00126     const Count_T& getActualTotalNbOfEvents (const EventType::EN_EventType&) cons
00127     t;
00128 public:
00129     // //////////// Setters ////////////
00131     void setStatus (const ProgressStatus& iProgressStatus) {
00132         _progressStatus = iProgressStatus;
00133     }
00135     void setStatus (const Count_T& iCurrentNbOfEvents,
00136                     const Count_T& iExpectedTotalNbOfEvents,
00137                     const Count_T& iActualTotalNbOfEvents) {
00138         _progressStatus.setCurrentNb (iCurrentNbOfEvents);
00139         _progressStatus.setExpectedNb (iExpectedTotalNbOfEvents);
00140         _progressStatus.setActualNb (iActualTotalNbOfEvents);
00141     }
00143     void setStatus (const Count_T& iCurrentNbOfEvents,
00144                     const Count_T& iActualTotalNbOfEvents) {
00145         _progressStatus.setCurrentNb (iCurrentNbOfEvents);
00146         _progressStatus.setActualNb (iActualTotalNbOfEvents);
00147     }
00149     void setCurrentNbOfEvents (const Count_T& iCurrentNbOfEvents) {
00150         _progressStatus.setCurrentNb (iCurrentNbOfEvents);
00151     }
00153     void setExpectedTotalNbOfEvents (const Count_T& iExpectedTotalNbOfEvents) {
00154         _progressStatus.setExpectedNb (iExpectedTotalNbOfEvents);
00155     }
00157     void setActualTotalNbOfEvents (const Count_T& iActualTotalNbOfEvents) {
00158         _progressStatus.setActualNb (iActualTotalNbOfEvents);
00159     }
00160
00165     void setStatus (const EventType::EN_EventType& iType,
00166                     const ProgressStatus& iProgressStatus);
00167
00168 public:
00169     // //////////// Display support methods ////////////
00176     void toStream (std::ostream& ioOut) const {
00177         ioOut << toString();
00178     }
00179
00185     void fromStream (std::istream& ioIn) {
00186     }
00187
00191     std::string toString() const;
00192
00196     const std::string describeKey() const {
00197         return _key.toString();
00198     }
00199
00200     /*
00201     * Display the full content of the event queue, with all its
00202     * demand streams.
00203     *
00204     * That method can be very consuming (in time, CPU and memory)
00205     * when there are a lot of demand streams (e.g., several hundreds
00206     * of thousands). Call it only for debug purposes.
00207     */
00208     std::string display() const;
00209
00210 public:
00212     // //////////// Business methods ////////////

```

```

00217     void reset();
00218
00232         ProgressStatusSet popEvent (EventStruct&);
00233
00254     bool addEvent (EventStruct&);
00255
00261     bool isQueueDone() const;
00262
00276     void addStatus (const EventType::EN_EventType&,
00277                     const NbOfRequests_T& iExpectedTotalNbOfEvents);
00278
00287     void updateStatus (const EventType::EN_EventType&,
00288                        const ProgressStatus& iProgressStatus);
00289
00303     void updateStatus (const EventType::EN_EventType&,
00304                        const NbOfEvents_T& iActualTotalNbOfEvents);
00305
00316     ProgressPercentage_T calculateProgress() const {
00317         return _progressStatus.progress();
00318     }
00319
00330     ProgressPercentage_T calculateProgress(const EventType::EN_EventType&)const;
00331
00332
00333 public:
00334     // //////////// Debug methods ////////////
00336     Count_T getQueueSize() const;
00337
00339     bool isQueueEmpty() const;
00340
00341
00342 protected:
00343     // //////////// Constructors and destructors ////////////
00345     EventQueue (const Key_T&);
00347     EventQueue (const EventQueue&);
00349     ~EventQueue();
00350 private:
00352     EventQueue();
00353
00354
00355 protected:
00356     // //////////// Attributes ////////////
00360     Key_T _key;
00361
00365     BomAbstract* _parent;
00366
00372     HolderMap_T _holderMap;
00373
00377     EventList_T _eventList;
00378
00382     ProgressStatus _progressStatus;
00383
00389     ProgressStatusMap_T _progressStatusMap;
00390 };
00391
00392 }
00393 #endif // __STDAIR_BOM_EVENTQUEUE_HPP

```

## 35.243 stdair/bom/EventQueueKey.cpp File Reference

```
#include <sstream>
#include <stdair/bom/EventQueueKey.hpp>
```

## Namespaces

- namespace `stdair`  
Handle on the `StdAir` library context.

## 35.244 EventQueueKey.cpp

```
00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 // Import section
00003 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 // StdAir
00007 #include <stdair/bom/EventQueueKey.hpp>
00008
00009 namespace stdair {
00010
00011 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00012 EventQueueKey::EventQueueKey (const EventQueueID_T& iEventQueueID)
00013 : _eventQueueID (iEventQueueID) {
00014 }
00015 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00016 EventQueueKey::EventQueueKey (const EventQueueKey& iKey)
00017 : _eventQueueID (iKey._eventQueueID) {
00018 }
00019
00020 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00021 EventQueueKey::~EventQueueKey () {
00022 }
00023
00024 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00025 void EventQueueKey::toStream (std::ostream& ioOut) const {
00026     ioOut << "EventQueueKey: " << toString() << std::endl;
00027 }
00028
00029 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00030 void EventQueueKey::fromStream (std::istream& ioIn) {
00031 }
00032
00033 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00034 const std::string EventQueueKey::toString() const {
00035     std::ostringstream oStr;
00036     oStr << _eventQueueID;
00037     return oStr.str();
00038 }
00039
00040 }
```

**35.245 stdair/bom/EventQueueKey.hpp File Reference**

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

**Classes**

- struct [stdair::EventQueueKey](#)

**Namespaces**

- namespace [stdair](#)  
Handle on the StdAir library context.

**35.246 EventQueueKey.hpp**

```
00001 #ifndef __STDAIR_BOM_EVENTQUEUEKEY_HPP
00002 #define __STDAIR_BOM_EVENTQUEUEKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/stdair_event_types.hpp>
00010 #include <stdair/bom/KeyAbstract.hpp>
00011
00012 namespace stdair {
00013
00015     struct EventQueueKey : public KeyAbstract {
00016
00017     private:
00018         // ////////////////////////////////// Default constructor //////////////////////////////////
00019         EventQueueKey () { }
00020
00021     public:
00022         // ////////////////////////////////// Construction //////////////////////////////////
00024         EventQueueKey (const EventQueueID_T&);
00025         EventQueueKey (const EventQueueKey&);
00027         ~EventQueueKey ();
00028
00029         // ////////////////////////////////// Getters //////////////////////////////////
00031         const EventQueueID_T& getEventQueueID() const {
00032             return _eventQueueID;
00033         }
00034
00035         // ////////////////////////////////// Display support methods //////////////////////////////////
00038         void toStream (std::ostream& ioOut) const;
00039
00042         void fromStream (std::istream& ioIn);
00043
00049         const std::string toString() const;
00050
```

```

00051
00052     private:
00053         // ////////// Attributes //////////
00054         EventQueueID_T _eventQueueID;
00055     };
00056
00057 }
00058
00059 #endif // __STDAIR_BOM_EVENTQUEUEKEY_HPP

```

### 35.247 stdair/bom/EventQueueTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< EventQueue \* > [stdair::EventQueueList\\_T](#)
- typedef std::map< const MapKey\_T, EventQueue \* > [stdair::EventQueueMap\\_T](#)

### 35.248 EventQueueTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_EVENTQUEUETYPES_HPP
00003 #define __STDAIR_BOM_EVENTQUEUETYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // Stdair
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class EventQueue;
00018
00019     typedef std::list<EventQueue*> EventQueueList_T;
00020
00021     typedef std::map<const MapKey_T, EventQueue*> EventQueueMap_T;
00022
00023 }
00024
00025 #endif // __STDAIR_BOM_EVENTQUEUETYPES_HPP

```

**35.249 stdair/bom/EventStruct.cpp File Reference**

```

#include <cassert>
#include <boost/shared_ptr.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Event.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/OptimisationNotificationStruct.hpp>
#include <stdair/bom/SnapshotStruct.hpp>
#include <stdair/bom/CancellationStruct.hpp>
#include <stdair/bom/RMEventStruct.hpp>
#include <stdair/bom/EventStruct.hpp>

```

**Namespaces**

- namespace [stdair](#)

*Handle on the StdAir library context.*

**35.250 EventStruct.cpp**

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // Boost
00007 #if BOOST_VERSION >= 103900
00008 #include <boost/make_shared.hpp>
00009 #else // BOOST_VERSION >= 103900
00010 #include <boost/shared_ptr.hpp>
00011 #endif // BOOST_VERSION >= 103900
00012 // StdAir
00013 #include <stdair/basic/BasConst_General.hpp>
00014 #include <stdair/basic/BasConst_Event.hpp>
00015 #include <stdair/bom/BookingRequestStruct.hpp>
00016 #include <stdair/bom/OptimisationNotificationStruct.hpp>
00017 #include <stdair/bom/SnapshotStruct.hpp>
00018 #include <stdair/bom/CancellationStruct.hpp>
00019 #include <stdair/bom/RMEventStruct.hpp>
00020 #include <stdair/bom/EventStruct.hpp>
00021
00022 namespace stdair {
00023
00024 // //////////////////////////////////////
00025 EventStruct::EventStruct()
00026     : _eventType (EventType::BKG_REQ), _eventTimeStamp (0) {
00027 }
00028
00029 // //////////////////////////////////////
00030 EventStruct::EventStruct (const EventType::EN_EventType& iEventType,

```

```

00031         BookingRequestPtr_T ioRequestPtr)
00032     : _eventType (iEventType) {
00033     //
00034     assert (ioRequestPtr != NULL);
00035     #if BOOST_VERSION >= 103900
00036         _bookingRequest = boost::make_shared<BookingRequestStruct> (*ioRequestPtr);
00037     #else // BOOST_VERSION >= 103900
00038         _bookingRequest = ioRequestPtr;
00039     #endif // BOOST_VERSION >= 103900
00040     assert (_bookingRequest != NULL);
00041
00042
00043     const Duration_T lDuration =
00044         _bookingRequest->getRequestDateTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00045     _eventTimeStamp = lDuration.total_milliseconds();
00046 }
00047
00048 // //////////////////////////////////////
00049 EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
00050     CancellationPtr_T ioCancellationPtr)
00051     : _eventType (iEventType) {
00052     //
00053     assert (ioCancellationPtr != NULL);
00054     #if BOOST_VERSION >= 103900
00055         _cancellation = boost::make_shared<CancellationStruct> (*ioCancellationPtr);
00056     #else // BOOST_VERSION >= 103900
00057         _cancellation = ioCancellationPtr;
00058     #endif // BOOST_VERSION >= 103900
00059     assert (_cancellation != NULL);
00060
00061     const Duration_T lDuration =
00062         _cancellation->getCancellationDateTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00063     _eventTimeStamp = lDuration.total_milliseconds();
00064 }
00065
00066 // //////////////////////////////////////
00067 EventStruct::
00068 EventStruct (const EventType::EN_EventType& iEventType,
00069     const DateTime_T& iDCPDate,
00070     OptimisationNotificationPtr_T ioOptimisationNotificationPtr)
00071     : _eventType (iEventType) {
00072     //
00073     assert (ioOptimisationNotificationPtr != NULL);
00074     #if BOOST_VERSION >= 103900
00075         _optimisationNotification =
00076             boost::make_shared<OptimisationNotificationStruct> (*ioOptimisationNotifica
00077 tionPtr);
00078     #else // BOOST_VERSION >= 103900
00079         _optimisationNotification = ioOptimisationNotificationPtr;
00080     #endif // BOOST_VERSION >= 103900
00081     assert (_optimisationNotification != NULL);
00082
00083     const Duration_T lDuration = iDCPDate - DEFAULT_EVENT_OLDEST_DATETIME;
00084     _eventTimeStamp = lDuration.total_milliseconds();
00085 }
00086
00087 // //////////////////////////////////////
00088 EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
00089     SnapshotPtr_T ioSnapshotPtr)
00090     : _eventType (iEventType) {

```



```

00107
00108     //
00109     assert (ioSnapshotPtr != NULL);
00110
00111     #if BOOST_VERSION >= 103900
00112         _snapshot = boost::make_shared<SnapshotStruct> (*ioSnapshotPtr);
00113     #else // BOOST_VERSION >= 103900
00114         _snapshot = ioSnapshotPtr;
00115     #endif // BOOST_VERSION >= 103900
00116     assert (_snapshot != NULL);
00117
00123     const Duration_T lDuration =
00124         _snapshot->getSnapshotTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00125     _eventTimeStamp = lDuration.total_milliseconds();
00126 }
00127
00128 // //////////////////////////////////////
00129 EventStruct::EventStruct (const EventType::EN_EventType& iEventType,
00130                          RMEventPtr_T ioRMEventPtr)
00131 : _eventType (iEventType) {
00132
00133     //
00134     assert (ioRMEventPtr != NULL);
00135
00136     #if BOOST_VERSION >= 103900
00137         _rmEvent = boost::make_shared<RMEventStruct> (*ioRMEventPtr);
00138     #else // BOOST_VERSION >= 103900
00139         _rmEvent = ioRMEventPtr;
00140     #endif // BOOST_VERSION >= 103900
00141     assert (_rmEvent != NULL);
00142
00148     const Duration_T lDuration =
00149         _rmEvent->getRMEventTime() - DEFAULT_EVENT_OLDEST_DATETIME;
00150     _eventTimeStamp = lDuration.total_milliseconds();
00151 }
00152
00153 // //////////////////////////////////////
00154 EventStruct::EventStruct (const EventStruct& iEventStruct)
00155 : _eventType (iEventStruct._eventType),
00156   _eventTimeStamp (iEventStruct._eventTimeStamp) {
00157
00158     //
00159     if (iEventStruct._bookingRequest != NULL) {
00160     #if BOOST_VERSION >= 103900
00161         _bookingRequest =
00162             boost::make_shared<BookingRequestStruct> (*iEventStruct._bookingRequest);
00163     #else // BOOST_VERSION >= 103900
00164         _bookingRequest = iEventStruct._bookingRequest;
00165     #endif // BOOST_VERSION >= 103900
00166     }
00167
00168     //
00169     if (iEventStruct._cancellation != NULL) {
00170     #if BOOST_VERSION >= 103900
00171         _cancellation =
00172             boost::make_shared<CancellationStruct> (*iEventStruct._cancellation);
00173     #else // BOOST_VERSION >= 103900
00174         _cancellation = iEventStruct._cancellation;
00175     #endif // BOOST_VERSION >= 103900
00176     }
00177
00178     //

```

```

00179     if (iEventStruct._optimisationNotification != NULL) {
00180 #if BOOST_VERSION >= 103900
00181         _optimisationNotification =
00182             boost::make_shared<OptimisationNotificationStruct> (*iEventStruct._optimi
sationNotification);
00183 #else // BOOST_VERSION >= 103900
00184         _optimisationNotification = iEventStruct._optimisationNotification;
00185 #endif // BOOST_VERSION >= 103900
00186     }
00187
00188     //
00189     if (iEventStruct._snapshot != NULL) {
00190 #if BOOST_VERSION >= 103900
00191         _snapshot = boost::make_shared<SnapshotStruct> (*iEventStruct._snapshot);
00192 #else // BOOST_VERSION >= 103900
00193         _snapshot = iEventStruct._snapshot;
00194 #endif // BOOST_VERSION >= 103900
00195     }
00196
00197     //
00198     if (iEventStruct._rmEvent != NULL) {
00199 #if BOOST_VERSION >= 103900
00200         _rmEvent = boost::make_shared<RmEventStruct> (*iEventStruct._rmEvent);
00201 #else // BOOST_VERSION >= 103900
00202         _rmEvent = iEventStruct._rmEvent;
00203 #endif // BOOST_VERSION >= 103900
00204     }
00205 }
00206
00207 // //////////////////////////////////////
00208 EventStruct::~EventStruct() {
00209 }
00210
00211 // //////////////////////////////////////
00212 void EventStruct::fromStream (std::istream& ioIn) {
00213 }
00214
00215 // //////////////////////////////////////
00216 const std::string EventStruct::describe() const {
00217     std::ostringstream oStr;
00218
00219     //
00220     const Duration_T lEventDateTimeDelta =
00221         boost::posix_time::milliseconds (_eventTimeStamp);
00222     const DateTime_T lEventDateTime (DEFAULT_EVENT_OLDEST_DATETIME
+ lEventDateTimeDelta);
00223     oStr << lEventDateTime;
00224
00225     //
00226     switch (_eventType) {
00227     case EventType::BKG_REQ: {
00228         assert (_bookingRequest != NULL);
00229         oStr << ", " << _eventType << ", " << _bookingRequest->describe();
00230         break;
00231     }
00232     case EventType::CX: {
00233         assert (_cancellation != NULL);
00234         oStr << ", " << _eventType << ", " << _cancellation->describe();
00235         break;
00236     }
00237     case EventType::OPT_NOT_4_FD: {
00238         assert (_optimisationNotification != NULL);

```

```

00240         oStr << ", " << _eventType
00241             << ", " << _optimisationNotification->describe();
00242         break;
00243     }
00244     case EventType::SNAPSHOT: {
00245         assert (_snapshot != NULL);
00246         oStr << ", " << _eventType
00247             << ", " << _snapshot->describe();
00248         break;
00249     }
00250     case EventType::RM: {
00251         assert (_rmEvent != NULL);
00252         oStr << ", " << _eventType
00253             << ", " << _rmEvent->describe();
00254         break;
00255     }
00256     default: {
00257         oStr << ", " << _eventType << " (not yet recognised)";
00258         break;
00259     }
00260 }
00261
00262 return oStr.str();
00263 }
00264
00265 }

```

### 35.251 stdair/bom/EventStruct.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/basic/EventType.hpp>
#include <stdair/bom/EventTypes.hpp>
#include <stdair/bom/BookingRequestTypes.hpp>
#include <stdair/bom/OptimisationNotificationTypes.hpp>
#include <stdair/bom/SnapshotTypes.hpp>
#include <stdair/bom/CancellationTypes.hpp>
#include <stdair/bom/RMEventTypes.hpp>

```

#### Classes

- struct [stdair::EventStruct](#)

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.252 EventStruct.hpp

```

00001 #ifndef __STDAIR_BAS_EVENTSTRUCT_HPP
00002 #define __STDAIR_BAS_EVENTSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_date_time_types.hpp>
00013 #include <stdair/stdair_event_types.hpp>
00014 #include <stdair/basic/StructAbstract.hpp>
00015 #include <stdair/basic/EventType.hpp>
00016 #include <stdair/bom/EventTypes.hpp>
00017 #include <stdair/bom/BookingRequestTypes.hpp>
00018 #include <stdair/bom/OptimisationNotificationTypes.hpp>
00019 #include <stdair/bom/SnapshotTypes.hpp>
00020 #include <stdair/bom/CancellationTypes.hpp>
00021 #include <stdair/bom/RMEventTypes.hpp>
00022
00023 namespace stdair {
00024
00035     struct EventStruct : public StructAbstract {
00036         // Friend classes and structures
00037         friend struct EventQueue;
00038
00039         // ////////////////////////////////// Getters //////////////////////////////////
00040     public:
00042         const EventType::EN_EventType& getEventType() const {
00043             return _eventType;
00044         }
00045
00052         const BookingRequestStruct& getBookingRequest() const {
00053             assert (_bookingRequest != NULL);
00054             return *_bookingRequest;
00055         }
00056
00063         const CancellationStruct& getCancellation() const {
00064             assert (_cancellation != NULL);
00065             return *_cancellation;
00066         }
00067
00075         const OptimisationNotificationStruct&
00076         getOptimisationNotificationStruct() const {
00077             assert (_optimisationNotification != NULL);
00078             return *_optimisationNotification;
00079         }
00080
00088         const SnapshotStruct& getSnapshotStruct() const {
00089             assert (_snapshot != NULL);
00090             return *_snapshot;

```

```

00091     }
00092
00100     const RMEventStruct& getRMEvent() const {
00101         assert (_rmEvent != NULL);
00102         return *_rmEvent;
00103     }
00104
00105     // /////////// Display methods ///////////
00106 public:
00109     void fromStream (std::istream& ioIn);
00110
00112     const std::string describe() const;
00113
00114
00115     // /////////// Constructors and destructors ///////////
00116 public:
00118     EventStruct();
00120     EventStruct (const EventType::EN_EventType&, BookingRequestPtr_T);
00122     EventStruct (const EventType::EN_EventType&, CancellationPtr_T);
00124     EventStruct (const EventType::EN_EventType&, const DateTime_T& iDCPDate,
00125                 OptimisationNotificationPtr_T);
00127     EventStruct (const EventType::EN_EventType&, SnapshotPtr_T);
00129     EventStruct (const EventType::EN_EventType&, RMEventPtr_T);
00131     EventStruct (const EventStruct&);
00132
00134     ~EventStruct();
00135
00136
00137     // ////////////////////////////////// Attributes //////////////////////////////////
00138 private:
00142     EventType::EN_EventType _eventType;
00143
00149     LongDuration_T _eventTimeStamp;
00150
00154     BookingRequestPtr_T _bookingRequest;
00155
00159     CancellationPtr_T _cancellation;
00160
00164     OptimisationNotificationPtr_T _optimisationNotification;
00165
00169     SnapshotPtr_T _snapshot;
00170
00174     RMEventPtr_T _rmEvent;
00175 };
00176
00177 }
00178 #endif // __STDAIR_BAS_EVENTSTRUCT_HPP

```

### 35.253 stdair/bom/EventTypes.hpp File Reference

```

#include <map>

#include <boost/shared_ptr.hpp>

#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_event_types.hpp>
#include <stdair/basic/ProgressStatus.hpp>

```

```
#include <stdair/bom/key_types.hpp>
```

#### Namespaces

- namespace `stdair`  
Handle on the `StdAir` library context.

#### Typedefs

- typedef `std::pair< const LongDuration_T, EventStruct >` `stdair::EventListElement_T`
- typedef `std::map< const LongDuration_T, EventStruct >` `stdair::EventList_T`

### 35.254 EventTypes.hpp

```
00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_EVENTTYPES_HPP
00003 #define __STDAIR_BOM_EVENTTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 // Boost Smart Pointers
00011 #include <boost/shared_ptr.hpp>
00012 // StdAir
00013 #include <stdair/stdair_basic_types.hpp>
00014 #include <stdair/stdair_date_time_types.hpp>
00015 #include <stdair/stdair_event_types.hpp>
00016 #include <stdair/basic/ProgressStatus.hpp>
00017 #include <stdair/bom/key_types.hpp>
00018
00019 namespace stdair {
00020
00022     struct EventStruct;
00023
00027     typedef std::pair<const LongDuration_T, EventStruct> EventListElement_T;
00028
00032     typedef std::map<const LongDuration_T, EventStruct> EventList_T;
00033 }
00034 #endif // __STDAIR_BOM_EVENTTYPES_HPP
00035
```

### 35.255 stdair/bom/FareFamily.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
```

```
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/FareFamily.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.256 FareFamily.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/FareFamily.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 FareFamily::FareFamily() : _key (DEFAULT_FARE_FAMILY_CODE), _parent (NULL) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 FareFamily::FareFamily (const FareFamily&
00024     : _key (DEFAULT_FARE_FAMILY_CODE), _parent (NULL) {
00025     assert (false);
00026 }
00027
00028 // //////////////////////////////////////
00029 FareFamily::FareFamily (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00030 }
00031
00032 // //////////////////////////////////////
00033 FareFamily::~FareFamily() {
00034 }
00035
00036 // //////////////////////////////////////
00037 std::string FareFamily::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
00040     return oStr.str();
00041 }
00042
00043 // //////////////////////////////////////
00044 void FareFamily::serialisationImplementationExport() const {
00045     std::ostringstream oStr;
```

```

00046     boost::archive::text_oarchive oa (oStr);
00047     oa << *this;
00048 }
00049
00050 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00051 void FareFamily::serialisationImplementationImport() {
00052     std::istream iStr;
00053     boost::archive::text_iarchive ia (iStr);
00054     ia >> *this;
00055 }
00056
00057 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00058 template<class Archive>
00059 void FareFamily::serialize (Archive& ioArchive,
00060                             const unsigned int iFileVersion) {
00061     ioArchive & _key;
00062 }
00063
00064 }
00065
00066

```

### 35.257 stdair/bom/FareFamily.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FareFamilyKey.hpp>
#include <stdair/bom/FareFamilyTypes.hpp>

```

#### Classes

- class [stdair::FareFamily](#)  
Class representing the actual attributes for a family fare.

#### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.258 FareFamily.hpp

```

00001 #ifndef __STDAIR_BOM_FAREFAMILY_HPP
00002 #define __STDAIR_BOM_FAREFAMILY_HPP
00003
00004 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

```



```

00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/FareFamilyKey.hpp>
00013 #include <stdair/bom/FareFamilyTypes.hpp>
00014
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023
00027     class FareFamily : public BomAbstract {
00028     public:
00029         template <typename BOM> friend class FacBom;
00030         friend class FacBomManager;
00031         friend class boost::serialization::access;
00032
00033         // ////////////////////////////////// Type definitions //////////////////////////////////
00037         typedef FareFamilyKey Key_T;
00038
00039     public:
00040         // ////////////////////////////////// Getters //////////////////////////////////
00041         const Key_T& getKey() const {
00042             return _key;
00043         }
00044
00048         BomAbstract* getParent() const {
00049             return _parent;
00050         }
00051
00053         const FamilyCode_T& getFamilyCode() const {
00054             return _key.getFamilyCode();
00055         }
00056
00058         const HolderMap_T& getHolderMap() const {
00059             return _holderMap;
00060         }
00061
00062     public:
00063         // ////////////////////////////////// Display support methods //////////////////////////////////
00064         void toStream (std::ostream& ioOut) const {
00065             ioOut << toString();
00066         }
00067
00069         void fromStream (std::istream& ioIn) {
00070             //
00071         }
00072
00073         std::string toString() const;
00074
00076         const std::string describeKey() const {
00077             return _key.toString();
00078         }
00079
00080     };
00081
00082 }
00083
00084
00085
00086
00087
00088
00089
00090
00091
00092
00093

```

```

00094
00095 public:
00096     // //////////// (Boost) Serialisation support methods ////////////
00100     template<class Archive>
00101     void serialize (Archive& ar, const unsigned int iFileVersion);
00102
00103 private:
00108     void serialisationImplementationExport() const;
00109     void serialisationImplementationImport();
00110
00111
00112 protected:
00113     // //////////// Constructors and destructors ////////////
00117     FareFamily (const Key_T&);
00118
00122     virtual ~FareFamily();
00123
00124 private:
00128     FareFamily();
00129
00133     FareFamily (const FareFamily&);
00134
00135
00136 public:
00137     // //////////// Attributes ////////////
00141     Key_T _key;
00142
00146     BomAbstract* _parent;
00147
00151     HolderMap_T _holderMap;
00152 };
00153
00154 }
00155 #endif // __STDAIR_BOM_FAREFAMILY_HPP
00156

```

### 35.259 stdair/bom/FareFamilyKey.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/FareFamilyKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

## Functions

- template void `stdair::FareFamilyKey::serialize< ba::text_oarchive >` (ba::text\_oarchive &, unsigned int)
- template void `stdair::FareFamilyKey::serialize< ba::text_iarchive >` (ba::text\_iarchive &, unsigned int)

## 35.260 FareFamilyKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/FareFamilyKey.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 FareFamilyKey::FareFamilyKey() : _familyCode (DEFAULT_FARE_FAMILY_CODE) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 FareFamilyKey::FareFamilyKey (const FareFamilyKey& iFareFamilyKey)
00024     : _familyCode (iFareFamilyKey._familyCode) {
00025 }
00026
00027 // //////////////////////////////////////
00028 FareFamilyKey::FareFamilyKey (const FamilyCode_T& iFamilyCode)
00029     : _familyCode (iFamilyCode) {
00030 }
00031
00032 // //////////////////////////////////////
00033 FareFamilyKey::~FareFamilyKey() {
00034 }
00035
00036 // //////////////////////////////////////
00037 void FareFamilyKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "FareFamilyKey: " << toString();
00039 }
00040
00041 // //////////////////////////////////////
00042 void FareFamilyKey::fromStream (std::istream& ioIn) {
00043 }
00044
00045 // //////////////////////////////////////
00046 const std::string FareFamilyKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _familyCode;
00049     return oStr.str();
00050 }

```

```

00051
00052 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00053 void FareFamilyKey::serialisationImplementationExport() const {
00054     std::ostream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057 }
00058
00059 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00060 void FareFamilyKey::serialisationImplementationImport() {
00061     std::istream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064 }
00065
00066 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00067 template<class Archive>
00068 void FareFamilyKey::serialize (Archive& ioArchive,
00069                               const unsigned int iFileVersion) {
00070     ioArchive & _familyCode;
00071 }
00072
00073 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00074 // Explicit template instantiation
00075 namespace ba = boost::archive;
00076 template void FareFamilyKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00077                                                           unsigned int);
00078 template void FareFamilyKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00079                                                           unsigned int);
00080
00081 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00082
00083 }

```

## 35.261 stdair/bom/FareFamilyKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

### Classes

- struct [stdair::FareFamilyKey](#)  
*Key of a given fare family, made of a fare family code.*

### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.262 FareFamilyKey.hpp

```

00001 #ifndef __STDAIR_BOM_FAREFAMILYKEY_HPP
00002 #define __STDAIR_BOM_FAREFAMILYKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00026     struct FareFamilyKey : public KeyAbstract {
00027         friend class boost::serialization::access;
00028
00029         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00030     private:
00031         FareFamilyKey();
00032
00033     public:
00034         FareFamilyKey (const FamilyCode_T& iFamilyCode);
00035
00036         FareFamilyKey (const FareFamilyKey&);
00037
00038         ~FareFamilyKey();
00039
00040     public:
00041         // ////////////////////////////////// Getters //////////////////////////////////
00042         const FamilyCode_T& getFamilyCode () const {
00043             return _familyCode;
00044         }
00045
00046     public:
00047         // ////////////////////////////////// Display support methods //////////////////////////////////
00048         void toStream (std::ostream& ioOut) const;
00049
00050         void fromStream (std::istream& ioIn);
00051
00052         const std::string toString() const;
00053
00054     public:
00055         // ////////////////////////////////// (Boost) Serialisation support methods //////////////////////////////////
00056         template<class Archive>
00057         void serialize (Archive& ar, const unsigned int iFileVersion);
00058
00059     private:
00060         void serialisationImplementationExport() const;
00061         void serialisationImplementationImport();

```

```

00104
00105
00106     private:
00107         // ////////////////////////////////// Attributes //////////////////////////////////
00111         FamilyCode_T _familyCode;
00112     };
00113
00114 }
00115 #endif // __STDAIR_BOM_FAREFAMILYKEY_HPP

```

### 35.263 stdair/bom/FareFamilyTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef `std::list< FareFamily * >` `stdair::FareFamilyList_T`
- typedef `std::map< const MapKey_T, FareFamily * >` `stdair::FareFamilyMap_T`

### 35.264 FareFamilyTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FAREFAMILYTYPES_HPP
00003 #define __STDAIR_BOM_FAREFAMILYTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class FareFamily;
00018
00020     typedef std::list<FareFamily*> FareFamilyList_T;
00021
00023     typedef std::map<const MapKey_T, FareFamily*> FareFamilyMap_T;
00024 }
00025 #endif // __STDAIR_BOM_FAREFAMILYTYPES_HPP

```

**35.265 stdair/bom/FareFeatures.cpp File Reference**

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/FareFeatures.hpp>
```

**Namespaces**

- namespace [stdair](#)

*Handle on the StdAir library context.*

**35.266 FareFeatures.cpp**

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_DefaultObject.hpp>
00009 #include <stdair/basic/BasConst_Request.hpp>
00010 #include <stdair/service/Logger.hpp>
00011 #include <stdair/bom/FareFeatures.hpp>
00012
00013 namespace stdair {
00014
00015 // //////////////////////////////////////
00016     FareFeatures::FareFeatures()
00017         : _key (TRIP_TYPE_ONE_WAY,
00018               NO_ADVANCE_PURCHASE,
00019               SATURDAY_STAY,
00020               CHANGE_FEES,
00021               NON_REFUNDABLE,
00022               NO_STAY_DURATION),
00023         _parent (NULL) {
00024         // That constructor is used by the serialisation process
00025     }
00026
00027 // //////////////////////////////////////
00028     FareFeatures::FareFeatures (const FareFeatures& iFeatures)
00029         : _key (iFeatures.getKey()), _parent (NULL) {
00030         assert (false);
00031     }
00032
00033 // //////////////////////////////////////
00034     FareFeatures::FareFeatures (const Key_T& iKey)
00035         : _key (iKey), _parent (NULL) {
00036     }
00037 }
```

```

00038 ///////////////////////////////////////////////////////////////////
00039 FareFeatures::~FareFeatures () {
00040 }
00041
00042 ///////////////////////////////////////////////////////////////////
00043 std::string FareFeatures::toString() const {
00044     std::ostringstream ostr;
00045     ostr << describeKey();
00046     return ostr.str();
00047 }
00048
00049 ///////////////////////////////////////////////////////////////////
00050 bool FareFeatures::
00051 isTripTypeValid (const TripType_T& iBookingRequestTripType) const {
00052     bool oIsTripTypeValidFlag = true;
00053
00054     const TripType_T& lFareTripType = getTripType();
00055     // Check whether the fare trip type is the same as the booking request
00056     // trip type
00057     if (iBookingRequestTripType == lFareTripType) {
00058         // One way case
00059         return oIsTripTypeValidFlag;
00060     }
00061
00062     if (iBookingRequestTripType == TRIP_TYPE_INBOUND
00063         || iBookingRequestTripType == TRIP_TYPE_OUTBOUND) {
00064         // Round trip case
00065         if (lFareTripType == TRIP_TYPE_ROUND_TRIP) {
00066             return oIsTripTypeValidFlag;
00067         }
00068     }
00069
00070     oIsTripTypeValidFlag = false;
00071     return oIsTripTypeValidFlag;
00072 }
00073
00074 ///////////////////////////////////////////////////////////////////
00075 bool FareFeatures::
00076 isStayDurationValid (const DayDuration_T& iStayDuration) const {
00077
00078     // Check if the stay duration is lower or equal to the minimum one.
00079     const DayDuration_T& lMinimumDayDuration = getMinimumStay();
00080     if (lMinimumDayDuration > iStayDuration) {
00081         return false;
00082     }
00083
00084     return true;
00085 }
00086
00087 ///////////////////////////////////////////////////////////////////
00088 bool FareFeatures::
00089 isAdvancePurchaseValid (const DateTime_T& iBookingRequestDateTime,
00090                        const DateTime_T& iFlightDateTime) const {
00091     bool oIsAdvancePurchaseValidFlag = true;
00092
00093     // Check whether the departure date is within the date range.
00094     const DayDuration_T& lAdvancedPurchase = getAdvancePurchase();
00095     const DateOffset_T lMinimumAdvancedPurchase (lAdvancedPurchase);
00096     const DateTime_T lCriticalDate = iFlightDateTime - lMinimumAdvancedPurchase;
00097
00098     if (lCriticalDate < iBookingRequestDateTime) {
00099         oIsAdvancePurchaseValidFlag = false;

```



```

00100         return oIsAdvancePurchaseValidFlag;
00101     }
00102
00103     return true;
00104 }
00105
00106 }
00107

```

### 35.267 stdair/bom/FareFeatures.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FareFeaturesKey.hpp>
#include <stdair/bom/FareFeaturesTypes.hpp>

```

#### Classes

- class [stdair::FareFeatures](#)  
Class representing the actual attributes for a fare date-period.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.268 FareFeatures.hpp

```

00001 #ifndef __STDAIR_BOM_FAREFEATURES_HPP
00002 #define __STDAIR_BOM_FAREFEATURES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/FareFeaturesKey.hpp>
00010 #include <stdair/bom/FareFeaturesTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00018     class FareFeatures : public BomAbstract {
00019     template <typename BOM> friend class FacBom;
00020     friend class FacBomManager;
00021
00022     public:
00023         // ////////////////////////////////// Type definitions //////////////////////////////////
00027         typedef FareFeaturesKey Key_T;
00028
00029     public:
00030         // ////////////////////////////////// Display support methods //////////////////////////////////
00036         void toStream (std::ostream& ioOut) const {

```

```

00037         ioOut << toString();
00038     }
00039
00045     void fromStream (std::istream& ioIn) {
00046     }
00047
00051     std::string toString() const;
00052
00056     const std::string describeKey() const {
00057         return _key.toString();
00058     }
00059
00060
00061 public:
00062     // //////////// Getters ////////////
00066     const Key_T& getKey() const {
00067         return _key;
00068     }
00069
00073     BomAbstract* const getParent() const {
00074         return _parent;
00075     }
00076
00080     const HolderMap_T& getHolderMap() const {
00081         return _holderMap;
00082     }
00083
00087     const TripType_T& getTripType() const {
00088         return _key.getTripType();
00089     }
00090
00094     const DayDuration_T& getAdvancePurchase() const {
00095         return _key.getAdvancePurchase();
00096     }
00097
00101     const SaturdayStay_T& getSaturdayStay() const {
00102         return _key.getSaturdayStay();
00103     }
00104
00108     const ChangeFees_T& getChangeFees() const {
00109         return _key.getChangeFees();
00110     }
00111
00115     const NonRefundable_T& getRefundableOption() const {
00116         return _key.getRefundableOption();
00117     }
00118
00122     const DayDuration_T& getMinimumStay() const {
00123         return _key.getMinimumStay();
00124     }
00125
00126
00127 public:
00128     // //////////// Business methods ////////////
00133     bool isTripTypeValid (const TripType_T&) const;
00134
00139     bool isStayDurationValid (const DayDuration_T&) const;
00140
00145     bool isAdvancePurchaseValid (const DateTime_T& iBookingRequestDateTime,
00146                                 const DateTime_T& iFlightDateTime) const;
00147
00148

```

```

00149     protected:
00150         // ////////// Constructors and destructors //////////
00154         FareFeatures (const Key_T&);
00158         virtual ~FareFeatures ();
00159
00160     private:
00164         FareFeatures ();
00168         FareFeatures (const FareFeatures&);
00169
00170     protected:
00171         // ////////// Attributes //////////
00175         Key_T _key;
00176
00180         BomAbstract* _parent;
00181
00185         HolderMap_T _holderMap;
00186     };
00187
00188 }
00189 #endif // __STDAIR_BOM_FAREFEATURES_HPP
00190

```

### 35.269 stdair/bom/FareFeaturesKey.cpp File Reference

```

#include <ostream>

#include <sstream>

#include <stdair/basic/BasConst_DefaultObject.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/FareFeaturesKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.270 FareFeaturesKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_DefaultObject.hpp>
00009 #include <stdair/basic/BasConst_Request.hpp>
00010 #include <stdair/bom/FareFeaturesKey.hpp>
00011
00012 namespace stdair {
00013
00014     // //////////////////////////////////////
00015     FareFeaturesKey::FareFeaturesKey()

```

```

00016     : _tripType (TRIP_TYPE_ONE_WAY),
00017       _advancePurchase (NO_ADVANCE_PURCHASE),
00018       _saturdayStay (SATURDAY_STAY),
00019       _changeFees (CHANGE_FEES),
00020       _nonRefundable (NON_REFUNDABLE),
00021       _minimumStay (NO_STAY_DURATION) {
00022     assert (false);
00023 }
00024
00025 // //////////////////////////////////////
00026 FareFeaturesKey::FareFeaturesKey (const TripType_T& iTripType,
00027                                   const DayDuration_T& iAdvancePurchase,
00028                                   const SaturdayStay_T& iSaturdayStay,
00029                                   const ChangeFees_T& iChangeFees,
00030                                   const NonRefundable_T& iNonRefundable,
00031                                   const DayDuration_T& iMinimumStay)
00032     : _tripType (iTripType), _advancePurchase (iAdvancePurchase),
00033       _saturdayStay (iSaturdayStay), _changeFees (iChangeFees),
00034       _nonRefundable (iNonRefundable), _minimumStay (iMinimumStay) {
00035 }
00036
00037 // //////////////////////////////////////
00038 FareFeaturesKey::FareFeaturesKey (const FareFeaturesKey& iKey)
00039     : _tripType (iKey.getTripType()),
00040       _advancePurchase (iKey.getAdvancePurchase()),
00041       _saturdayStay (iKey.getSaturdayStay()),
00042       _changeFees (iKey.getChangeFees()),
00043       _nonRefundable (iKey.getRefundableOption()),
00044       _minimumStay (iKey.getMinimumStay()) {
00045 }
00046
00047 // //////////////////////////////////////
00048 FareFeaturesKey::~FareFeaturesKey() {
00049 }
00050
00051 // //////////////////////////////////////
00052 void FareFeaturesKey::toStream (std::ostream& ioOut) const {
00053     ioOut << "FareFeaturesKey: " << toString() << std::endl;
00054 }
00055
00056 // //////////////////////////////////////
00057 void FareFeaturesKey::fromStream (std::istream& ioIn) {
00058 }
00059
00060 // //////////////////////////////////////
00061 const std::string FareFeaturesKey::toString() const {
00062     std::ostringstream oStr;
00063     oStr << _tripType << " -- " << _advancePurchase << "-"
00064         << _saturdayStay << "-" << _changeFees << "-"
00065         << _nonRefundable << "-" << _minimumStay;
00066     return oStr.str();
00067 }
00068
00069 }

```

### 35.271 stdair/bom/FareFeaturesKey.hpp File Reference

```

#include <stdair/bom/KeyAbstract.hpp>

#include <stdair/stdair_date_time_types.hpp>

```

```
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
```

### Classes

- struct `stdair::FareFeaturesKey`

*Key of date-period.*

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.272 FareFeaturesKey.hpp

```
00001 #ifndef __STDAIR_BOM_FAREFEATURESKEY_HPP
00002 #define __STDAIR_BOM_FAREFEATURESKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010 #include <stdair/stdair_demand_types.hpp>
00011 #include <stdair/stdair_inventory_types.hpp>
00012
00013 namespace stdair {
00014
00018     struct FareFeaturesKey : public KeyAbstract {
00019     public:
00020         // ////////////////////////////////// Construction //////////////////////////////////
00022         FareFeaturesKey (const TripType_T&, const DayDuration_T&,
00023                         const SaturdayStay_T&, const ChangeFees_T&,
00024                         const NonRefundable_T&, const DayDuration_T&);
00026         FareFeaturesKey (const FareFeaturesKey&);
00028         ~FareFeaturesKey ();
00029     private:
00031         FareFeaturesKey();
00032
00033
00034     public:
00035         // ////////////////////////////////// Getters //////////////////////////////////
00039         const TripType_T& getTripType() const {
00040             return _tripType;
00041         }
00042
00046         const DayDuration_T& getAdvancePurchase() const {
00047             return _advancePurchase;
00048         }
00049
00053         const SaturdayStay_T& getSaturdayStay() const {
00054             return _saturdayStay;
00055         }
00056
00056
```

```

00060     const ChangeFees_T& getChangeFees() const {
00061         return _changeFees;
00062     }
00063
00067     const NonRefundable_T& getRefundableOption() const {
00068         return _nonRefundable;
00069     }
00070
00074     const DayDuration_T& getMinimumStay() const {
00075         return _minimumStay;
00076     }
00077
00078
00079 public:
00080     // //////////// Display support methods ////////////
00086     void toStream (std::ostream& ioOut) const;
00087
00093     void fromStream (std::istream& ioIn);
00094
00100     const std::string toString() const;
00101
00102
00103 private:
00104     // ////////////////////////////////// Attributes //////////////////////////////////
00108     TripType_T _tripType;
00109
00113     DayDuration_T _advancePurchase;
00114
00118     SaturdayStay_T _saturdayStay;
00119
00123     ChangeFees_T _changeFees;
00124
00128     NonRefundable_T _nonRefundable;
00129
00133     DayDuration_T _minimumStay;
00134 };
00135
00136 }
00137 #endif // __STDAIR_BOM_FAREFEATURESKEY_HPP

```

### 35.273 stdair/bom/FareFeaturesTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef `std::list< FareFeatures * >` `stdair::FareFeaturesList_T`

- typedef std::map< const MapKey\_T, FareFeatures \* > [stdair::FareFeaturesMap\\_T](#)
- typedef std::pair< MapKey\_T, FareFeatures \* > [stdair::FareFeaturesWithKey\\_T](#)
- typedef std::list< FareFeaturesWithKey\_T > [stdair::FareFeaturesDetailedList\\_T](#)

### 35.274 FareFeaturesTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FAREFEATURESTYPES_HPP
00003 #define __STDAIR_BOM_FAREFEATURESTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class FareFeatures;
00018
00020     typedef std::list<FareFeatures*> FareFeaturesList_T;
00021
00023     typedef std::map<const MapKey_T, FareFeatures*> FareFeaturesMap_T;
00024
00026     typedef std::pair<MapKey_T, FareFeatures*> FareFeaturesWithKey_T;
00027     typedef std::list<FareFeaturesWithKey_T> FareFeaturesDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_FAREFEATURESTYPES_HPP
00030

```

### 35.275 stdair/bom/FareOptionStruct.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/basic/BasConst_BookingClass.hpp>

#include <stdair/bom/FareOptionStruct.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.276 FareOptionStruct.cpp

```

00001 // //////////////////////////////////////

```

```

00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/bom/FareOptionStruct.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     FareOptionStruct::FareOptionStruct ()
00015     : _fare (DEFAULT_FARE_VALUE), _avl (DEFAULT_AVAILABILITY) {
00016     }
00017
00018     // //////////////////////////////////////
00019     FareOptionStruct::FareOptionStruct (const FareOptionStruct& iFO)
00020     : _classPath (iFO._classPath),
00021       _fare (iFO._fare), _avl (iFO._avl), _changeFee (iFO._changeFee),
00022       _nonRefundable (iFO._nonRefundable), _saturdayStay (iFO._saturdayStay) {
00023     }
00024
00025     // //////////////////////////////////////
00026     FareOptionStruct::FareOptionStruct (const std::string& iClassPath,
00027                                         const Fare_T& iFare,
00028                                         const ChangeFees_T& iChangeFee,
00029                                         const NonRefundable_T& iNonRefundable,
00030                                         const SaturdayStay_T& iSaturdayNightStay)
00031     : _fare (iFare), _avl (DEFAULT_AVAILABILITY),
00032       _changeFee (iChangeFee), _nonRefundable (iNonRefundable),
00033       _saturdayStay (iSaturdayNightStay) {
00034         _classPath.push_back (iClassPath);
00035     }
00036
00037     // //////////////////////////////////////
00038     FareOptionStruct::~FareOptionStruct () {
00039     }
00040
00041     // //////////////////////////////////////
00042     void FareOptionStruct::toStream (std::ostream& ioOut) const {
00043         ioOut << describe();
00044     }
00045
00046     // //////////////////////////////////////
00047     void FareOptionStruct::fromStream (std::istream& ioIn) {
00048     }
00049
00050     // //////////////////////////////////////
00051     const std::string FareOptionStruct::describe() const {
00052         std::ostringstream oStr;
00053
00054         oStr << "Class path: ";
00055         unsigned short idx = 0;
00056         for (ClassList_StringList_T::const_iterator itClassPath =
00057             _classPath.begin(); itClassPath != _classPath.end();
00058             ++itClassPath, ++idx) {
00059             if (idx != 0) {
00060                 oStr << "-";
00061             }
00062             const std::string& lClassPath = *itClassPath;
00063             oStr << lClassPath;

```



```

00064     }
00065
00066     ostr << "; " << _fare << " EUR";
00067     ostr << "; conditions: " << _changeFee << " " << _nonRefundable
00068         << " " << _saturdayStay;
00069     return ostr.str();
00070 }
00071
00072 // //////////////////////////////////////
00073 const std::string FareOptionStruct::display() const {
00074     std::ostringstream ostr;
00075
00076     unsigned short idx = 0;
00077     for (ClassList_StringList_T::const_iterator itClassPath =
00078         _classPath.begin(); itClassPath != _classPath.end();
00079         ++itClassPath, ++idx) {
00080         if (idx != 0) {
00081             ostr << "-";
00082         }
00083         const std::string& lClassPath = *itClassPath;
00084         ostr << lClassPath;
00085     }
00086
00087     ostr << ", " << _fare << ", " << _changeFee << " " << _nonRefundable
00088         << " " << _saturdayStay;
00089     return ostr.str();
00090 }
00091
00092 // //////////////////////////////////////
00093 void FareOptionStruct::addClassList (const std::string iClassCodeList) {
00094     _classPath.push_back (iClassCodeList);
00095 }
00096
00097 // //////////////////////////////////////
00098 void FareOptionStruct::emptyClassList () {
00099     _classPath.clear();
00100 }
00101
00102 }

```

## 35.277 stdair/bom/FareOptionStruct.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingClassTypes.hpp>

```

### Classes

- struct [stdair::FareOptionStruct](#)  
Structure holding the elements of a fare option.

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.278 FareOptionStruct.hpp

```

00001 #ifndef __STDAIR_BOM_FAREOPTIONSTRUCT_HPP
00002 #define __STDAIR_BOM_FAREOPTIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 #include <stdair/bom/BookingClassTypes.hpp>
00014
00015 namespace stdair {
00016
00020     struct FareOptionStruct : public StructAbstract {
00021     public:
00022         // //////////// Getters ////////////
00024         const ClassList_StringList_T& getClassPath() const {
00025             return _classPath;
00026         }
00027
00029         const Fare_T& getFare() const {
00030             return _fare;
00031         }
00032
00034         const Availability_T& getAvailability() const {
00035             return _avl;
00036         }
00037
00039         const ChangeFees_T getChangeFees() const {
00040             return _changeFee;
00041         }
00042
00044         const NonRefundable_T getNonRefundable() const {
00045             return _nonRefundable;
00046         }
00047
00049         const SaturdayStay_T getSaturdayStay() const {
00050             return _saturdayStay;
00051         }
00052
00053     public:
00055         // //////////// Setters ////////////
00057         void addClassList (const std::string);
00058
00060         void emptyClassList ();
00061
00063         void setFare (const Fare_T& iFare) {
00064             _fare = iFare;
00065         }

```

```

00066
00068     void setAvailability (const Availability_T& iAvl) {
00069         _avl = iAvl;
00070     }
00071
00073     void setChangeFees (const ChangeFees_T iRes) {
00074         _changeFee = iRes;
00075     }
00076
00078     void setNonRefundable (const NonRefundable_T iRes) {
00079         _nonRefundable = iRes;
00080     }
00081
00083     void setSaturdayStay (const SaturdayStay_T iRes) {
00084         _saturdayStay = iRes;
00085     }
00086
00087
00088 public:
00089     // //////////// Display support method ////////////
00095     void toStream (std::ostream& ioOut) const;
00096
00102     void fromStream (std::istream& ioIn);
00103
00107     const std::string describe() const;
00108
00112     const std::string display() const;
00113
00114
00115 public:
00116     // //////////// Constructors & Destructor ////////////
00120     FareOptionStruct ();
00121
00125     FareOptionStruct (const std::string& iClassPath,
00126                     const Fare_T&, const ChangeFees_T&,
00127                     const NonRefundable_T&, const SaturdayStay_T&);
00128
00132     FareOptionStruct (const FareOptionStruct&);
00133
00137     ~FareOptionStruct ();
00138
00139
00140 private:
00141     // ////////////////////////////////// Attributes //////////////////////////////////
00145     ClassList_StringList_T _classPath;
00146
00150     Fare_T _fare;
00151
00155     Availability_T _avl;
00156
00160     ChangeFees_T _changeFee;
00161
00165     NonRefundable_T _nonRefundable;
00166
00170     SaturdayStay_T _saturdayStay;
00171 };
00172
00173 }
00174 #endif // __STDAIR_BOM_FAREOPTIONSTRUCT_HPP

```

**35.279 stdair/bom/FareOptionTypes.hpp File Reference**

```
#include <list>
#include <map>
#include <stdair/stdair_types.hpp>
#include <stdair/bom/key_types.hpp>
```

**Namespaces**

- namespace [stdair](#)  
*Handle on the StdAir library context.*

**Typedefs**

- typedef std::list< FareOptionStruct > [stdair::FareOptionList\\_T](#)

**35.280 FareOptionTypes.hpp**

```
00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FAREOPTIONTYPES_HPP
00003 #define __STDAIR_BOM_FAREOPTIONTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <list>
00010 #include <map>
00011 // STDAIR
00012 #include <stdair/stdair_types.hpp>
00013 #include <stdair/bom/key_types.hpp>
00014
00015 namespace stdair {
00016
00017     // Forward declarations.
00018     struct FareOptionStruct;
00019
00020     typedef std::list<FareOptionStruct> FareOptionList_T;
00021
00022 }
00023
00024 #endif // __STDAIR_BOM_FAREOPTIONTYPES_HPP
00025
```

**35.281 stdair/bom/FlightDate.cpp File Reference**

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
```

```
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.282 FlightDate.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/Inventory.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012 #include <stdair/bom/LegDate.hpp>
00013 #include <stdair/bom/SegmentDate.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 FlightDate::FlightDate()
00019 : _key (DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE), _parent (NULL) {
00020     // That constructor is used by the serialisation process
00021 }
00022
00023 // //////////////////////////////////////
00024 FlightDate::FlightDate (const FlightDate&)
00025 : _key (DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE), _parent (NULL) {
00026     assert (false);
00027 }
00028
00029 // //////////////////////////////////////
00030 FlightDate::FlightDate (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00031 }
00032
00033 // //////////////////////////////////////
00034 FlightDate::~FlightDate() {
00035 }
00036
00037 // //////////////////////////////////////
00038 const AirlineCode_T& FlightDate::getAirlineCode() const {
00039     const Inventory* lInventory_ptr =
00040         static_cast<const Inventory*> (getParent());
00041     assert (lInventory_ptr != NULL);
00042     return lInventory_ptr->getAirlineCode();
00043 }
```

```

00043     }
00044
00045     // //////////////////////////////////////
00046     std::string FlightDate::toString() const {
00047         std::ostringstream ostr;
00048         ostr << describeKey();
00049         return ostr.str();
00050     }
00051
00052     // //////////////////////////////////////
00053     LegDate* FlightDate::getLegDate (const std::string& iLegDateKeyStr) const {
00054         LegDate* oLegDate_ptr =
00055             BomManager::getObjectPtr<LegDate> (*this, iLegDateKeyStr);
00056         return oLegDate_ptr;
00057     }
00058
00059     // //////////////////////////////////////
00060     LegDate* FlightDate::getLegDate (const LegDateKey& iLegDateKey) const {
00061         return getLegDate (iLegDateKey.toString());
00062     }
00063
00064     // //////////////////////////////////////
00065     SegmentDate* FlightDate::
00066     getSegmentDate (const std::string& iSegmentDateKeyStr) const {
00067         SegmentDate* oSegmentDate_ptr =
00068             BomManager::getObjectPtr<SegmentDate> (*this, iSegmentDateKeyStr);
00069         return oSegmentDate_ptr;
00070     }
00071
00072     // //////////////////////////////////////
00073     SegmentDate* FlightDate::
00074     getSegmentDate (const SegmentDateKey& iSegmentDateKey) const {
00075         return getSegmentDate (iSegmentDateKey.toString());
00076     }
00077
00078 }
00079

```

### 35.283 stdair/bom/FlightDate.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/FlightDateKey.hpp>
#include <stdair/bom/FlightDateTypes.hpp>

```

#### Classes

- class `stdair::FlightDate`  
Class representing the actual attributes for an airline flight-date.

## Namespaces

- namespace `boost`  
*Forward declarations.*
- namespace `boost::serialization`
- namespace `stdair`  
*Handle on the StdAir library context.*

## 35.284 FlightDate.hpp

```

00001 #ifndef __STDAIR_BOM_FLIGHTDATE_HPP
00002 #define __STDAIR_BOM_FLIGHTDATE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/FlightDateKey.hpp>
00014 #include <stdair/bom/FlightDateTypes.hpp>
00015
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023
00024     struct LegDateKey;
00025     class LegDate;
00026     struct SegmentDateKey;
00027     class SegmentDate;
00028
00029     class FlightDate : public BomAbstract {
00030     public:
00031         template <typename BOM> friend class FacBom;
00032         friend class FacBomManager;
00033         friend class boost::serialization::access;
00034
00035         // ////////////////////////////////// Type definitions //////////////////////////////////
00036         typedef FlightDateKey Key_T;
00037
00038     public:
00039         // ////////////////////////////////// Getters //////////////////////////////////
00040         const Key_T& getKey() const {
00041             return _key;
00042         }
00043
00044         BomAbstract* const getParent() const {
00045             return _parent;
00046         }
00047     };
00048 }

```

```

00061     const FlightNumber_T& getFlightNumber() const {
00062         return _key.getFlightNumber();
00063     }
00064
00066     const Date_T& getDepartureDate() const {
00067         return _key.getDepartureDate();
00068     }
00069
00077     const AirlineCode_T& getAirlineCode() const;
00078
00082     const HolderMap_T& getHolderMap() const {
00083         return _holderMap;
00084     }
00085
00096     LegDate* getLegDate (const std::string& iLegDateKeyStr) const;
00097
00108     LegDate* getLegDate (const LegDateKey&) const;
00109
00120     SegmentDate* getSegmentDate (const std::string& iSegmentDateKeyStr) const;
00121
00132     SegmentDate* getSegmentDate (const SegmentDateKey&) const;
00133
00134 public:
00135     // //////////// Display support methods ////////////
00141     void toStream (std::ostream& ioOut) const {
00142         ioOut << toString();
00143     }
00144
00150     void fromStream (std::istream& ioIn) {
00151     }
00152
00156     std::string toString() const;
00157
00161     const std::string describeKey() const {
00162         return _key.toString();
00163     }
00164
00165
00166 public:
00167     // //////////// (Boost) Serialisation support methods ////////////
00171     template<class Archive>
00172     void serialize (Archive& ar, const unsigned int iFileVersion);
00173
00174 private:
00182     void serialisationImplementationExport() const;
00183     void serialisationImplementationImport();
00184
00185
00186 protected:
00187     // //////////// Constructors and destructors ////////////
00191     FlightDate (const Key_T&);
00192
00196     virtual ~FlightDate();
00197
00198 private:
00202     FlightDate();
00203
00207     FlightDate (const FlightDate&);
00208
00209
00210 protected:
00211     // //////////// Attributes ////////////

```



```

00215     Key_T _key;
00216
00220     BomAbstract* _parent;
00221
00225     HolderMap_T _holderMap;
00226 };
00227
00228 }
00229 #endif // __STDAIR_BOM_FLIGHTDATE_HPP
00230

```

### 35.285 stdair/bom/FlightDateKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/date_time/gregorian/formatters.hpp>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/FlightDateKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

#### Functions

- template void `stdair::FlightDateKey::serialize< ba::text_oarchive >` (ba::text\_oarchive &, unsigned int)
- template void `stdair::FlightDateKey::serialize< ba::text_iarchive >` (ba::text\_iarchive &, unsigned int)

### 35.286 FlightDateKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost Date-Time
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 // Boost.Serialization

```

```

00010 #include <boost/archive/text_iarchive.hpp>
00011 #include <boost/archive/text_oarchive.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_Inventory.hpp>
00015 #include <stdair/basic/BasConst_BomDisplay.hpp>
00016 #include <stdair/bom/FlightDateKey.hpp>
00017
00018 namespace stdair {
00019
00020 // //////////////////////////////////////
00021 FlightDateKey::FlightDateKey()
00022     : _flightNumber (DEFAULT_FLIGHT_NUMBER),
00023       _departureDate (DEFAULT_DEPARTURE_DATE) {
00024     assert (false);
00025 }
00026
00027 // //////////////////////////////////////
00028 FlightDateKey::FlightDateKey (const FlightNumber_T& iFlightNumber,
00029                               const Date_T& iFlightDate)
00030     : _flightNumber (iFlightNumber), _departureDate (iFlightDate) {
00031 }
00032
00033 // //////////////////////////////////////
00034 FlightDateKey::FlightDateKey (const FlightDateKey& iKey)
00035     : _flightNumber (iKey._flightNumber), _departureDate (iKey._departureDate) {
00036 }
00037
00038 // //////////////////////////////////////
00039 FlightDateKey::~FlightDateKey() {
00040 }
00041
00042 // //////////////////////////////////////
00043 void FlightDateKey::toStream (std::ostream& ioOut) const {
00044     ioOut << "FlightDateKey: " << toString();
00045 }
00046
00047 // //////////////////////////////////////
00048 void FlightDateKey::fromStream (std::istream& ioIn) {
00049 }
00050
00051 // //////////////////////////////////////
00052 const std::string FlightDateKey::toString() const {
00053     std::ostringstream ostr;
00054     const std::string& lDepartureDateStr =
00055         boost::gregorian::to_simple_string (_departureDate);
00056     ostr << _flightNumber
00057         << DEFAULT_KEY_SUB_FLD_DELIMITER << " " << lDepartureDateStr;
00058     return ostr.str();
00059 }
00060
00061 // //////////////////////////////////////
00062 void FlightDateKey::serialisationImplementationExport() const {
00063     std::ostringstream ostr;
00064     boost::archive::text_oarchive oa (ostr);
00065     oa << *this;
00066 }
00067
00068 // //////////////////////////////////////
00069 void FlightDateKey::serialisationImplementationImport() {
00070     std::istringstream istr;
00071     boost::archive::text_iarchive ia (istr);

```

```

00072     ia >> *this;
00073 }
00074
00075 // //////////////////////////////////////
00076 template<class Archive>
00077 void FlightDateKey::serialize (Archive& ioArchive,
00078                               const unsigned int iFileVersion) {
00083     std::string lDepartureDateStr =
00084         boost::gregorian::to_simple_string (_departureDate);
00085     ioArchive & _flightNumber & lDepartureDateStr;
00086 }
00087
00088 // //////////////////////////////////////
00089 // Explicit template instantiation
00090 namespace ba = boost::archive;
00091 template void FlightDateKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00092                                                         unsigned int);
00093 template void FlightDateKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00094                                                         unsigned int);
00095 // //////////////////////////////////////
00096
00097 }

```

### 35.287 stdair/bom/FlightDateKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::FlightDateKey](#)  
*Key of a given flight-date, made of a flight number and a departure date.*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.288 FlightDateKey.hpp

```

00001 #ifndef __STDAIR_BOM_FLIGHTDATEKEY_HPP
00002 #define __STDAIR_BOM_FLIGHTDATEKEY_HPP
00003

```

```

00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_date_time_types.hpp>
00013 #include <stdair/bom/KeyAbstract.hpp>
00014
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023
00028     struct FlightDateKey : public KeyAbstract {
00029         friend class boost::serialization::access;
00030
00031         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00032     private:
00036         FlightDateKey();
00037
00038     public:
00042         FlightDateKey (const FlightNumber_T&, const Date_T&);
00043
00047         FlightDateKey (const FlightDateKey&);
00048
00052         ~FlightDateKey();
00053
00054
00055     public:
00056         // ////////////////////////////////// Getters //////////////////////////////////
00058         const FlightNumber_T& getFlightNumber() const {
00059             return _flightNumber;
00060         }
00061
00063         const Date_T& getDepartureDate() const {
00064             return _departureDate;
00065         }
00066
00067
00068     public:
00069         // ////////////////////////////////// Display support methods //////////////////////////////////
00075         void toStream (std::ostream& ioOut) const;
00076
00082         void fromStream (std::istream& ioIn);
00083
00093         const std::string toString() const;
00094
00095
00096     public:
00097         // ////////////////////////////////// (Boost) Serialisation support methods //////////////////////////////////
00101         template<class Archive>
00102         void serialize (Archive& ar, const unsigned int iFileVersion);
00103
00104     private:
00109         void serialisationImplementationExport() const;
00110         void serialisationImplementationImport();

```

```

00111
00112
00113     private:
00114         // //////////////// Attributes ////////////////
00118         FlightNumber_T _flightNumber;
00119
00123         Date_T _departureDate;
00124     };
00125
00126 }
00127 #endif // __STDAIR_BOM_FLIGHTDATEKEY_HPP

```

### 35.289 stdair/bom/FlightDateTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< FlightDate \* > `stdair::FlightDateList_T`
- typedef std::map< const MapKey\_T, FlightDate \* > `stdair::FlightDateMap_T`

### 35.290 FlightDateTypes.hpp

```

00001 // ////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FLIGHTDATETYPES_HPP
00003 #define __STDAIR_BOM_FLIGHTDATETYPES_HPP
00004
00005 // ////////////////////////////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations
00017     class FlightDate;
00018
00019     // //////////////// Type definitions ////////////////
00021     typedef std::list<FlightDate*> FlightDateList_T;
00022
00024     typedef std::map<const MapKey_T, FlightDate*> FlightDateMap_T;

```

```

00025
00026 }
00027 #endif // __STDAIR_BOM_FLIGHTDATETYPES_HPP
00028

```

### 35.291 stdair/bom/FlightPeriod.cpp File Reference

```

#include <cassert>

#include <stdair/bom/FlightPeriod.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.292 FlightPeriod.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // STDAIR
00007 #include <stdair/bom/FlightPeriod.hpp>
00008
00009 namespace stdair {
00010
00011 // //////////////////////////////////////
00012 FlightPeriod::FlightPeriod (const Key_T& iKey)
00013 : _key (iKey), _parent (NULL) {
00014 }
00015
00016 // //////////////////////////////////////
00017 FlightPeriod::~FlightPeriod () {
00018 }
00019
00020 // //////////////////////////////////////
00021 std::string FlightPeriod::toString() const {
00022     std::ostringstream oStr;
00023     oStr << describeKey();
00024     return oStr.str();
00025 }
00026
00027 }
00028

```

### 35.293 stdair/bom/FlightPeriod.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>

#include <stdair/bom/FlightPeriodKey.hpp>

#include <stdair/bom/FlightPeriodTypes.hpp>

```

## Classes

- class `stdair::FlightPeriod`

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.294 FlightPeriod.hpp

```

00001 #ifndef __STDAIR_BOM_FLIGHTPERIOD_HPP
00002 #define __STDAIR_BOM_FLIGHTPERIOD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/FlightPeriodKey.hpp>
00010 #include <stdair/bom/FlightPeriodTypes.hpp>
00011
00012 namespace stdair {
00013
00014     class FlightPeriod : public BomAbstract {
00015     public:
00016         template <typename BOM> friend class FacBom;
00017         friend class FacBomManager;
00018
00019     public:
00020         // Type definitions.
00021         typedef FlightPeriodKey Key_T;
00022
00023     public:
00024         // ////////////////////////////////// Getters //////////////////////////////////
00025         const Key_T& getKey () const { return _key; }
00026
00027         BomAbstract* const getParent () const { return _parent; }
00028
00029         const FlightNumber_T& getFlightNumber () const {
00030             return _key.getFlightNumber();
00031         }
00032
00033         const PeriodStruct& getPeriod () const { return _key.getPeriod(); }
00034
00035         const HolderMap_T& getHolderMap () const { return _holderMap; }
00036
00037     public:
00038         // ////////////////////////////////// Display support methods //////////////////////////////////
00039         void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00040
00041         void fromStream (std::istream& ioIn) { }
00042
00043         std::string toString () const;
00044
00045         const std::string describeKey () const { return _key.toString(); }
00046
00047     protected:

```

```

00062     FlightPeriod (const Key_T&);
00063     FlightPeriod (const FlightPeriod&);
00064     ~FlightPeriod();
00065
00066 protected:
00067     // Attributes
00068     Key_T _key;
00069     BomAbstract* _parent;
00070     HolderMap_T _holderMap;
00071 };
00072
00073
00074 }
00075 #endif // __STDAIR_BOM_FLIGHTPERIOD_HPP
00076

```

### 35.295 stdair/bom/FlightPeriodKey.cpp File Reference

```
#include <stdair/bom/FlightPeriodKey.hpp>
```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.296 FlightPeriodKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STDAIR
00005 #include <stdair/bom/FlightPeriodKey.hpp>
00006
00007 namespace stdair {
00008
00009     // //////////////////////////////////////
00010     FlightPeriodKey::FlightPeriodKey (const FlightNumber_T& iFlightNumber,
00011                                     const PeriodStruct& iPeriod)
00012     : _flightNumber (iFlightNumber), _period (iPeriod) {
00013     }
00014
00015     // //////////////////////////////////////
00016     FlightPeriodKey::FlightPeriodKey (const FlightPeriodKey& iKey)
00017     : _flightNumber (iKey._flightNumber), _period (iKey._period) {
00018     }
00019
00020     // //////////////////////////////////////
00021     FlightPeriodKey::~FlightPeriodKey () {
00022     }
00023
00024     // //////////////////////////////////////
00025     void FlightPeriodKey::toStream (std::ostream& ioOut) const {
00026         ioOut << "FlightPeriodKey: " << toString() << std::endl;
00027     }
00028
00029     // //////////////////////////////////////
00030     void FlightPeriodKey::fromStream (std::istream& ioIn) {

```



```

00031     }
00032
00033     // //////////////////////////////////////
00034     const std::string FlightPeriodKey::toString() const {
00035         std::ostringstream ostr;
00036         ostr << _flightNumber << ", " << _period.describeShort();
00037         return ostr.str();
00038     }
00039
00040 }
```

### 35.297 stdair/bom/FlightPeriodKey.hpp File Reference

```

#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/bom/PeriodStruct.hpp>
```

#### Classes

- struct [stdair::FlightPeriodKey](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.298 FlightPeriodKey.hpp

```

00001 #ifndef __STDAIR_BOM_FLIGHTPERIODKEY_HPP
00002 #define __STDAIR_BOM_FLIGHTPERIODKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/bom/PeriodStruct.hpp>
00010
00011 namespace stdair {
00012     struct FlightPeriodKey : public KeyAbstract {
00013     private:
00014         // ////////////////////////////////// Default constructor //////////////////////////////////
00015         FlightPeriodKey ();
00016     public:
00017         // ////////////////////////////////// Construction //////////////////////////////////
00018         FlightPeriodKey (const FlightNumber_T&, const PeriodStruct&);
00019         FlightPeriodKey (const FlightPeriodKey&);
00020         ~FlightPeriodKey ();
00021
00022         // ////////////////////////////////// Getters //////////////////////////////////
00023         const FlightNumber_T& getFlightNumber() const {
00024             return _flightNumber;
00025         }
00026     }
```

```

00031
00033     const PeriodStruct& getPeriod () const {
00034         return _period;
00035     }
00036
00037     // //////////// Display support methods ////////////
00040     void toStream (std::ostream& ioOut) const;
00041
00044     void fromStream (std::istream& ioIn);
00045
00051     const std::string toString() const;
00052
00053 private:
00054     // Attributes
00056     FlightNumber_T _flightNumber;
00057
00059     PeriodStruct _period;
00060
00061 };
00062
00063 }
00064 #endif // __STDAIR_BOM_FLIGHTPERIODKEY_HPP

```

### 35.299 stdair/bom/FlightPeriodTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< FlightPeriod \* > [stdair::FlightPeriodList\\_T](#)
- typedef std::map< const MapKey\_T, FlightPeriod \* > [stdair::FlightPeriodMap\\_T](#)

### 35.300 FlightPeriodTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_FLIGHTPERIODTYPES_HPP
00003 #define __STDAIR_BOM_FLIGHTPERIODTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir

```

```

00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class FlightPeriod;
00018
00020     typedef std::list<FlightPeriod*> FlightPeriodList_T;
00021
00023     typedef std::map<const MapKey_T, FlightPeriod*> FlightPeriodMap_T;
00024 }
00025 #endif // __STDAIR_BOM_FLIGHTPERIODTYPES_HPP
00026

```

### 35.301 stdair/bom/GuillotineBlock.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/multi_array.hpp>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/GuillotineBlock.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.302 GuillotineBlock.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/multi_array.hpp>
00009 // Boost.Serialization
00010 #include <boost/archive/text_iarchive.hpp>
00011 #include <boost/archive/text_oarchive.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_Inventory.hpp>
00015 #include <stdair/bom/BomManager.hpp>
00016 #include <stdair/bom/GuillotineBlock.hpp>

```

```

00017
00018 namespace stdair {
00019
00020 // //////////////////////////////////////
00021 GuillotineBlock::GuillotineBlock()
00022     : _key (DEFAULT_GUILLOTINE_NUMBER), _parent (NULL) {
00023     assert (false);
00024 }
00025
00026 // //////////////////////////////////////
00027 GuillotineBlock::GuillotineBlock (const GuillotineBlock&)
00028     : _key (DEFAULT_GUILLOTINE_NUMBER), _parent (NULL) {
00029     assert (false);
00030 }
00031
00032 // //////////////////////////////////////
00033 GuillotineBlock::
00034 GuillotineBlock (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00035 }
00036
00037 // //////////////////////////////////////
00038 GuillotineBlock::~GuillotineBlock() {
00039 }
00040
00041 // //////////////////////////////////////
00042 std::string GuillotineBlock::toString() const {
00043     std::ostringstream ostr;
00044     ostr << describeKey();
00045     return ostr.str();
00046 }
00047
00048 // //////////////////////////////////////
00049 void GuillotineBlock::
00050 initSnapshotBlocks (const SegmentCabinIndexMap_T& iSegmentCabinIndexMap,
00051                    const ValueTypeIndexMap_T& iValueTypeIndexMap) {
00052     _segmentCabinIndexMap = iSegmentCabinIndexMap;
00053     _valueTypesIndexMap = iValueTypeIndexMap;
00054
00055     unsigned int lNumberOfSegmentCabins = _segmentCabinIndexMap.size();
00056     unsigned int lNumberOfValueTypes = _valueTypesIndexMap.size();
00057
00058     // Initialise the snapshot blocks
00059     // Normally, the block includes snapshots from DTD MAX to DTD 0, thus
00060     // DEFAULT_MAX_DTD + 1 values. However, we would like to add the day
00061     // before DTD MAX (this value will be initialised to zero).
00062     _bookingSnapshotBlock.
00063         resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00064                [DEFAULT_MAX_DTD + 2]);
00065     _cancellationSnapshotBlock.
00066         resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00067                [DEFAULT_MAX_DTD + 2]);
00068     _productAndPriceOrientedBookingSnapshotBlock.
00069         resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00070                [DEFAULT_MAX_DTD + 2]);
00071     _availabilitySnapshotBlock.
00072         resize (boost::extents[lNumberOfSegmentCabins*lNumberOfValueTypes]
00073                [DEFAULT_MAX_DTD + 2]);
00074
00075 }
00076
00077 // //////////////////////////////////////
00078 const BlockIndex_T& GuillotineBlock::

```

```

00079  getBlockIndex (const MapKey_T& iKey) const {
00080      ValueTypeIndexMap_T::const_iterator itVTIdx =
00081          _valueTypesIndexMap.find (iKey);
00082      assert (itVTIdx != _valueTypesIndexMap.end());
00083      return itVTIdx->second;
00084  }
00085
00086  // //////////////////////////////////////
00087  const BlockNumber_T& GuillotineBlock::
00088  getBlockNumber (const SegmentCabin& iSegmentCabin) const {
00089      SegmentCabinIndexMap_T::const_iterator itSCIdx =
00090          _segmentCabinIndexMap.find (&iSegmentCabin);
00091      assert (itSCIdx != _segmentCabinIndexMap.end());
00092      return itSCIdx->second;
00093  }
00094
00095  // //////////////////////////////////////
00096  ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00097  getConstSegmentCabinDTDBookingSnapshotView (const BlockNumber_T iSCIdxBegin,
00098                                              const BlockNumber_T iSCIdxEnd,
00099                                              const DTD_T iDTD) const {
00100      const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00101      const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00102      const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00103
00104      return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
00105egin, lValueIdxEnd)][iDTD] ];
00106  }
00107
00108  // //////////////////////////////////////
00109  ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00110  getConstSegmentCabinDTDRangeBookingSnapshotView
00111  (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00112   const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00113      const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00114      const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00115      const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00116
00117      return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
00118egin, lValueIdxEnd)][iDTDBegin, iDTDEnd + 1] ];
00119  }
00120
00121  // //////////////////////////////////////
00122  SegmentCabinDTDSnapshotView_T GuillotineBlock::
00123  getSegmentCabinDTDBookingSnapshotView (const BlockNumber_T iSCIdxBegin,
00124                                          const BlockNumber_T iSCIdxEnd,
00125                                          const DTD_T iDTD) {
00126      const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00127      const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00128      const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00129
00130      return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
00131egin, lValueIdxEnd)][iDTD] ];
00132  }
00133
00134  // //////////////////////////////////////
00135  SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00136  getSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T iSCIdxBegin,
00137                                              const BlockNumber_T iSCIdxEnd,
00138                                              const DTD_T iDTDBegin,
00139                                              const DTD_T iDTDEnd) {
00140      const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();

```

```

00138     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00139     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00140
00141     return _bookingSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxB
egin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00142 }
00143
00144 // //////////////////////////////////////
00145 ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00146 getConstSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T iSCIdxBegin
n,
00147     const BlockNumber_T iSCIdxEnd,
00148     const DTD_T iDTD) const {
00149     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00150     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00151     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00152
00153     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
eIdxBegin, lValueIdxEnd)][iDTD] ];
00154 }
00155
00156 // //////////////////////////////////////
00157 ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00158 getConstSegmentCabinDTDRangeCancellationSnapshotView
00159 (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00160  const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00161     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00162     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00163     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00164
00165     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
eIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00166 }
00167
00168 // //////////////////////////////////////
00169 SegmentCabinDTDSnapshotView_T GuillotineBlock::
00170 getSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T iSCIdxBegin,
00171     const BlockNumber_T iSCIdxEnd,
00172     const DTD_T iDTD) {
00173     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00174     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00175     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00176
00177     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
eIdxBegin, lValueIdxEnd)][iDTD] ];
00178 }
00179
00180 // //////////////////////////////////////
00181 SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00182 getSegmentCabinDTDRangeCancellationSnapshotView(const BlockNumber_T iSCIdxBegin
,
00183     const BlockNumber_T iSCIdxEnd,
00184     const DTD_T iDTDBegin,
00185     const DTD_T iDTDEnd) {
00186     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00187     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00188     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00189
00190     return _cancellationSnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValu
eIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00191 }
00192

```

```

00193 ///////////////////////////////////////////////////////////////////
00194 ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00195 getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const
BlockNumber_T iSCIdxBegin,
00196                                     const BlockNumber_T iSCIdxEnd,
00197                                     const DTD_T iDTD) const {
00198     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00199     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00200     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00201
00202     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][iDTD] ];
00203 }
00204
00205 ///////////////////////////////////////////////////////////////////
00206 ConstSegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00207 getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView
00208 (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00209  const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00210     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00211     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00212     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00213
00214     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegi
n, iDTDEnd + 1)] ];
00215 }
00216
00217 ///////////////////////////////////////////////////////////////////
00218 SegmentCabinDTDSnapshotView_T GuillotineBlock::
00219 getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView (const
BlockNumber_T iSCIdxBegin,
00220                                     const BlockNumber_T iSCIdxEnd,
00221                                     const DTD_T iDTD) {
00222     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00223     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00224     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00225
00226     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][iDTD] ];
00227 }
00228
00229 ///////////////////////////////////////////////////////////////////
00230 SegmentCabinDTDRangeSnapshotView_T GuillotineBlock::
00231 getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView (const
BlockNumber_T iSCIdxBegin,
00232                                     const BlockNumber_T iSCIdxEnd,
00233                                     const DTD_T iDTDBegin,
00234                                     const DTD_T iDTDEnd) {
00235     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00236     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00237     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00238
00239     return _productAndPriceOrientedBookingSnapshotBlock [ boost::indices[
SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegi
n, iDTDEnd + 1)] ];
00240 }
00241
00242 ///////////////////////////////////////////////////////////////////
00243 ConstSegmentCabinDTDSnapshotView_T GuillotineBlock::
00244 getConstSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T iSCIdxBegi
n,

```

```

00245                                     const BlockNumber_T iSCIdxEnd,
00246                                     const DTD_T iDTD) const {
00247     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00248     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00249     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00250
00251     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][iDTD] ];
00252 }
00253
00254 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00255 ConstSegmentCabinDTRangeSnapshotView_T GuillotineBlock::
00256 getConstSegmentCabinDTRangeAvailabilitySnapshotView
00257 (const BlockNumber_T iSCIdxBegin, const BlockNumber_T iSCIdxEnd,
00258  const DTD_T iDTDBegin, const DTD_T iDTDEnd) const {
00259     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00260     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00261     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00262
00263     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00264 }
00265
00266 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00267 SegmentCabinDTRangeSnapshotView_T GuillotineBlock::
00268 getSegmentCabinDTRangeAvailabilitySnapshotView (const BlockNumber_T iSCIdxBegin,
00269                                                  const BlockNumber_T iSCIdxEnd,
00270                                                  const DTD_T iDTD) {
00271     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00272     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00273     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00274
00275     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][iDTD] ];
00276 }
00277
00278 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00279 SegmentCabinDTRangeSnapshotView_T GuillotineBlock::
00280 getSegmentCabinDTRangeAvailabilitySnapshotView(const BlockNumber_T iSCIdxBegin
00281 ,
00282                                                  const BlockNumber_T iSCIdxEnd,
00283                                                  const DTD_T iDTDBegin,
00284                                                  const DTD_T iDTDEnd) {
00285     const unsigned int lNbOfValueTypes = _valueTypesIndexMap.size();
00286     const unsigned int lValueIdxBegin = iSCIdxBegin * lNbOfValueTypes;
00287     const unsigned int lValueIdxEnd = (iSCIdxEnd + 1) * lNbOfValueTypes;
00288
00289     return _availabilitySnapshotBlock [ boost::indices[SnapshotBlockRange_T(lValueIdxBegin, lValueIdxEnd)][SnapshotBlockRange_T(iDTDBegin, iDTDEnd + 1)] ];
00290 }
00291
00292 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00293 void GuillotineBlock::serialisationImplementationExport() const {
00294     std::ostringstream ostr;
00295     boost::archive::text_oarchive oa (ostr);
00296     oa << *this;
00297 }
00298
00299 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00300 void GuillotineBlock::serialisationImplementationImport() {
00301     std::istringstream istr;
00302     boost::archive::text_iarchive ia (istr);

```



```

00302     ia >> *this;
00303 }
00304
00305 // //////////////////////////////////////
00306 template<class Archive>
00307 void GuillotineBlock::serialize (Archive& ioArchive,
00308                                  const unsigned int iFileVersion) {
00309     ioArchive & _key;
00310 }
00311
00312 }
00313

```

### 35.303 stdair/bom/GuillotineBlock.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/GuillotineBlockKey.hpp>
#include <stdair/bom/GuillotineBlockTypes.hpp>

```

#### Classes

- class [stdair::GuillotineBlock](#)  
Class representing the actual attributes for an airline guillotine-block.

#### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.304 GuillotineBlock.hpp

```

00001 #ifndef __STDAIR_BOM_GUILLOTINEBLOCK_HPP
00002 #define __STDAIR_BOM_GUILLOTINEBLOCK_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>

```

```
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/GuillotineBlockKey.hpp>
00014 #include <stdair/bom/GuillotineBlockTypes.hpp>
00015
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023     // Forward declarations
00024     class SegmentCabin;
00025
00026     class GuillotineBlock : public BomAbstract {
00027     public:
00028         template <typename BOM> friend class FacBom;
00029         friend class FacBomManager;
00030         friend class boost::serialization::access;
00031
00032         // ////////////////////////////////// Type definitions //////////////////////////////////
00033         typedef GuillotineBlockKey Key_T;
00034
00035     public:
00036         // ////////////////////////////////// Getters //////////////////////////////////
00037         const Key_T& getKey() const {
00038             return _key;
00039         }
00040
00041         BomAbstract* const getParent() const {
00042             return _parent;
00043         }
00044
00045         const GuillotineNumber_T& getGuillotineNumber() const {
00046             return _key.getGuillotineNumber();
00047         }
00048
00049         const HolderMap_T& getHolderMap() const {
00050             return _holderMap;
00051         }
00052
00053         const SegmentCabinIndexMap_T& getSegmentCabinIndexMap() const {
00054             return _segmentCabinIndexMap;
00055         }
00056
00057         const ValueTypeIndexMap_T& getValueTypeIndexMap() const {
00058             return _valueTypesIndexMap;
00059         }
00060
00061         const BlockIndex_T& getBlockIndex (const MapKey_T&) const;
00062
00063         const BlockNumber_T& getBlockNumber (const SegmentCabin&) const;
00064
00065         ConstSegmentCabinDTDSnapshotView_T
00066         getConstSegmentCabinDTDBookingSnapshotView (const BlockNumber_T,
00067                                                         const BlockNumber_T,
00068                                                         const DTD_T) const;
00069
00070         ConstSegmentCabinDTDRangeSnapshotView_T
00071         getConstSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T,
00072                                                             const BlockNumber_T,
```

```
00096                                     const DTD_T,
00097                                     const DTD_T) const;
00098
00101     SegmentCabinDTDSnapshotView_T
00102     getSegmentCabinDTDBookingSnapshotView (const BlockNumber_T,
00103                                             const BlockNumber_T, const DTD_T);
00104
00107     SegmentCabinDTDRangeSnapshotView_T
00108     getSegmentCabinDTDRangeBookingSnapshotView (const BlockNumber_T,
00109                                                  const BlockNumber_T,
00110                                                  const DTD_T, const DTD_T);
00111
00114     ConstSegmentCabinDTDSnapshotView_T
00115     getConstSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T,
00116                                                       const BlockNumber_T,
00117                                                       const DTD_T) const;
00118
00121     ConstSegmentCabinDTDRangeSnapshotView_T
00122     getConstSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T,
00123                                                           const BlockNumber_T,
00124                                                           const DTD_T,
00125                                                           const DTD_T) const;
00126
00129     SegmentCabinDTDSnapshotView_T
00130     getSegmentCabinDTDCancellationSnapshotView (const BlockNumber_T,
00131                                                  const BlockNumber_T,
00132                                                  const DTD_T);
00133
00136     SegmentCabinDTDRangeSnapshotView_T
00137     getSegmentCabinDTDRangeCancellationSnapshotView (const BlockNumber_T,
00138                                                       const BlockNumber_T,
00139                                                       const DTD_T, const DTD_T);
00140
00143     ConstSegmentCabinDTDSnapshotView_T
00144     getConstSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView
00145     (const BlockNumber_T, const BlockNumber_T, const DTD_T) const;
00146
00149     ConstSegmentCabinDTDRangeSnapshotView_T
00150     getConstSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView
00151     (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T) const;
00152
00155     SegmentCabinDTDSnapshotView_T
00156     getSegmentCabinDTDProductAndPriceOrientedBookingSnapshotView
00157     (const BlockNumber_T, const BlockNumber_T, const DTD_T);
00158
00161     SegmentCabinDTDRangeSnapshotView_T
00162     getSegmentCabinDTDRangeProductAndPriceOrientedBookingSnapshotView
00163     (const BlockNumber_T, const BlockNumber_T, const DTD_T, const DTD_T);
00164
00167     ConstSegmentCabinDTDSnapshotView_T
00168     getConstSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T,
00169                                                       const BlockNumber_T,
00170                                                       const DTD_T) const;
00171
00174     ConstSegmentCabinDTDRangeSnapshotView_T
00175     getConstSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T,
00176                                                           const BlockNumber_T,
00177                                                           const DTD_T,
00178                                                           const DTD_T) const;
00179
00182     SegmentCabinDTDSnapshotView_T
00183     getSegmentCabinDTDAvailabilitySnapshotView (const BlockNumber_T,
```

```

00184                                     const BlockNumber_T,
00185                                     const DTD_T);
00186
00187     SegmentCabinDTDRangeSnapshotView_T
00188     getSegmentCabinDTDRangeAvailabilitySnapshotView (const BlockNumber_T,
00189                                                         const BlockNumber_T,
00190                                                         const DTD_T, const DTD_T);
00191
00192 public:
00193     // //////////// Setters ////////////
00194     void initSnapshotBlocks (const SegmentCabinIndexMap_T&,
00195                             const ValueTypeIndexMap_T&);
00196
00197 public:
00198     // //////////// Display support methods ////////////
00199     void toStream (std::ostream& ioOut) const {
00200         ioOut << toString();
00201     }
00202
00203     void fromStream (std::istream& ioIn) {
00204     }
00205
00206     std::string toString() const;
00207
00208     const std::string describeKey() const {
00209         return _key.toString();
00210     }
00211
00212 public:
00213     // //////////// (Boost) Serialisation support methods ////////////
00214     template<class Archive>
00215     void serialize (Archive& ar, const unsigned int iFileVersion);
00216
00217 private:
00218     void serialisationImplementationExport() const;
00219     void serialisationImplementationImport();
00220
00221 protected:
00222     // //////////// Constructors and destructors ////////////
00223     GuillotineBlock (const Key_T&);
00224
00225     virtual ~GuillotineBlock();
00226
00227 private:
00228     GuillotineBlock();
00229
00230     GuillotineBlock (const GuillotineBlock&);
00231
00232 protected:
00233     // //////////// Attributes ////////////
00234     Key_T _key;
00235
00236     BomAbstract* _parent;
00237
00238     HolderMap_T _holderMap;
00239
00240     SegmentCabinIndexMap_T _segmentCabinIndexMap;
00241

```

```

00291     ValueTypeIndexMap_T _valueTypesIndexMap;
00292
00294     SnapshotBlock_T _bookingSnapshotBlock;
00295
00297     SnapshotBlock_T _cancellationSnapshotBlock;
00298
00300     SnapshotBlock_T _productAndPriceOrientedBookingSnapshotBlock;
00301
00303     SnapshotBlock_T _availabilitySnapshotBlock;
00304 };
00305
00306 }
00307 #endif // __STDAIR_BOM_GUILLOTINEBLOCK_HPP
00308

```

### 35.305 stdair/bom/GuillotineBlockKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/GuillotineBlockKey.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Functions

- template void [stdair::GuillotineBlockKey::serialize](#)< [ba::text\\_oarchive](#) > ([ba::text\\_oarchive](#) &, unsigned int)
- template void [stdair::GuillotineBlockKey::serialize](#)< [ba::text\\_iarchive](#) > ([ba::text\\_iarchive](#) &, unsigned int)

### 35.306 GuillotineBlockKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization

```

```

00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/basic/BasConst_BomDisplay.hpp>
00014 #include <stdair/bom/GuillotineBlockKey.hpp>
00015
00016 namespace stdair {
00017
00018 // //////////////////////////////////////
00019 GuillotineBlockKey::GuillotineBlockKey()
00020 : _guillotineNumber (DEFAULT_GUILLOTINE_NUMBER) {
00021     assert (false);
00022 }
00023
00024 // //////////////////////////////////////
00025 GuillotineBlockKey::
00026 GuillotineBlockKey (const GuillotineNumber_T& iGuillotineNumber)
00027 : _guillotineNumber (iGuillotineNumber) {
00028 }
00029
00030 // //////////////////////////////////////
00031 GuillotineBlockKey::GuillotineBlockKey (const GuillotineBlockKey& iKey)
00032 : _guillotineNumber (iKey._guillotineNumber) {
00033 }
00034
00035 // //////////////////////////////////////
00036 GuillotineBlockKey::~GuillotineBlockKey() {
00037 }
00038
00039 // //////////////////////////////////////
00040 void GuillotineBlockKey::toStream (std::ostream& ioOut) const {
00041     ioOut << "GuillotineBlockKey: " << toString();
00042 }
00043
00044 // //////////////////////////////////////
00045 void GuillotineBlockKey::fromStream (std::istream& ioIn) {
00046 }
00047
00048 // //////////////////////////////////////
00049 const std::string GuillotineBlockKey::toString() const {
00050     std::ostringstream oStr;
00051     oStr << _guillotineNumber;
00052     return oStr.str();
00053 }
00054
00055 // //////////////////////////////////////
00056 void GuillotineBlockKey::serialisationImplementationExport() const {
00057     std::ostringstream oStr;
00058     boost::archive::text_oarchive oa (oStr);
00059     oa << *this;
00060 }
00061
00062 // //////////////////////////////////////
00063 void GuillotineBlockKey::serialisationImplementationImport() {
00064     std::istringstream iStr;
00065     boost::archive::text_iarchive ia (iStr);
00066     ia >> *this;
00067 }
00068
00069 // //////////////////////////////////////

```

```

00070     template<class Archive>
00071     void GuillotineBlockKey::serialize (Archive& ioArchive,
00072                                         const unsigned int iFileVersion) {
00073         ioArchive & _guillotineNumber;
00074     }
00075
00076     // //////////////////////////////////////
00077     // Explicit template instantiation
00078     namespace ba = boost::archive;
00079     template void GuillotineBlockKey::
00080     serialize<ba::text_oarchive> (ba::text_oarchive&, unsigned int);
00081     template void GuillotineBlockKey::
00082     serialize<ba::text_iarchive> (ba::text_iarchive&, unsigned int);
00083     // //////////////////////////////////////
00084 }

```

### 35.307 stdair/bom/GuillotineBlockKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::GuillotineBlockKey](#)  
*Key of a given guillotine block, made of a guillotine number.*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.308 GuillotineBlockKey.hpp

```

00001 #ifndef __STDAIR_BOM_GUILLOTINEBLOCKKEY_HPP
00002 #define __STDAIR_BOM_GUILLOTINEBLOCKKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>

```

```
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00026     struct GuillotineBlockKey : public KeyAbstract {
00027         friend class boost::serialization::access;
00028
00029         // ////////// Constructors and destructors //////////
00030     private:
00034         GuillotineBlockKey();
00035
00036     public:
00040         GuillotineBlockKey (const GuillotineNumber_T&);
00041
00045         GuillotineBlockKey (const GuillotineBlockKey&);
00046
00050         ~GuillotineBlockKey();
00051
00052
00053     public:
00054         // ////////// Getters //////////
00056         const GuillotineNumber_T& getGuillotineNumber() const {
00057             return _guillotineNumber;
00058         }
00059
00060
00061     public:
00062         // ////////// Display support methods //////////
00068         void toStream (std::ostream& ioOut) const;
00069
00075         void fromStream (std::istream& ioIn);
00076
00086         const std::string toString() const;
00087
00088
00089     public:
00090         // ////////// (Boost) Serialisation support methods //////////
00094         template<class Archive>
00095         void serialize (Archive& ar, const unsigned int iFileVersion);
00096
00097     private:
00102         void serialisationImplementationExport() const;
00103         void serialisationImplementationImport();
00104
00105
00106     private:
00107         // ////////// Attributes //////////
00111         GuillotineNumber_T _guillotineNumber;
00112
00113     };
00114
00115 }
00116 #endif // __STDAIR_BOM_GUILLOTINEBLOCKKEY_HPP
```



## 35.309 stdair/bom/GuillotineBlockTypes.hpp File Reference

```
#include <map>
#include <list>
#include <boost/multi_array.hpp>
#include <stdair/bom/key_types.hpp>
```

## Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## Typedefs

- typedef std::list< GuillotineBlock \* > [stdair::GuillotineBlockList\\_T](#)
- typedef std::map< const MapKey\_T, GuillotineBlock \* > [stdair::GuillotineBlockMap\\_T](#)
- typedef std::map< const SegmentCabin \*, BlockNumber\_T > [stdair::SegmentCabinIndexMap\\_T](#)
- typedef std::map< const MapKey\_T, BlockIndex\_T > [stdair::ValueTypeIndexMap\\_T](#)

## 35.310 GuillotineBlockTypes.hpp

```
00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_GUILLOTINEBLOCKTYPES_HPP
00003 #define __STDAIR_BOM_GUILLOTINEBLOCKTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // BOOST
00012 #include <boost/multi_array.hpp>
00013 // StdAir
00014 #include <stdair/bom/key_types.hpp>
00015
00016 namespace stdair {
00017
00018 // Forward declarations
00019 class GuillotineBlock;
00020 class SegmentCabin;
00021
00022 // ////////////////////////////////////// Type definitions //////////////////////////////////////
00024 typedef std::list<GuillotineBlock*> GuillotineBlockList_T;
00025
00027 typedef std::map<const MapKey_T, GuillotineBlock*> GuillotineBlockMap_T;
00028
00030 typedef std::map<const SegmentCabin*, BlockNumber_T> SegmentCabinIndexMap_T;
```

```

00031
00033     typedef std::map<const MapKey_T, BlockIndex_T> ValueTypeIndexMap_T;
00034
00035 }
00036 #endif // __STDAIR_BOM_GUILLOTINEBLOCKTYPES_HPP
00037

```

### 35.311 stdair/bom/Inventory.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.312 Inventory.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/BomManager.hpp>
00010 #include <stdair/bom/Inventory.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012
00013 namespace stdair {
00014
00015     // //////////////////////////////////////
00016     Inventory::Inventory() : _key (DEFAULT_AIRLINE_CODE), _parent (NULL) {
00017         // That constructor is used by the serialisation process
00018     }
00019
00020     // //////////////////////////////////////
00021     Inventory::Inventory (const Inventory&)
00022         : _key (DEFAULT_AIRLINE_CODE), _parent (NULL) {
00023         assert (false);
00024     }
00025
00026     // //////////////////////////////////////
00027     Inventory::Inventory (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00028     }

```

```

00029
00030 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00031 Inventory::~Inventory() {
00032 }
00033
00034 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00035 std::string Inventory::toString() const {
00036     std::ostringstream ostr;
00037     ostr << describeKey();
00038     return ostr.str();
00039 }
00040
00041 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00042 FlightDate* Inventory::
00043 getFlightDate (const std::string& iFlightDateKeyStr) const {
00044     FlightDate* oFlightDate_ptr =
00045         BomManager::getObjectPtr<FlightDate> (*this, iFlightDateKeyStr);
00046     return oFlightDate_ptr;
00047 }
00048
00049 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00050 FlightDate* Inventory::
00051 getFlightDate (const FlightDateKey& iFlightDateKey) const {
00052     return getFlightDate (iFlightDateKey.toString());
00053 }
00054
00055 }
00056

```

### 35.313 stdair/bom/Inventory.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <stdair/stdair_inventory_types.hpp>

#include <stdair/bom/BomAbstract.hpp>

#include <stdair/bom/InventoryKey.hpp>

#include <stdair/bom/InventoryTypes.hpp>

```

#### Classes

- class [stdair::Inventory](#)  
Class representing the actual attributes for an airline inventory.

#### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.314 Inventory.hpp

```

00001 #ifndef __STDAIR_BOM_INVENTORY_HPP
00002 #define __STDAIR_BOM_INVENTORY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/InventoryKey.hpp>
00014 #include <stdair/bom/InventoryTypes.hpp>
00015
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023     class AirlineFeature;
00024     struct FlightDateKey;
00025     class FlightDate;
00026
00027     class Inventory : public BomAbstract {
00028     public:
00029         template <typename BOM> friend class FacBom;
00030         friend class FacBomManager;
00031         friend class boost::serialization::access;
00032
00033         // ////////////////////////////////// Type definitions //////////////////////////////////
00034         typedef InventoryKey Key_T;
00035
00036     public:
00037         // ////////////////////////////////// Getters //////////////////////////////////
00038         const Key_T& getKey() const {
00039             return _key;
00040         }
00041
00042         const AirlineCode_T& getAirlineCode() const {
00043             return _key.getAirlineCode();
00044         }
00045
00046         BomAbstract* const getParent() const {
00047             return _parent;
00048         }
00049
00050         const HolderMap_T& getHolderMap() const {
00051             return _holderMap;
00052         }
00053
00054         FlightDate* getFlightDate (const std::string& iFlightDateKeyStr) const;
00055
00056         FlightDate* getFlightDate (const FlightDateKey&) const;
00057
00058     };
00059
00060 }
00061
00062 
```

```

00093 public:
00094     // //////////// Setters ////////////
00096     void setAirlineFeature (const AirlineFeature* ioAirlineFeaturePtr) {
00097         _airlineFeature = ioAirlineFeaturePtr;
00098     }
00099
00100
00101 public:
00102     // //////////// Display support methods ////////////
00108     void toStream (std::ostream& ioOut) const {
00109         ioOut << toString();
00110     }
00111
00117     void fromStream (std::istream& ioIn) {
00118     }
00119
00123     std::string toString() const;
00124
00128     const std::string describeKey() const {
00129         return _key.toString();
00130     }
00131
00132
00133 public:
00134     // //////////// (Boost) Serialisation support methods ////////////
00138     template<class Archive>
00139     void serialize (Archive& ar, const unsigned int iFileVersion);
00140
00141 private:
00149     void serialisationImplementationExport() const;
00150     void serialisationImplementationImport();
00151
00152
00153 protected:
00154     // //////////// Constructors and destructors ////////////
00158     Inventory (const Key_T&);
00162     ~Inventory();
00163
00164 private:
00168     Inventory();
00172     Inventory (const Inventory&);
00173
00174
00175 protected:
00176     // //////////// Attributes ////////////
00180     Key_T _key;
00181
00185     BomAbstract* _parent;
00186
00190     const AirlineFeature* _airlineFeature;
00191
00195     HolderMap_T _holderMap;
00196 };
00197
00198 }
00199 #endif // __STDAIR_BOM_INVENTORY_HPP
00200

```

**35.315 stdair/bom/InventoryKey.cpp File Reference**

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/InventoryKey.hpp>
```

**Namespaces**

- namespace `stdair`  
Handle on the `StdAir` library context.

**Functions**

- template void `stdair::InventoryKey::serialize< ba::text_oarchive >` (ba::text\_oarchive &, unsigned int)
- template void `stdair::InventoryKey::serialize< ba::text_iarchive >` (ba::text\_iarchive &, unsigned int)

**35.316 InventoryKey.cpp**

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/InventoryKey.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 InventoryKey::InventoryKey() : _airlineCode (DEFAULT_AIRLINE_CODE) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 InventoryKey::InventoryKey (const AirlineCode_T& iAirlineCode)
00024     : _airlineCode (iAirlineCode) {
00025 }
00026
```

```

00027 ///////////////////////////////////////////////////////////////////
00028 InventoryKey::InventoryKey (const InventoryKey& iKey)
00029 : _airlineCode (iKey._airlineCode) {
00030 }
00031
00032 ///////////////////////////////////////////////////////////////////
00033 InventoryKey::~InventoryKey() {
00034 }
00035
00036 ///////////////////////////////////////////////////////////////////
00037 void InventoryKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "InventoryKey: " << toString();
00039 }
00040
00041 ///////////////////////////////////////////////////////////////////
00042 void InventoryKey::fromStream (std::istream& ioIn) {
00043 }
00044
00045 ///////////////////////////////////////////////////////////////////
00046 const std::string InventoryKey::toString() const {
00047     std::ostringstream ostr;
00048     ostr << _airlineCode;
00049     return ostr.str();
00050 }
00051
00052 ///////////////////////////////////////////////////////////////////
00053 void InventoryKey::serialisationImplementationExport() const {
00054     std::ostringstream ostr;
00055     boost::archive::text_oarchive oa (ostr);
00056     oa << *this;
00057 }
00058
00059 ///////////////////////////////////////////////////////////////////
00060 void InventoryKey::serialisationImplementationImport() {
00061     std::istringstream istr;
00062     boost::archive::text_iarchive ia (istr);
00063     ia >> *this;
00064 }
00065
00066 ///////////////////////////////////////////////////////////////////
00067 template<class Archive>
00068 void InventoryKey::serialize (Archive& ioArchive,
00069                             const unsigned int iFileVersion) {
00070     ioArchive & _airlineCode;
00071 }
00072
00073 ///////////////////////////////////////////////////////////////////
00074 // Explicit template instantiation
00075 namespace ba = boost::archive;
00076 template void InventoryKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00077                                                         unsigned int);
00078 template void InventoryKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00079                                                         unsigned int);
00080 ///////////////////////////////////////////////////////////////////
00081
00082 }

```

### 35.317 stdair/bom/InventoryKey.hpp File Reference

```
#include <iosfwd>
```

```
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

#### Classes

- struct `stdair::InventoryKey`  
*Key of a given inventory, made of the airline code.*

#### Namespaces

- namespace `boost`  
*Forward declarations.*
- namespace `boost::serialization`
- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.318 InventoryKey.hpp

```
00001 #ifndef __STDAIR_BOM_INVENTORYKEY_HPP
00002 #define __STDAIR_BOM_INVENTORYKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00026     struct InventoryKey : public KeyAbstract {
00027         friend class boost::serialization::access;
00028
00029         // ////////// Constructors and destructors //////////
00030     private:
00031         InventoryKey();
00032
00033     public:
00034         // ////////// Construction //////////
00035         InventoryKey (const AirlineCode_T& iAirlineCode);
00036
00037         InventoryKey (const InventoryKey&);
00038
00039     };
00040
00041 }
```



```

00051     ~InventoryKey();
00052
00053
00054     // //////////// Getters ////////////
00058     const AirlineCode_T& getAirlineCode() const {
00059         return _airlineCode;
00060     }
00061
00062
00063 public:
00064     // //////////// Display support methods ////////////
00070     void toStream (std::ostream& ioOut) const;
00071
00077     void fromStream (std::istream& ioIn);
00078
00088     const std::string toString() const;
00089
00090
00091 public:
00092     // //////////// (Boost) Serialisation support methods ////////////
00096     template<class Archive>
00097     void serialize (Archive& ar, const unsigned int iFileVersion);
00098
00099 private:
00104     void serialisationImplementationExport() const;
00105     void serialisationImplementationImport();
00106
00107
00108 private:
00109     // ////////////////////////////////// Attributes //////////////////////////////////
00113     AirlineCode_T _airlineCode;
00114 };
00115
00116 }
00117 #endif // __STDAIR_BOM_INVENTORYKEY_HPP

```

### 35.319 stdair/bom/InventoryTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< Inventory \* > [stdair::InventoryList\\_T](#)
- typedef std::map< const MapKey\_T, Inventory \* > [stdair::InventoryMap\\_T](#)

**35.320 InventoryTypes.hpp**

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_INVENTORYTYPES_HPP
00003 #define __STDAIR_BOM_INVENTORYTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // Stdair
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class Inventory;
00018
00019     typedef std::list<Inventory*> InventoryList_T;
00020
00021     typedef std::map<const MapKey_T, Inventory*> InventoryMap_T;
00022
00023 }
00024
00025 #endif // __STDAIR_BOM_INVENTORYTYPES_HPP

```

**35.321 stdair/bom/key\_types.hpp File Reference**

```

#include <string>
#include <list>

```

**Namespaces**

- namespace [stdair](#)  
Handle on the StdAir library context.

**Typedefs**

- typedef std::string [stdair::MapKey\\_T](#)
- typedef std::list< std::string > [stdair::KeyList\\_T](#)

**35.322 key\_types.hpp**

```

00001 #ifndef __STDAIR_BOM_KEY_TYPES_HPP
00002 #define __STDAIR_BOM_KEY_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>

```

```

00009 #include <list>
00010
00011 namespace stdair {
00012
00013     // ////////////////////////////////// Type definitions //////////////////////////////////
00015     typedef std::string MapKey_T;
00016
00018     typedef std::list<std::string> KeyList_T;
00019
00020 }
00021 #endif // __STDAIR_BOM_KEY_TYPES_HPP

```

### 35.323 stdair/bom/KeyAbstract.hpp File Reference

```
#include <iosfwd>
```

```
#include <string>
```

#### Classes

- struct [stdair::KeyAbstract](#)

*Base class for the keys of Business Object Model (BOM) layer.*

*Note that that key allows to differentiate two objects at the same level only. For instance, the segment-date key allows to differentiate two segment-dates under a given flight-date, but does not allow to differentiate two segment-dates in general.*

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

#### Functions

- template<class charT , class traits >  
std::basic\_ostream< charT, traits > & [operator<<](#) (std::basic\_ostream< charT, traits > &ioOut, const [stdair::KeyAbstract](#) &iKey)
- template<class charT , class traits >  
std::basic\_istream< charT, traits > & [operator>>](#) (std::basic\_istream< charT, traits > &ioln, [stdair::KeyAbstract](#) &iKey)

#### 35.323.1 Function Documentation

**35.323.1.1** template<class charT , class traits > std::basic\_ostream<charT, traits>&  
operator<< ( std::basic\_ostream< charT, traits > & ioOut, const  
stdair::KeyAbstract & iKey ) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 69 of file [KeyAbstract.hpp](#).

References [stdair::KeyAbstract::toStream\(\)](#).

**35.323.1.2** `template<class charT , class traits > std::basic_istream<charT, traits>&  
operator>> ( std::basic_istream< charT, traits > & ioIn, stdair::KeyAbstract &  
ioKey ) [inline]`

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 97 of file [KeyAbstract.hpp](#).

References [stdair::KeyAbstract::fromStream\(\)](#).

### 35.324 KeyAbstract.hpp

```

00001
00007 #ifndef __STDAIR_BOM_KEYABSTRACT_HPP
00008 #define __STDAIR_BOM_KEYABSTRACT_HPP
00009
00010 // //////////////////////////////////////
00011 // Import section
00012 // //////////////////////////////////////
00013 // STL
00014 #include <iosfwd>
00015 #include <string>
00016
00017 namespace stdair {
00018
00026     struct KeyAbstract {
00027     public:
00028
00029         // ////////// Display support methods //////////
00034         virtual void toStream (std::ostream& ioOut) const {}
00035
00040         virtual void fromStream (std::istream& ioIn) {}
00041
00051         virtual const std::string toString() const { return std::string("Hello!"); }
00052
00056         virtual ~KeyAbstract() {}
00057     };
00058
00059 }
00060
00066 template <class charT, class traits>
00067 inline
00068 std::basic_ostream<charT, traits>&
00069 operator<< (std::basic_ostream<charT, traits>& ioOut,
00070             const stdair::KeyAbstract& iKey) {
00076     std::basic_ostringstream<charT, traits> ostr;
00077     ostr.copyfmt (ioOut);
00078     ostr.width (0);
00079
00080     // Fill string stream
00081     iKey.toStream (ostr);
00082
00083     // Print string stream

```

```

00084   ioOut << ostr.str();
00085
00086   return ioOut;
00087 }
00088
00094 template <class charT, class traits>
00095 inline
00096 std::basic_istream<charT, traits>&
00097 operator>> (std::basic_istream<charT, traits>& ioIn,
00098             stdair::KeyAbstract& ioKey) {
00099     // Fill Key object with input stream
00100     ioKey.fromStream (ioIn);
00101     return ioIn;
00102 }
00103
00104 #endif // __STDAIR_BOM_KEYABSTRACT_HPP

```

### 35.325 stdair/bom/LegCabin.cpp File Reference

```

#include <cassert>
#include <sstream>

#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/LegCabin.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.326 LegCabin.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/BasConst_BomDisplay.hpp>
00011 #include <stdair/bom/BomManager.hpp>
00012 #include <stdair/bom/LegDate.hpp>
00013 #include <stdair/bom/LegCabin.hpp>
00014
00015

```

```

00016 namespace stdair {
00017
00018 // //////////////////////////////////////
00019 LegCabin::LegCabin() : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00020     assert (false);
00021 }
00022
00023 // //////////////////////////////////////
00024 LegCabin::LegCabin (const LegCabin&)
00025 : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00026     assert (false);
00027 }
00028
00029 // //////////////////////////////////////
00030 LegCabin::LegCabin (const Key_T& iKey)
00031 : _key (iKey), _parent (NULL),
00032   _offeredCapacity (DEFAULT_CABIN_CAPACITY),
00033   _physicalCapacity (DEFAULT_CABIN_CAPACITY),
00034   _soldSeat (DEFAULT_CLASS_NB_OF_BOOKINGS),
00035   _committedSpace (DEFAULT_COMMITTED_SPACE),
00036   _availabilityPool (DEFAULT_AVAILABILITY),
00037   _availability (DEFAULT_AVAILABILITY),
00038   _currentBidPrice (DEFAULT_BID_PRICE),
00039   _bidPriceVector (DEFAULT_BID_PRICE_VECTOR) {
00040 }
00041
00042 // //////////////////////////////////////
00043 LegCabin::~LegCabin() {
00044 }
00045
00046 // //////////////////////////////////////
00047 void LegCabin::setCapacities (const CabinCapacity_T& iCapacity) {
00048     _offeredCapacity = iCapacity;
00049     _physicalCapacity = iCapacity;
00050     setAvailabilityPool (iCapacity - _committedSpace);
00051 }
00052
00053 // //////////////////////////////////////
00054 const MapKey_T LegCabin::getFullerKey() const {
00055     const LegDate& lLegDate = BomManager::getParent<LegDate> (*this);
00056     const MapKey_T oFullKey =
00057         lLegDate.describeKey() + DEFAULT_KEY_FLD_DELIMITER + getCabinCode();
00058     return oFullKey;
00059 }
00060
00061 // //////////////////////////////////////
00062 std::string LegCabin::toString() const {
00063     std::ostringstream oStr;
00064     oStr << describeKey();
00065     return oStr.str();
00066 }
00067
00068 // //////////////////////////////////////
00069 const std::string LegCabin::displayVirtualClassList () const {
00070     std::ostringstream oStr;
00071
00072     for (VirtualClassList_T::const_iterator itVC = _virtualClassList.begin();
00073          itVC != _virtualClassList.end(); ++itVC) {
00074         const VirtualClassStruct& lVC = *itVC;
00075         oStr << std::endl << "Yield: " << std::fixed << std::setprecision (2)
00076             << lVC.getYield()

```

```

00078         << ", Protection: " << std::fixed << std::setprecision (2)
00079         << lVC.getCumulatedProtection()
00080         << ", Booking limit: " << std::fixed << std::setprecision (2)
00081         << lVC.getCumulatedBookingLimit();
00082     }
00083
00084     return oStr.str();
00085 }
00086
00087 // //////////////////////////////////////
00088 void LegCabin::updateFromReservation (const NbOfBookings_T& iNbOfBookings) {
00089     _committedSpace += iNbOfBookings;
00090     _availabilityPool = _offeredCapacity - _committedSpace;
00091 }
00092
00093 // //////////////////////////////////////
00094 void LegCabin::updateCurrentBidPrice() {
00095     const unsigned short lAvailabilityPool =
00096         static_cast<unsigned short> (std::floor (_availabilityPool));
00097
00098     if (lAvailabilityPool >= 1) {
00099         const unsigned short lBidPriceVectorSize = _bidPriceVector.size();
00100         if (lBidPriceVectorSize >= lAvailabilityPool) {
00101             _currentBidPrice = _bidPriceVector.at (lAvailabilityPool - 1);
00102         }
00103     }
00104 }
00105
00106 // //////////////////////////////////////
00107 void LegCabin::addDemandInformation (const YieldValue_T& iYield,
00108                                     const MeanValue_T& iMeanValue,
00109                                     const StdDevValue_T& iStdDevValue) {
00110     //
00111     const int lYieldLevel =
00112         static_cast<int> (std::floor (iYield + 0.5));
00113
00114     //
00115     YieldLevelDemandMap_T::iterator itDemand =
00116         _yieldLevelDemandMap.find (lYieldLevel);
00117
00118     if (itDemand == _yieldLevelDemandMap.end()) {
00119         MeanStdDevPair_T lMeanStdDevPair (iMeanValue, iStdDevValue);
00120         const bool hasInsertBeenSuccessful = _yieldLevelDemandMap.
00121             insert (YieldLevelDemandMap_T::value_type (lYieldLevel,
00122                                                         lMeanStdDevPair)).second;
00123         assert (hasInsertBeenSuccessful == true);
00124     } else {
00125         //
00126         MeanStdDevPair_T& lMeanStdDevPair = itDemand->second;
00127         MeanValue_T lMeanValue = iMeanValue + lMeanStdDevPair.first;
00128         StdDevValue_T lStdDevValue = iStdDevValue * iStdDevValue + lMeanStdDevPair.
00129             second * lMeanStdDevPair.second;
00130         lStdDevValue = std::sqrt (lStdDevValue);
00131
00132         //
00133         lMeanStdDevPair = MeanStdDevPair_T (lMeanValue, lStdDevValue);
00134     }
00135 }
00136
00137 }
00138

```

**35.327 stdair/bom/LegCabin.hpp File Reference**

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/LegCabinKey.hpp>
#include <stdair/bom/LegCabinTypes.hpp>
#include <stdair/bom/VirtualClassStruct.hpp>
#include <stdair/bom/VirtualClassTypes.hpp>

```

**Classes**

- class [stdair::LegCabin](#)  
*Class representing the actual attributes for an airline leg-cabin.*

**Namespaces**

- namespace [stdair](#)  
*Handle on the StdAir library context.*

**35.328 LegCabin.hpp**

```

00001 #ifndef __STDAIR_BOM_LEGCABIN_HPP
00002 #define __STDAIR_BOM_LEGCABIN_HPP
00003 // //////////////////////////////////////
00004 // Import section
00005 // //////////////////////////////////////
00006 // STL
00007 #include <iosfwd>
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/stdair_maths_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/LegCabinKey.hpp>
00014 #include <stdair/bom/LegCabinTypes.hpp>
00015 #include <stdair/bom/VirtualClassStruct.hpp>
00016 #include <stdair/bom/VirtualClassTypes.hpp>
00017
00018 namespace stdair {
00019
00024     class LegCabin : public BomAbstract {
00025         template <typename BOM> friend class FacBom;
00026         friend class FacBomManager;
00027
00028     public:

```



```
00029 // //////////// Type definitions ////////////
00033 typedef LegCabinKey Key_T;
00034
00035 public:
00036 // //////////// Getters ////////////
00040 const Key_T& getKey() const {
00041     return _key;
00042 }
00043
00047 BomAbstract* const getParent() const {
00048     return _parent;
00049 }
00050
00054 const CabinCode_T& getCabinCode() const {
00055     return _key.getCabinCode();
00056 }
00057
00065 const MapKey_T getFullerKey() const;
00066
00070 const HolderMap_T& getHolderMap() const {
00071     return _holderMap;
00072 }
00073
00075 const CabinCapacity_T& getOfferedCapacity() const {
00076     return _offeredCapacity;
00077 }
00078
00080 const CabinCapacity_T& getPhysicalCapacity() const {
00081     return _physicalCapacity;
00082 }
00083
00085 const NbOfSeats_T& getSoldSeat() const {
00086     return _soldSeat;
00087 }
00088
00090 const CommittedSpace_T& getCommittedSpace() const {
00091     return _committedSpace;
00092 }
00093
00095 const Availability_T& getAvailabilityPool() const {
00096     return _availabilityPool;
00097 }
00098
00100 const Availability_T& getAvailability() const {
00101     return _availability;
00102 }
00103
00105 const BidPrice_T& getCurrentBidPrice() const {
00106     return _currentBidPrice;
00107 }
00108
00110 const BidPrice_T& getPreviousBidPrice() const {
00111     return _previousBidPrice;
00112 }
00113
00115 const BidPriceVector_T& getBidPriceVector() const {
00116     return _bidPriceVector;
00117 }
00118
00120 const CapacityAdjustment_T& getRegradeAdjustment() const {
00121     return _dcsRegrade;
00122 }
```

```
00123
00125     const AuthorizationLevel_T& getAuthorizationLevel() const {
00126         return _au;
00127     }
00128
00130     const UPR_T& getUPR() const {
00131         return _upr;
00132     }
00133
00135     const Availability_T& getNetAvailability() const {
00136         return _nav;
00137     }
00138
00140     const Availability_T& getGrossAvailability() const {
00141         return _gav;
00142     }
00143
00145     const OverbookingRate_T& getAvgCancellationPercentage() const {
00146         return _acp;
00147     }
00148
00150     const NbOfSeats_T& getETB() const {
00151         return _etb;
00152     }
00153
00155     const NbOfSeats_T& getStaffNbOfSeats() const {
00156         return _staffNbOfBookings;
00157     }
00158
00160     const NbOfSeats_T& getWLNbOfSeats() const {
00161         return _wlNbOfBookings;
00162     }
00163
00165     const NbOfSeats_T& getGroupNbOfSeats() const {
00166         return _groupNbOfBookings;
00167     }
00168
00170     VirtualClassList_T& getVirtualClassList() {
00171         return _virtualClassList;
00172     }
00173
00175     BidPriceVector_T& getBidPriceVector() {
00176         return _bidPriceVector;
00177     }
00178
00179
00181     const YieldLevelDemandMap_T getYieldLevelDemandMap() {
00182         return _yieldLevelDemandMap;
00183     }
00184
00185
00186 public:
00187     // //////////// Setters ////////////
00189     void setCapacities (const CabinCapacity_T& iCapacity);
00190
00192     void setSoldSeat (const NbOfSeats_T& iSoldSeat) {
00193         _soldSeat = iSoldSeat;
00194     }
00195
00197     void setCommittedSpace (const CommittedSpace_T& iCommittedSpace) {
00198         _committedSpace = iCommittedSpace;
00199     }
```

```
00200
00202     void setAvailabilityPool (const Availability_T& iAvailabilityPool) {
00203         _availabilityPool = iAvailabilityPool;
00204     }
00205
00207     void setAvailability (const Availability_T& iAvailability) {
00208         _availability = iAvailability;
00209     }
00210
00212     void setCurrentBidPrice (const BidPrice_T& iBidPrice) {
00213         _currentBidPrice = iBidPrice;
00214     }
00215
00217     void setPreviousBidPrice (const BidPrice_T& iBidPrice) {
00218         _previousBidPrice = iBidPrice;
00219     }
00220
00222     void updatePreviousBidPrice () {
00223         _previousBidPrice = _currentBidPrice;
00224     }
00225
00227     void setRegradeAdjustment (const CapacityAdjustment_T& iRegradeAdjustment) {
00228         _dcsRegrade = iRegradeAdjustment;
00229     }
00230
00232     void setAuthorizationLevel (const AuthorizationLevel_T& iAU) {
00233         _au = iAU;
00234     }
00235
00237     void setUPR (const UPR_T& iUPR) {
00238         _upr = iUPR;
00239     }
00240
00242     void setNetAvailability (const Availability_T& iNAV) {
00243         _nav = iNAV;
00244     }
00245
00247     void setGrossAvailability (const Availability_T& iGAV) {
00248         _gav = iGAV;
00249     }
00250
00252     void setAvgCancellationPercentage (const OverbookingRate_T& iACP) {
00253         _acp = iACP;
00254     }
00255
00257     void setETB (const NbOfSeats_T& iETB) {
00258         _etb = iETB;
00259     }
00260
00262     void setStaffNbOfSeats (const NbOfSeats_T& iStaffSeats) {
00263         _staffNbOfBookings = iStaffSeats;
00264     }
00265
00267     void setWLNbOfSeats (const NbOfSeats_T& iWLSeats) {
00268         _wlNbOfBookings = iWLSeats;
00269     }
00270
00272     void setGroupNbOfSeats (const NbOfSeats_T& iGroupSeats) {
00273         _groupNbOfBookings = iGroupSeats;
00274     }
00275
00277     void updateCurrentBidPrice();
```

```
00278
00279
00280 public:
00281     // //////////// Display support methods ////////////
00286     void toStream (std::ostream& ioOut) const {
00287         ioOut << toString();
00288     }
00289
00294     void fromStream (std::istream& ioIn) {
00295     }
00296
00300     std::string toString() const;
00301
00305     const std::string describeKey() const {
00306         return _key.toString();
00307     }
00308
00312     const std::string displayVirtualClassList() const;
00313
00314
00315 public:
00316     // //////////// Business methods ////////////
00320     void updateFromReservation (const NbOfBookings_T&);
00321
00325     void addVirtualClass (const VirtualClassStruct& iVC) {
00326         _virtualClassList.push_back (iVC);
00327     }
00328
00332     void emptyVirtualClassList() {
00333         _virtualClassList.clear();
00334     }
00335
00339     void emptyBidPriceVector() {
00340         _bidPriceVector.clear();
00341     }
00342
00346     void addDemandInformation (const YieldValue_T&, const MeanValue_T&,
00347                               const StdDevValue_T&);
00348
00352     void emptyYieldLevelDemandMap() {
00353         _yieldLevelDemandMap.clear();
00354     }
00355
00356
00357 protected:
00358     // //////////// Constructors and destructors ////////////
00362     LegCabin (const Key_T&);
00366     ~LegCabin();
00367
00368 private:
00372     LegCabin();
00376     LegCabin (const LegCabin&);
00377
00378
00379
00380 protected:
00381     // //////////// Attributes ////////////
00385     Key_T _key;
00386
00390     BomAbstract* _parent;
00391
00395     HolderMap_T _holderMap;
```

```

00396
00398     CabinCapacity_T _offeredCapacity;
00399
00401     CabinCapacity_T _physicalCapacity;
00402
00404     NbOfSeats_T _soldSeat;
00405
00406     /* Committed space. */
00407     CommittedSpace_T _committedSpace;
00408
00410     Availability_T _availabilityPool;
00411
00413     Availability_T _availability;
00414
00416     BidPrice_T _currentBidPrice;
00417
00419     BidPrice_T _previousBidPrice;
00420
00422     BidPriceVector_T _bidPriceVector;
00423
00425     VirtualClassList_T _virtualClassList;
00426
00428     YieldLevelDemandMap_T _yieldLevelDemandMap;
00429
00430
00431 public:
00433     CapacityAdjustment_T _dcsRegrade;
00434
00436     AuthorizationLevel_T _au;
00437
00439     UPR_T _upr;
00440
00442     Availability_T _nav;
00443
00445     Availability_T _gav;
00446
00448     OverbookingRate_T _acp;
00449
00451     NbOfSeats_T _etb;
00452
00454     NbOfSeats_T _staffNbOfBookings;
00455
00457     NbOfSeats_T _wlNbOfBookings;
00458
00460     NbOfSeats_T _groupNbOfBookings;
00461 };
00462
00463 }
00464 #endif // __STDAIR_BOM_LEGCABIN_HPP
00465

```

### 35.329 stdair/bom/LegCabinKey.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <boost/archive/text_iarchive.hpp>

#include <boost/archive/text_oarchive.hpp>

```

```
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/LegCabinKey.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.330 LegCabinKey.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/LegCabinKey.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 LegCabinKey::LegCabinKey() : _cabinCode (DEFAULT_CABIN_CODE) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 LegCabinKey::LegCabinKey (const CabinCode_T& iCabinCode)
00024     : _cabinCode (iCabinCode) {
00025 }
00026
00027 // //////////////////////////////////////
00028 LegCabinKey::LegCabinKey (const LegCabinKey& iKey)
00029     : _cabinCode (iKey._cabinCode) {
00030 }
00031
00032 // //////////////////////////////////////
00033 LegCabinKey::~LegCabinKey () {
00034 }
00035
00036 // //////////////////////////////////////
00037 void LegCabinKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "LegCabinKey: " << toString() << std::endl;
00039 }
00040
00041 // //////////////////////////////////////
00042 void LegCabinKey::fromStream (std::istream& ioIn) {
00043 }
00044
00045 // //////////////////////////////////////
```

```

00046  const std::string LegCabinKey::toString() const {
00047      std::ostringstream ostr;
00048      ostr << _cabinCode;
00049      return ostr.str();
00050  }
00051
00052  // //////////////////////////////////////
00053  void LegCabinKey::serialisationImplementationExport() const {
00054      std::ostringstream ostr;
00055      boost::archive::text_oarchive oa (ostr);
00056      oa << *this;
00057  }
00058
00059  // //////////////////////////////////////
00060  void LegCabinKey::serialisationImplementationImport() {
00061      std::istreamstream istr;
00062      boost::archive::text_iarchive ia (istr);
00063      ia >> *this;
00064  }
00065
00066  // //////////////////////////////////////
00067  template<class Archive>
00068  void LegCabinKey::serialize (Archive& ioArchive,
00069                              const unsigned int iFileVersion) {
00074      ioArchive & _cabinCode;
00075  }
00076
00077 }

```

### 35.331 stdair/bom/LegCabinKey.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <stdair/stdair_basic_types.hpp>

#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::LegCabinKey](#)  
*Key of a given leg-cabin, made of a cabin code (only).*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.332 LegCabinKey.hpp

```

00001 #ifndef __STDAIR_BOM_LEGCABINKEY_HPP
00002 #define __STDAIR_BOM_LEGCABINKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00026     struct LegCabinKey : public KeyAbstract {
00027         friend class boost::serialization::access;
00028
00029         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00030     private:
00031         LegCabinKey();
00032
00033     public:
00034         LegCabinKey (const CabinCode_T& iCabinCode);
00035
00036         LegCabinKey (const LegCabinKey&);
00037
00038         ~LegCabinKey();
00039
00040     public:
00041         // ////////////////////////////////// Getters //////////////////////////////////
00042         const CabinCode_T& getCabinCode() const {
00043             return _cabinCode;
00044         }
00045
00046     public:
00047         // ////////////////////////////////// Display support methods //////////////////////////////////
00048         void toStream (std::ostream& ioOut) const;
00049
00050         void fromStream (std::istream& ioIn);
00051
00052         const std::string toString() const;
00053
00054     public:
00055         // ////////////////////////////////// (Boost) Serialisation support methods //////////////////////////////////
00056         template<class Archive>
00057         void serialize (Archive& ar, const unsigned int iFileVersion);
00058
00059     private:
00060         void serialisationImplementationExport() const;
00061         void serialisationImplementationImport();

```



```

00104
00105
00106     private:
00107         // ////////////////////////////////// Attributes //////////////////////////////////
00111         CabinCode_T _cabinCode;
00112     };
00113
00114 }
00115 #endif // __STDAIR_BOM_LEGCABINKEY_HPP

```

### 35.333 stdair/bom/LegCabinTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< LegCabin \* > [stdair::LegCabinList\\_T](#)
- typedef std::map< const MapKey\_T, LegCabin \* > [stdair::LegCabinMap\\_T](#)

### 35.334 LegCabinTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_LEGCABINTYPES_HPP
00003 #define __STDAIR_BOM_LEGCABINTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class LegCabin;
00018
00020     typedef std::list<LegCabin*> LegCabinList_T;
00021
00023     typedef std::map<const MapKey_T, LegCabin*> LegCabinMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_LEGCABINTYPES_HPP

```

00027

**35.335 stdair/bom/LegDate.cpp File Reference**

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/LegDate.hpp>
```

**Namespaces**

- namespace [stdair](#)

*Handle on the StdAir library context.*

**35.336 LegDate.cpp**

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/FlightDate.hpp>
00012 #include <stdair/bom/LegCabin.hpp>
00013 #include <stdair/bom/LegDate.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 LegDate::LegDate() : _key (DEFAULT_ORIGIN), _parent (NULL) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 LegDate::LegDate (const LegDate&) : _key (DEFAULT_ORIGIN), _parent (NULL) {
00024     assert (false);
00025 }
00026
00027 // //////////////////////////////////////
00028 LegDate::LegDate (const Key_T& iKey)
00029     : _key (iKey), _parent (NULL), _distance (DEFAULT_DISTANCE_VALUE),
00030       _capacity (DEFAULT_CABIN_CAPACITY) {
```

```

00031     }
00032
00033     // //////////////////////////////////////
00034     LegDate::~LegDate () {
00035     }
00036
00037     // //////////////////////////////////////
00038     const AirlineCode_T& LegDate::getAirlineCode() const {
00039         const FlightDate* lFlightDate_ptr =
00040             static_cast<const FlightDate*> (getParent());
00041         assert (lFlightDate_ptr != NULL);
00042         return lFlightDate_ptr->getAirlineCode();
00043     }
00044
00045     // //////////////////////////////////////
00046     std::string LegDate::toString() const {
00047         std::ostringstream oStr;
00048         oStr << describeKey();
00049         return oStr.str();
00050     }
00051
00052     // //////////////////////////////////////
00053     LegCabin* LegDate::getLegCabin (const std::string& iLegCabinKeyStr) const {
00054         LegCabin* oLegCabin_ptr =
00055             BomManager::getObjectPtr<LegCabin> (*this, iLegCabinKeyStr);
00056         return oLegCabin_ptr;
00057     }
00058
00059     // //////////////////////////////////////
00060     LegCabin* LegDate::getLegCabin (const LegCabinKey& iLegCabinKey) const {
00061         return getLegCabin (iLegCabinKey.toString());
00062     }
00063
00064     // //////////////////////////////////////
00065     const Duration_T LegDate::getTimeOffset() const {
00066         // TimeOffset = (OffTime - BoardingTime) + (OffDate - BoardingDate) * 24
00067         //               - ElapsedTime
00068         Duration_T oTimeOffset = (_offTime - _boardingTime);
00069
00070         const DateOffset_T& lDateOffset = getDateOffset();
00071
00072         const Duration_T lDateOffsetInHours (lDateOffset.days() * 24, 0, 0);
00073
00074         oTimeOffset += lDateOffsetInHours - _elapsedTime;
00075
00076         return oTimeOffset;
00077     }
00078
00079     // //////////////////////////////////////
00080     void LegDate::setElapsedTime (const Duration_T& iElapsedTime) {
00081         // Set Elapsed time
00082         _elapsedTime = iElapsedTime;
00083
00084         // Update distance according to the mean plane speed
00085         updateDistanceFromElapsedTime();
00086     }
00087
00088     // //////////////////////////////////////
00089     void LegDate::updateDistanceFromElapsedTime() {
00090         //
00091         const double lElapseInHours =
00092             static_cast<const double> (_elapsedTime.hours());

```

```

00093
00094     // Normally, Distance_T is an unsigned long int
00095     const Distance_T lDistance =
00096         static_cast<const Distance_T> (DEFAULT_FLIGHT_SPEED * lElapseInHours);
00097
00098     _distance = lDistance;
00099 }
00100
00101 }
00102

```

### 35.337 stdair/bom/LegDate.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/LegDateKey.hpp>
#include <stdair/bom/LegDateTypes.hpp>

```

#### Classes

- class [stdair::LegDate](#)

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.338 LegDate.hpp

```

00001 #ifndef __STDAIR_BOM_LEGDATE_HPP
00002 #define __STDAIR_BOM_LEGDATE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/LegDateKey.hpp>
00014 #include <stdair/bom/LegDateTypes.hpp>
00015
00016 namespace stdair {
00017
00019     struct LegCabinKey;
00020     class LegCabin;

```

```
00021
00025 class LegDate : public BomAbstract {
00026     template <typename BOM> friend class FacBom;
00027     friend class FacBomManager;
00028
00029 public:
00030     // //////////// Type definitions ////////////
00032     typedef LegDateKey Key_T;
00033
00034
00035 public:
00036     // //////////// Getters ////////////
00038     const Key_T& getKey() const {
00039         return _key;
00040     }
00041
00043     BomAbstract* const getParent() const {
00044         return _parent;
00045     }
00046
00048     const AirportCode_T& getBoardingPoint() const {
00049         return _key.getBoardingPoint();
00050     }
00051
00059     const AirlineCode_T& getAirlineCode() const;
00060
00064     const HolderMap_T& getHolderMap() const {
00065         return _holderMap;
00066     }
00067
00078     LegCabin* getLegCabin (const std::string& iLegCabinKeyStr) const;
00079
00090     LegCabin* getLegCabin (const LegCabinKey&) const;
00091
00093     const AirportCode_T& getOffPoint() const {
00094         return _offPoint;
00095     }
00096
00098     const Date_T& getBoardingDate() const {
00099         return _boardingDate;
00100     }
00101
00103     const Duration_T& getBoardingTime() const {
00104         return _boardingTime;
00105     }
00106
00108     const Date_T& getOffDate() const {
00109         return _offDate;
00110     }
00111
00113     const Duration_T& getOffTime() const {
00114         return _offTime;
00115     }
00116
00118     const Duration_T& getElapsedTime() const {
00119         return _elapsedTime;
00120     }
00121
00123     const Distance_T& getDistance() const {
00124         return _distance;
00125     }
00126
```

```
00128     const CabinCapacity_T& getCapacity() const {
00129         return _capacity;
00130     }
00131
00133     const DateOffset_T getDateOffset() const {
00134         return _offDate - _boardingDate;
00135     }
00136
00141     const Duration_T getTimeOffset() const;
00142
00143
00144 public:
00145     // ////////// Setters //////////
00147     void setOffPoint (const AirportCode_T& iOffPoint) {
00148         _offPoint = iOffPoint;
00149     }
00150
00152     void setBoardingDate (const Date_T& iBoardingDate) {
00153         _boardingDate = iBoardingDate;
00154     }
00155
00157     void setBoardingTime (const Duration_T& iBoardingTime) {
00158         _boardingTime = iBoardingTime;
00159     }
00160
00162     void setOffDate (const Date_T& iOffDate) {
00163         _offDate = iOffDate;
00164     }
00165
00167     void setOffTime (const Duration_T& iOffTime) {
00168         _offTime = iOffTime;
00169     }
00170
00172     void setElapsedTime (const Duration_T&);
00173
00174 private:
00176     void updateDistanceFromElapsedTime();
00177
00178
00179 public:
00180     // ////////// Display support methods //////////
00183     void toStream (std::ostream& ioOut) const {
00184         ioOut << toString();
00185     }
00186
00189     void fromStream (std::istream& ioIn) {
00190     }
00191
00193     std::string toString() const;
00194
00196     const std::string describeKey() const {
00197         return _key.toString();
00198     }
00199
00200
00201 protected:
00202     // ////////// Constructors and destructors //////////
00204     LegDate (const Key_T&);
00206     virtual ~LegDate();
00207
00208 private:
00210     LegDate();
```

```

00212     LegDate (const LegDate&);
00213
00214
00215     protected:
00216     // ////////// Attributes //////////
00217     Key_T _key;
00218
00219
00221     BomAbstract* _parent;
00222
00224     HolderMap_T _holderMap;
00225
00227     AirportCode_T _offPoint;
00228
00230     Date_T _boardingDate;
00231
00233     Duration_T _boardingTime;
00234
00236     Date_T _offDate;
00237
00239     Duration_T _offTime;
00240
00242     Duration_T _elapsedTime;
00243
00245     Distance_T _distance;
00246
00248     CabinCapacity_T _capacity;
00249 };
00250
00251 }
00252 #endif // __STDAIR_BOM_LEGDATE_HPP
00253

```

### 35.339 stdair/bom/LegDateKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/LegDateKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.340 LegDateKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir

```

```

00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/bom/LegDateKey.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 LegDateKey::LegDateKey() : _boardingPoint (DEFAULT_ORIGIN) {
00015     assert (false);
00016 }
00017
00018 // //////////////////////////////////////
00019 LegDateKey::LegDateKey (const AirportCode_T& iBoardingPoint)
00020     : _boardingPoint (iBoardingPoint) {
00021 }
00022
00023 // //////////////////////////////////////
00024 LegDateKey::LegDateKey (const LegDateKey& iKey)
00025     : _boardingPoint (iKey._boardingPoint) {
00026 }
00027
00028 // //////////////////////////////////////
00029 LegDateKey::~LegDateKey () {
00030 }
00031
00032 // //////////////////////////////////////
00033 void LegDateKey::toStream (std::ostream& ioOut) const {
00034     ioOut << "LegDateKey: " << toString();
00035 }
00036
00037 // //////////////////////////////////////
00038 void LegDateKey::fromStream (std::istream& ioIn) {
00039 }
00040
00041 // //////////////////////////////////////
00042 const std::string LegDateKey::toString() const {
00043     std::ostringstream oStr;
00044     oStr << _boardingPoint;
00045     return oStr.str();
00046 }
00047
00048 }

```

### 35.341 stdair/bom/LegDateKey.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::LegDateKey](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.



## 35.342 LegDateKey.hpp

```

00001 #ifndef __STDAIR_BOM_LEGDATEKEY_HPP
00002 #define __STDAIR_BOM_LEGDATEKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
00016     struct LegDateKey : public KeyAbstract {
00017
00018         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00019     private:
00021         LegDateKey();
00022
00023     public:
00025         LegDateKey (const AirportCode_T& iBoardingPoint);
00027         LegDateKey (const LegDateKey&);
00029         ~LegDateKey();
00030
00031
00032         // ////////////////////////////////// Getters //////////////////////////////////
00034         const AirportCode_T& getBoardingPoint() const {
00035             return _boardingPoint;
00036         }
00037
00038
00039         // ////////////////////////////////// Display support methods //////////////////////////////////
00042         void toStream (std::ostream& ioOut) const;
00043
00046         void fromStream (std::istream& ioIn);
00047
00053         const std::string toString() const;
00054
00055
00056     private:
00057         // ////////////////////////////////// Attributes //////////////////////////////////
00059         AirportCode_T _boardingPoint;
00060     };
00061
00062 }
00063 #endif // __STDAIR_BOM_LEGDATEKEY_HPP

```

## 35.343 stdair/bom/LegDateTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

## Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

## Typedefs

- typedef `std::list< LegDate * >` `stdair::LegDateList_T`
- typedef `std::map< const MapKey_T, LegDate * >` `stdair::LegDateMap_T`

## 35.344 LegDateTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_LEGDATE_Types_HPP
00003 #define __STDAIR_BOM_LEGDATE_Types_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class LegDate;
00018
00019     typedef std::list<LegDate*> LegDateList_T;
00020
00021     typedef std::map<const MapKey_T, LegDate*> LegDateMap_T;
00022 }
00023 #endif // __STDAIR_BOM_LEGDATE_Types_HPP
00024

```

## 35.345 stdair/bom/OnDDate.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/OnDDate.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.346 OnDDate.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Inventory.hpp>
00009 #include <stdair/basic/BasConst_General.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/Inventory.hpp>
00012 #include <stdair/bom/OnDDate.hpp>
00013
00014 namespace stdair {
00015
00016 // //////////////////////////////////////
00017 OnDDate::OnDDate()
00018     : _key (DEFAULT_OND_STRING_LIST), _parent (NULL) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 OnDDate::OnDDate (const OnDDate& iOnDDate)
00024     : _key (iOnDDate.getKey()), _parent (NULL) {
00025     assert (false);
00026 }
00027
00028 // //////////////////////////////////////
00029 OnDDate::OnDDate (const Key_T& iKey)
00030     : _key (iKey), _parent (NULL) {
00031 }
00032
00033 // //////////////////////////////////////
00034 OnDDate::~OnDDate() {
00035 }
00036
00037 // //////////////////////////////////////
00038 std::string OnDDate::toString() const {
00039     std::ostringstream oStr;
00040     oStr << describeKey();
00041     return oStr.str();
00042 }
00043
00044 // //////////////////////////////////////
00045 const AirlineCode_T& OnDDate::getAirlineCode() const {
00046     const Inventory* lInventory_ptr =
00047         static_cast<const Inventory*> (getParent());
00048     assert (lInventory_ptr != NULL);
00049     return lInventory_ptr->getAirlineCode();
00050 }
00051
00052 // //////////////////////////////////////
00053 void OnDDate::

```

```

00054 setDemandInformation (const CabinClassPairList_T& iCabinClassPairList,
00055                       const YieldDemandPair_T& iYieldDemandPair) {
00056     std::ostream oStr;
00057     for(CabinClassPairList_T::const_iterator itCCP = iCabinClassPairList.begin();

00058         itCCP != iCabinClassPairList.end(); ++itCCP) {
00059         oStr << itCCP->first << ":" << itCCP->second << ";";
00060     }
00061     std::string lCabinClassPath = oStr.str();
00062     StringDemandStructMap_T::iterator it =
00063         _classPathDemandMap.find(lCabinClassPath);
00064     if (it == _classPathDemandMap.end()) {
00065         const StringDemandStructPair_T lPairStringDemandChar (lCabinClassPath,
00066                                                                iYieldDemandPair);
00067         _classPathDemandMap.insert (lPairStringDemandChar);
00068         const StringCabinClassPair_T lStringCabinClassPair (lCabinClassPath,
00069                                                            iCabinClassPairList);
00070         _stringCabinClassPairListMap.insert (lStringCabinClassPair);
00071     } else {
00072         it->second = iYieldDemandPair;
00073     }
00074 }
00075
00076 // //////////////////////////////////////
00077 void OnDDate::setTotalForecast (const CabinCode_T& iCabinCode,
00078                               const WTPDemandPair_T& iWTPDemandPair) {
00079     CabinForecastMap_T::iterator it =
00080         _cabinForecastMap.find (iCabinCode);
00081     if (it == _cabinForecastMap.end()) {
00082         const CabinForecastPair_T lPairCabinForecastChar (iCabinCode,
00083                                                            iWTPDemandPair);
00084         _cabinForecastMap.insert (lPairCabinForecastChar);
00085     } else {
00086         assert (false);
00087     }
00088 }
00089 }
00090
00091 }

```

### 35.347 stdair/bom/OnDDate.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/OnDDateKey.hpp>
#include <stdair/bom/OnDDateTypes.hpp>

```

## Classes

- class `stdair::OnDDate`

*Class representing the actual attributes for an airline flight-date.*

## Namespaces

- namespace `boost`  
*Forward declarations.*
- namespace `boost::serialization`
- namespace `stdair`

*Handle on the StdAir library context.*

## 35.348 OnDDate.hpp

```

00001 #ifndef __STDAIR_BOM_ONDDATE_HPP
00002 #define __STDAIR_BOM_ONDDATE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_maths_types.hpp>
00013 #include <stdair/stdair_basic_types.hpp>
00014 #include <stdair/stdair_demand_types.hpp>
00015 #include <stdair/stdair_rm_types.hpp>
00016 #include <stdair/bom/BomAbstract.hpp>
00017 #include <stdair/bom/OnDDateKey.hpp>
00018 #include <stdair/bom/OnDDateTypes.hpp>
00019
00021 namespace boost {
00022     namespace serialization {
00023         class access;
00024     }
00025 }
00026
00027 namespace stdair {
00028
00033     class OnDDate : public BomAbstract {
00034     public:
00035         template <typename BOM> friend class FacBom;
00036         friend class FacBomManager;
00037         friend class boost::serialization::access;
00038
00039         // ////////////////////////////////// Type definitions //////////////////////////////////
00040         typedef OnDDateKey Key_T;
00041
00042     public:
00043         // ////////////////////////////////// Getters //////////////////////////////////
00044         const Key_T& getKey() const {
00045             return _key;

```

```

00051     }
00052
00054     BomAbstract* const getParent() const {
00055         return _parent;
00056     }
00057
00065     const AirlineCode_T& getAirlineCode() const;
00066
00067
00069     const stdair::Date_T getDate() const {
00070         return _key.getDate();
00071     }
00072
00074     const stdair::AirportCode_T getOrigin() const {
00075         return _key.getOrigin();
00076     }
00077
00079     const stdair::AirportCode_T getDestination() const {
00080         return _key.getDestination();
00081     }
00082
00086     const HolderMap_T& getHolderMap() const {
00087         return _holderMap;
00088     }
00089
00093     const StringDemandStructMap_T& getDemandInfoMap () const {
00094         return _classPathDemandMap;
00095     }
00096
00100     const CabinForecastMap_T& getTotalForecastMap () const {
00101         return _cabinForecastMap;
00102     }
00103
00107     const WTPDemandPair_T& getTotalForecast (const CabinCode_T& iCC) const {
00108         assert (_cabinForecastMap.find(iCC) != _cabinForecastMap.end());
00109         return _cabinForecastMap.find(iCC)->second;
00110     }
00111
00115     const CabinClassPairList_T& getCabinClassPairList (const std::string& iStr) c
00116 onst {
00117         assert (_stringCabinClassPairListMap.find(iStr) !=
00118 _stringCabinClassPairListMap.end());
00117         return _stringCabinClassPairListMap.find(iStr)->second;
00118     }
00119
00123     const short getNbOfSegments () const {
00124         return _key.getNbOfSegments();
00125     }
00126
00127 public:
00128     // //////////// Setters ////////////
00130     void setDemandInformation (const CabinClassPairList_T&,
00131                             const YieldDemandPair_T&);
00132
00133
00135     void setTotalForecast (const CabinCode_T&,
00136                             const WTPDemandPair_T&);
00137
00138
00139 public:
00140     // //////////// Display support methods ////////////
00146     void toStream (std::ostream& ioOut) const {

```

```

00147         ioOut << toString();
00148     }
00149
00155     void fromStream (std::istream& ioIn) {
00156     }
00157
00161     std::string toString() const;
00162
00166     const std::string describeKey() const {
00167         return _key.toString();
00168     }
00169
00170
00171     public:
00172         // ////////// (Boost) Serialisation support methods //////////
00176         template<class Archive>
00177         void serialize (Archive& ar, const unsigned int iFileVersion);
00178
00179     private:
00184         void serialisationImplementation();
00185
00186
00187     protected:
00188         // ////////// Constructors and destructors //////////
00192         OnDDate (const Key_T&);
00193
00197         virtual ~OnDDate();
00198
00199     private:
00203         OnDDate();
00204
00208         OnDDate (const OnDDate&);
00209
00210
00211     protected:
00212         // ////////// Attributes //////////
00216         Key_T _key;
00217
00221         BomAbstract* _parent;
00222
00226         HolderMap_T _holderMap;
00227
00231         StringDemandStructMap_T _classPathDemandMap;
00232
00236         StringCabinClassPairListMap_T _stringCabinClassPairListMap;
00237
00241         CabinForecastMap_T _cabinForecastMap;
00242     };
00243
00244 }
00245 #endif // __STDAIR_BOM_ONDDATE_HPP

```

### 35.349 stdair/bom/OnDDateKey.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <boost/date_time/gregorian/formatters.hpp>

#include <boost/archive/text_iarchive.hpp>

```

```

#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/OnDDateKey.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/BomDisplay.hpp>

```

### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### Functions

- template void `stdair::OnDDateKey::serialize< ba::text_oarchive >` (ba::text\_oarchive &, unsigned int)
- template void `stdair::OnDDateKey::serialize< ba::text_iarchive >` (ba::text\_iarchive &, unsigned int)

### 35.350 OnDDateKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost Date-Time
00008 #include <boost/date_time/gregorian/formatters.hpp>
00009 // Boost.Serialization
00010 #include <boost/archive/text_iarchive.hpp>
00011 #include <boost/archive/text_oarchive.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_Inventory.hpp>
00015 #include <stdair/basic/BasConst_BomDisplay.hpp>
00016 #include <stdair/basic/BasConst_General.hpp>
00017 #include <stdair/bom/OnDDateKey.hpp>
00018 #include <stdair/bom/BomKeyManager.hpp>
00019 #include <stdair/bom/Inventory.hpp>
00020 #include <stdair/bom/FlightDate.hpp>
00021 #include <stdair/bom/SegmentDate.hpp>

```



```

00022 #include <stdair/bom/BomDisplay.hpp>
00023
00024 namespace stdair {
00025
00026 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00027 OnDDateKey::OnDDateKey()
00028 : _OnDStringList (DEFAULT_OND_STRING_LIST) {
00029     assert (false);
00030 }
00031
00032 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00033 OnDDateKey::OnDDateKey (const OnDStringList_T& iOnDStringList)
00034 : _OnDStringList (iOnDStringList) {
00035 }
00036
00037 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00038 OnDDateKey::OnDDateKey (const OnDDateKey& iKey)
00039 : _OnDStringList (iKey._OnDStringList) {
00040 }
00041
00042 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00043 OnDDateKey::~OnDDateKey () {
00044 }
00045
00046 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00047 const Date_T OnDDateKey::getDate() const {
00048     assert(_OnDStringList.empty() == false);
00049     const OnDString_T& lFrontOnDString = _OnDStringList.front();
00050     return BomKeyManager::extractFlightDateKey (lFrontOnDString).
getDepartureDate();
00051 }
00052
00053 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00054 const AirportCode_T OnDDateKey::getOrigin() const {
00055     assert(_OnDStringList.empty() == false);
00056     const OnDString_T& lFrontOnDString = _OnDStringList.front();
00057     return BomKeyManager::extractSegmentDateKey (lFrontOnDString).
getBoardingPoint();
00058 }
00059
00060 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00061 const AirportCode_T OnDDateKey::getDestination() const {
00062     assert(_OnDStringList.empty() == false);
00063     const OnDString_T& lLastOnDString = _OnDStringList.back();
00064     return BomKeyManager::extractSegmentDateKey (lLastOnDString).getOffPoint();
00065 }
00066
00067 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00068 void OnDDateKey::toStream (std::ostream& ioOut) const {
00069     ioOut << "OnDDateKey: " << toString();
00070 }
00071
00072 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00073 void OnDDateKey::fromStream (std::istream& ioIn) {
00074 }
00075
00076 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00077 const std::string OnDDateKey::toString() const {
00078     std::ostringstream oStr;
00079     for (OnDStringList_T::const_iterator itOnDString = _OnDStringList.begin();
00080          itOnDString != _OnDStringList.end(); ++itOnDString){
00081         oStr << *itOnDString << " ";

```

```

00082     }
00083     return oStr.str();
00084 }
00085
00086 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00087 void OnDDateKey::serialisationImplementationExport() const {
00088     std::ostringstream oStr;
00089     boost::archive::text_oarchive oa (oStr);
00090     oa << *this;
00091 }
00092
00093 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00094 void OnDDateKey::serialisationImplementationImport() {
00095     std::istringstream iStr;
00096     boost::archive::text_iarchive ia (iStr);
00097     ia >> *this;
00098 }
00099
00100 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00101 template<class Archive>
00102 void OnDDateKey::serialize (Archive& ioArchive,
00103                             const unsigned int iFileVersion) {
00104 }
00105
00106 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00107 // Explicit template instantiation
00108 namespace ba = boost::archive;
00109 template void OnDDateKey::serialize<ba::text_oarchive> (ba::text_oarchive&,
00110                                                         unsigned int);
00111 template void OnDDateKey::serialize<ba::text_iarchive> (ba::text_iarchive&,
00112                                                         unsigned int);
00113 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00114 }
00115
00116 }

```

### 35.351 stdair/bom/OnDDateKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::OnDDateKey](#)

*Key of a given O&D-date, made of a list of OnD strings. a OnD string contains the airline code, the flight number, the date and the segment (origin and destination).*

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.352 OnDDateKey.hpp

```

00001 #ifndef __STDAIR_BOM_ONDDATEKEY_HPP
00002 #define __STDAIR_BOM_ONDDATEKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/stdair_date_time_types.hpp>
00014 #include <stdair/bom/KeyAbstract.hpp>
00015
00016 namespace stdair {
00017
00023     struct OnDDateKey : public KeyAbstract {
00024         friend class boost::serialization::access;
00025
00026         // ////////// Constructors and destructors //////////
00027     private:
00031         OnDDateKey();
00032
00033     public:
00037         OnDDateKey (const OnDStringList_T&);
00038
00042         OnDDateKey (const OnDDateKey&);
00043
00047         ~OnDDateKey();
00048
00049
00050     public:
00051         // ////////// Getters //////////
00055         const Date_T getDate() const;
00056
00060         const AirportCode_T getOrigin() const;
00061
00065         const AirportCode_T getDestination() const;
00066
00070         const short getNbOfSegments () const {
00071             return _OnDStringList.size();
00072         }
00073
00074     public:
00075         // ////////// Display support methods //////////
00081         void toStream (std::ostream& ioOut) const;
00082
00088         void fromStream (std::istream& ioIn);
00089
00099         const std::string toString() const;
00100
00101

```

```

00102 public:
00103     // //////////// (Boost) Serialisation support methods ////////////
00107     template<class Archive>
00108     void serialize (Archive& ar, const unsigned int iFileVersion);
00109
00110 private:
00115     void serialisationImplementationExport() const;
00116     void serialisationImplementationImport();
00117
00118
00119 private:
00120     // //////////// Attributes ////////////
00121     OnDStringList_T _OnDStringList;
00122
00123 };
00124
00125 }
00126 #endif // __STDAIR_BOM_ONDDATEKEY_HPP

```

### 35.353 stdair/bom/OnDDateTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_demand_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

#### Typedefs

- typedef std::list< OnDDate \* > `stdair::OnDDateList_T`
- typedef std::map< const MapKey\_T, OnDDate \* > `stdair::OnDDateMap_T`
- typedef std::pair< std::string, YieldDemandPair\_T > `stdair::StringDemandStructPair_T`
- typedef std::map< std::string, YieldDemandPair\_T > `stdair::StringDemandStructMap_T`
- typedef std::map< std::string, CabinClassPairList\_T > `stdair::StringCabinClassPairListMap_T`
- typedef std::pair< std::string, CabinClassPairList\_T > `stdair::StringCabinClassPair_T`
- typedef std::map< CabinCode\_T, WTPDemandPair\_T > `stdair::CabinForecastMap_T`
- typedef std::pair< CabinCode\_T, WTPDemandPair\_T > `stdair::CabinForecastPair_T`

## 35.354 OnDDateTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_ONDDATETYPES_HPP
00003 #define __STDAIR_BOM_ONDDATETYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // Stdair
00012 #include <stdair/bom/key_types.hpp>
00013 #include <stdair/stdair_maths_types.hpp>
00014 #include <stdair/stdair_demand_types.hpp>
00015
00016 namespace stdair {
00017
00018     // Forward declarations.
00019     class OnDDate;
00020
00022     typedef std::list<OnDDate*> OnDDateList_T;
00023
00025     typedef std::map<const MapKey_T, OnDDate*> OnDDateMap_T;
00026
00032     typedef std::pair<std::string, YieldDemandPair_T> StringDemandStructPair_T;
00033     typedef std::map<std::string, YieldDemandPair_T> StringDemandStructMap_T;
00034
00041     typedef std::map<std::string, CabinClassPairList_T>
StringCabinClassPairListMap_T;
00042     typedef std::pair<std::string, CabinClassPairList_T> StringCabinClassPair_T;
00043
00048     typedef std::map<CabinCode_T, WTPDemandPair_T> CabinForecastMap_T;
00049     typedef std::pair<CabinCode_T, WTPDemandPair_T> CabinForecastPair_T;
00050
00051 }
00052 #endif // __STDAIR_BOM_ONDDATETYPES_HPP

```

## 35.355 stdair/bom/OptimisationNotificationStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/bom/OptimisationNotificationStruct.hpp>

```

## Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.356 OptimisationNotificationStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section

```

```

00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/OptimisationNotificationStruct.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 OptimisationNotificationStruct::OptimisationNotificationStruct()
00014 : _partySize (0), _stayDuration (0), _wtp (0.0), _valueOfTime (0.0) {
00015     assert (false);
00016 }
00017
00018 // //////////////////////////////////////
00019 OptimisationNotificationStruct::
00020 OptimisationNotificationStruct (const OptimisationNotificationStruct& iOptimisa
tionNotification)
00021 : _origin (iOptimisationNotification._origin),
00022   _destination (iOptimisationNotification._destination),
00023   _pos (iOptimisationNotification._pos),
00024   _preferredDepartureDate (iOptimisationNotification._preferredDepartureDate)
00025 ,
00026   _notificationDateTime (iOptimisationNotification._notificationDateTime),
00027   _preferredCabin (iOptimisationNotification._preferredCabin),
00028   _partySize (iOptimisationNotification._partySize),
00029   _channel (iOptimisationNotification._channel),
00030   _tripType (iOptimisationNotification._tripType),
00031   _stayDuration (iOptimisationNotification._stayDuration),
00032   _frequentFlyerType (iOptimisationNotification._frequentFlyerType),
00033   _preferredDepartureTime (iOptimisationNotification._preferredDepartureTime)
00034 ,
00035   _wtp (iOptimisationNotification._wtp),
00036   _valueOfTime (iOptimisationNotification._valueOfTime) {
00037 }
00038
00039 // //////////////////////////////////////
00040 OptimisationNotificationStruct::
00041 OptimisationNotificationStruct (const AirportCode_T& iOrigin,
00042                                const AirportCode_T& iDestination,
00043                                const CityCode_T& iPOS,
00044                                const Date_T& iDepartureDate,
00045                                const DateTime_T& iNotificationDateTime,
00046                                const CabinCode_T& iPreferredCabin,
00047                                const NbOfSeats_T& iPartySize,
00048                                const ChannelLabel_T& iChannel,
00049                                const TripType_T& iTripType,
00050                                const DayDuration_T& iStayDuration,
00051                                const FrequentFlyer_T& iFrequentFlyerType,
00052                                const Duration_T& iPreferredDepartureTime,
00053                                const WTP_T& iWTP,
00054                                const PriceValue_T& iValueOfTime)
00055 : _origin (iOrigin), _destination (iDestination),
00056   _pos (iPOS), _preferredDepartureDate (iDepartureDate),
00057   _notificationDateTime (iNotificationDateTime),
00058   _preferredCabin (iPreferredCabin), _partySize (iPartySize),
00059   _channel (iChannel), _tripType (iTripType),
00060   _stayDuration (iStayDuration), _frequentFlyerType (iFrequentFlyerType),
00061   _preferredDepartureTime (iPreferredDepartureTime), _wtp (iWTP),
00062   _valueOfTime (iValueOfTime) {

```

```

00062
00063 // //////////////////////////////////////
00064 OptimisationNotificationStruct::~OptimisationNotificationStruct() {
00065 }
00066
00067 // //////////////////////////////////////
00068 void OptimisationNotificationStruct::toStream (std::ostream& ioOut) const {
00069     ioOut << describe();
00070 }
00071
00072 // //////////////////////////////////////
00073 void OptimisationNotificationStruct::fromStream (std::istream& ioIn) {
00074 }
00075
00076 // //////////////////////////////////////
00077 const std::string OptimisationNotificationStruct::describe() const {
00078     std::ostringstream oStr;
00079     oStr << "At " << _notificationDateTime
00080         << ", for (" << _pos << ") " << _origin << "-" << _destination
00081         << " " << _preferredDepartureDate << " " << _preferredCabin
00082         << " " << _partySize << " " << _channel << " " << _tripType
00083         << " " << _stayDuration << " " << _frequentFlyerType
00084         << " " << _preferredDepartureTime << " " << _wtp
00085         << " " << _valueOfTime;
00086     return oStr.str();
00087 }
00088
00089 }

```

### 35.357 stdair/bom/OptimisationNotificationStruct.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/OptimisationNotificationTypes.hpp>

```

#### Classes

- struct [stdair::OptimisationNotificationStruct](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.358 OptimisationNotificationStruct.hpp

```

00001 #ifndef __STDAIR_BOM_OPTIMISATIONNOTIFICATIONSTRUCT_HPP

```

```
00002 #define __STDAIR_BOM_OPTIMISATIONNOTIFICATIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/OptimisationNotificationTypes.hpp>
00015
00016 namespace stdair {
00017
00019     struct OptimisationNotificationStruct : public StructAbstract {
00020     public:
00021         // ////////////////////////////////// Getters //////////////////////////////////
00022         const AirportCode_T& getOrigin() const {
00023             return _origin;
00024         }
00025
00026         const AirportCode_T& getDestination() const {
00027             return _destination;
00028         }
00029
00030         const CityCode_T& getPOS() const {
00031             return _pos;
00032         }
00033
00034         const Date_T& getPreferedDepartureDate() const {
00035             return _preferredDepartureDate;
00036         }
00037
00038         const DateTime_T& getNotificationDateTime() const {
00039             return _notificationDateTime;
00040         }
00041
00042         const CabinCode_T& getPreferredCabin() const {
00043             return _preferredCabin;
00044         }
00045
00046         const NbOfSeats_T& getPartySize() const {
00047             return _partySize;
00048         }
00049
00050         const ChannelLabel_T& getOptimisationChannel() const {
00051             return _channel;
00052         }
00053
00054         const TripType_T& getTripType() const {
00055             return _tripType;
00056         }
00057
00058         const DayDuration_T& getStayDuration() const {
00059             return _stayDuration;
00060         }
00061
00062         const FrequentFlyer_T& getFrequentFlyerType() const {
00063             return _frequentFlyerType;
00064         }
00065
00066         const FrequentFlyer_T& getFrequentFlyerType() const {
00067             return _frequentFlyerType;
00068         }
00069
00070         const FrequentFlyer_T& getFrequentFlyerType() const {
00071             return _frequentFlyerType;
00072         }
00073
00074         const FrequentFlyer_T& getFrequentFlyerType() const {
00075             return _frequentFlyerType;
00076         }
00077     }
```



```

00076
00078     const Duration_T& getPreferredDepartureTime() const {
00079         return _preferredDepartureTime;
00080     }
00081
00083     const WTP_T& getWTP() const {
00084         return _wtp;
00085     }
00086
00088     const PriceValue_T& getValueOfTime () const {
00089         return _valueOfTime;
00090     }
00091
00092     // //////////// Display support method ////////////
00095     void toStream (std::ostream& ioOut) const;
00096
00099     void fromStream (std::istream& ioIn);
00100
00102     const std::string describe() const;
00103
00104
00105     // //////////// Constructors and Destructors ////////////
00106 public:
00108     OptimisationNotificationStruct (const AirportCode_T& iOrigin,
00109                                     const AirportCode_T& iDestination,
00110                                     const CityCode_T& iPOS,
00111                                     const Date_T& iDepartureDate,
00112                                     const DateTime_T& iNotificationDateTime,
00113                                     const CabinCode_T& iPreferredCabin,
00114                                     const NbOfSeats_T& iPartySize,
00115                                     const ChannelLabel_T& iChannel,
00116                                     const TripType_T& iTripType,
00117                                     const DayDuration_T& iStayDuration,
00118                                     const FrequentFlyer_T& iFrequentFlyerType,
00119                                     const Duration_T& iPreferredDepartureTime,
00120                                     const WTP_T& iWTP,
00121                                     const PriceValue_T& iValueOfTime);
00122
00124     OptimisationNotificationStruct (const OptimisationNotificationStruct&);
00125
00126 private:
00129     OptimisationNotificationStruct ();
00130
00131 public:
00133     ~OptimisationNotificationStruct();
00134
00135 private:
00137     // //////////// Attributes ////////////
00139     const AirportCode_T _origin;
00140
00142     const AirportCode_T _destination;
00143
00145     const CityCode_T _pos;
00146
00148     const Date_T _preferredDepartureDate;
00149
00151     const DateTime_T _notificationDateTime;
00152
00154     const CabinCode_T _preferredCabin;
00155
00157     const NbOfSeats_T _partySize;

```

```

00158
00160     const ChannelLabel_T _channel;
00161
00164     const TripType_T _tripType;
00165
00167     const DayDuration_T _stayDuration;
00168
00170     const FrequentFlyer_T _frequentFlyerType;
00171
00173     const Duration_T _preferredDepartureTime;
00174
00176     const WTP_T _wtp;
00177
00179     const PriceValue_T _valueOfTime;
00180 };
00181
00182 }
00183 #endif // __STDAIR_BOM_OPTIMISATIONNOTIFICATIONSTRUCT_HPP

```

### 35.359 stdair/bom/OptimisationNotificationTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef boost::shared\_ptr< OptimisationNotificationStruct > [stdair::OptimisationNotificationPtr\\_T](#)

### 35.360 OptimisationNotificationTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_OPTIMISATIONNOTIFICATIONTYPES_HPP
00003 #define __STDAIR_BOM_OPTIMISATIONNOTIFICATIONTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013     // Forward declarations
00014     struct OptimisationNotificationStruct;
00015
00016     // ////////////////////////////////// Type definitions //////////////////////////////////
00018     typedef boost::
00019         shared_ptr<OptimisationNotificationStruct> OptimisationNotificationPtr_T;
00020

```

```

00021 }
00022 #endif // __STDAIR_BOM_OPTIMISATIONNOTIFICATIONTYPES_HPP
00023

```

### 35.361 stdair/bom/ParsedKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/tokenizer.hpp>
#include <boost/lexical_cast.hpp>
#include <boost/date_time/gregorian/parsers.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/InventoryKey.hpp>
#include <stdair/bom/FlightDateKey.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
#include <stdair/bom/ParsedKey.hpp>
#include <stdair/service/Logger.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Functions

- const boost::char\_separator< char > [stdair::TokeniserDashSeparator](#) ("-")
- const boost::char\_separator< char > [stdair::TokeniserTimeSeparator](#) (":")

### 35.362 ParsedKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost
00008 #include <boost/tokenizer.hpp>
00009 #include <boost/lexical_cast.hpp>
00010 #include <boost/date_time/gregorian/parsers.hpp>
00011 // StdAir

```

```

00012 #include <stdair/stdair_exceptions.hpp>
00013 #include <stdair/basic/BasConst_Inventory.hpp>
00014 #include <stdair/basic/BasConst_BomDisplay.hpp>
00015 #include <stdair/bom/InventoryKey.hpp>
00016 #include <stdair/bom/FlightDateKey.hpp>
00017 #include <stdair/bom/SegmentDateKey.hpp>
00018 #include <stdair/bom/ParsedKey.hpp>
00019 #include <stdair/service/Logger.hpp>
00020
00021 namespace stdair {
00022
00023     // ////////////////////////////////// Tokenising support //////////////////////////////////
00027     typedef boost::tokenizer<boost::char_separator<char> > Tokeniser_T;
00028
00032     const boost::char_separator<char> TokeniserDashSeparator ("-");
00033
00037     const boost::char_separator<char> TokeniserTimeSeparator (":");
00038
00039     // ////////////////////////////////// ParsedKey //////////////////////////////////
00040     ParsedKey::ParsedKey() : _fullKey (""), _airlineCode (""), _flightNumber (""),
00041                             _departureDate (""), _boardingPoint (""),
00042                             _offPoint (""), _boardingTime ("") {
00043     }
00044
00045     // ////////////////////////////////// ~ParsedKey //////////////////////////////////
00046     ParsedKey::~ParsedKey() {
00047     }
00048
00049     // ////////////////////////////////// InventoryKey //////////////////////////////////
00050     InventoryKey ParsedKey::getInventoryKey() const {
00051         if (_airlineCode.size() < 2 || _airlineCode.size() > 3) {
00052             STDAIR_LOG_ERROR ("No airline code can be found in '" << _fullKey << "'");
00053             STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00054             throw KeyNotFoundException ("No airline code can be found in '"
00055                                         + _fullKey + "'");
00056         }
00057         return _airlineCode;
00058     }
00059
00060     // ////////////////////////////////// FlightDateKey //////////////////////////////////
00061     FlightDateKey ParsedKey::getFlightDateKey() const {
00062         // Check whether the departure date has been parsed correctly.
00063         Tokeniser_T lDateTokens (_departureDate, TokeniserDashSeparator);
00064
00065         if (lDateTokens.begin() == lDateTokens.end()) {
00066             STDAIR_LOG_ERROR ("No date can be found in '" << _fullKey << "'");
00067             STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00068             throw KeyNotFoundException ("No date can be found in '" + _fullKey + "'");
00069         }
00070
00071         const FlightNumber_T lFlightNumber =
00072             boost::lexical_cast<FlightNumber_T> (_flightNumber);
00073
00074         const Date_T lDepartureDate =
00075             boost::gregorian::from_simple_string (_departureDate);
00076
00077         const FlightDateKey oFlightDateKey (lFlightNumber, lDepartureDate);
00078
00079         return oFlightDateKey;
00080     }
00081
00082     // //////////////////////////////////

```

```

00083 SegmentDateKey ParsedKey::getSegmentKey() const {
00084     if (_boardingPoint.size() != 3 || _offPoint.size() != 3) {
00085         STDAIR_LOG_ERROR ("No airport code can be found in '" << _fullKey << "'");
00086         STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00087         throw KeyNotFoundException ("No airport code can be found in '"
00088                                     + _fullKey + "'");
00089     }
00090
00091     const SegmentDateKey oSegmentDateKey (_boardingPoint, _offPoint);
00092
00093     return oSegmentDateKey;
00094 }
00095
00096 // //////////////////////////////////////
00097 const Duration_T ParsedKey::getBoardingTime() const {
00098     // Check whether the boarding time has been parsed correctly.
00099     Tokeniser_T lTimeTokens (_boardingTime, TokeniserTimeSeparator);
00100
00101     if (lTimeTokens.begin() == lTimeTokens.end()) {
00102         STDAIR_LOG_ERROR ("No boarding time can be found in '" << _fullKey << "'");
00103
00104         STDAIR_LOG_DEBUG ("Parsed key: " << toString());
00105         throw KeyNotFoundException ("No boarding time can be found in '"
00106                                     + _fullKey + "'");
00107     }
00108
00109     const Duration_T oBoardingTime (boost::posix_time::
00110                                     duration_from_string (_boardingTime));
00111
00112     return oBoardingTime;
00113 }
00114
00115 // //////////////////////////////////////
00116 void ParsedKey::toStream (std::ostream& ioOut) const {
00117     ioOut << "ParsedKey: " << toString();
00118 }
00119
00120 // //////////////////////////////////////
00121 void ParsedKey::fromStream (std::istream& ioIn) {
00122 }
00123
00124 // //////////////////////////////////////
00125 const std::string ParsedKey::toString() const {
00126     std::ostringstream oStr;
00127
00128     oStr << _airlineCode
00129         << DEFAULT_KEY_FLD_DELIMITER << " "
00130         << _flightNumber
00131         << DEFAULT_KEY_SUB_FLD_DELIMITER << " "
00132         << _departureDate
00133         << DEFAULT_KEY_FLD_DELIMITER << " "
00134         << _boardingPoint
00135         << DEFAULT_KEY_SUB_FLD_DELIMITER << " "
00136         << _offPoint
00137         << DEFAULT_KEY_FLD_DELIMITER << " "
00138         << _boardingTime;
00139
00140     return oStr.str();
00141 }
00142 }

```

**35.363 stdair/bom/ParsedKey.hpp File Reference**

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>
```

**Classes**

- struct [stdair::ParsedKey](#)

**Namespaces**

- namespace [stdair](#)  
Handle on the StdAir library context.

**35.364 ParsedKey.hpp**

```
00001 #ifndef __STDAIR_BOM_PARSEDKEY_HPP
00002 #define __STDAIR_BOM_PARSEDKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_date_time_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00014 namespace stdair {
00015     struct InventoryKey;
00016     struct FlightDateKey;
00017     struct SegmentDateKey;
00018
00019     struct ParsedKey : public KeyAbstract{
00020
00021     // /////////////////////////////////// Getter ///////////////////////////////////
00022     InventoryKey getInventoryKey () const;
00023
00024     FlightDateKey getFlightDateKey () const;
00025
00026     SegmentDateKey getSegmentKey () const;
00027
00028     const Duration_T getBoardingTime () const;
00029
00030     public:
00031     // /////////////////////////////////// Display support methods ///////////////////////////////////
00032     void toStream (std::ostream& ioOut) const;
00033
00034     void fromStream (std::istream& ioIn);
00035
00036     };
00037
00038 }
```

```

00061     const std::string toString() const;
00062
00063 public:
00064     // //////////// Constructor and destructor. ////////////
00065     // Default constructor
00066     ParsedKey ();
00067     // Defaut destructor
00068     ~ParsedKey ();
00069
00070 public:
00071     // //////////// Attributes ////////////
00072     std::string _fullKey;
00073     std::string _airlineCode;
00074     std::string _flightNumber;
00075     std::string _departureDate;
00076     std::string _boardingPoint;
00077     std::string _offPoint;
00078     std::string _boardingTime;
00079 };
00080
00081 }
00082 #endif // __STDAIR_BOM_PARSEDKEY_HPP

```

### 35.365 stdair/bom/PeriodStruct.cpp File Reference

```

#include <sstream>
#include <cassert>
#include <stdair/basic/BasConst_Period_BOM.hpp>
#include <stdair/bom/PeriodStruct.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.366 PeriodStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 #include <cassert>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Period_BOM.hpp>
00009 #include <stdair/bom/PeriodStruct.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     PeriodStruct::PeriodStruct ()
00015         : _dateRange (BOOST_DEFAULT_DATE_PERIOD), _dow () {
00016     }

```

```

00017
00018 // //////////////////////////////////////
00019 PeriodStruct::PeriodStruct (const DatePeriod_T& iDateRange,
00020                             const DoWStruct& iDoW)
00021     : _dateRange (iDateRange), _dow (iDoW) {
00022 }
00023
00024 // //////////////////////////////////////
00025 PeriodStruct::PeriodStruct (const PeriodStruct& iPeriodStruct)
00026     : _dateRange (iPeriodStruct._dateRange), _dow (iPeriodStruct._dow) {
00027 }
00028
00029
00030 // //////////////////////////////////////
00031 const std::string PeriodStruct::describeShort() const {
00032     std::ostringstream ostr;
00033     ostr << _dateRange << ", " << _dow.describeShort ();
00034     return ostr.str();
00035 }
00036
00037 // //////////////////////////////////////
00038 const std::string PeriodStruct::describe() const {
00039     std::ostringstream ostr;
00040     ostr << _dateRange << ", " << _dow.describe ();
00041     return ostr.str();
00042 }
00043
00044 // //////////////////////////////////////
00045 PeriodStruct PeriodStruct::
00046 addDateOffset (const DateOffset_T& iDateOffset) const {
00047     // Create a new date range by shifting the date range of this object with
00048     // iDateOffset.
00049     DatePeriod_T lNewDateRange = getDateRange();
00050     lNewDateRange.shift (iDateOffset);
00051
00052     // Create a new DoWStruct by shifting the DoWStruct of this object with
00053     // iDateOffset.
00054     const long lNbOfDaysOffset = iDateOffset.days();
00055     const DoWStruct& lDoW = getDoW();
00056     const DoWStruct lNewDoW = lDoW.shift (lNbOfDaysOffset);
00057
00058     return PeriodStruct (lNewDateRange, lNewDoW);
00059 }
00060
00061 // //////////////////////////////////////
00062 PeriodStruct PeriodStruct::
00063 intersection (const PeriodStruct& iPeriodStruct) const {
00064     const DatePeriod_T lNewDateRange =
00065         _dateRange.intersection (iPeriodStruct._dateRange);
00066     const DoWStruct lNewDoW = _dow.intersection (iPeriodStruct._dow);
00067
00068     return PeriodStruct (lNewDateRange, lNewDoW);
00069 }
00070
00071 // //////////////////////////////////////
00072 const bool PeriodStruct::isValid () const {
00073     if (_dateRange.is_null() == false && _dow.isValid()) {
00074         return true;
00075     }
00076     return false;
00077 }
00078

```



```
00079 }
```

### 35.367 stdair/bom/PeriodStruct.hpp File Reference

```
#include <string>
#include <vector>
#include <stdair/stdair_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/DoWStruct.hpp>
```

#### Classes

- struct [stdair::PeriodStruct](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.368 PeriodStruct.hpp

```
00001 #ifndef __STDAIR_BOM_PERIODSTRUCT_HPP
00002 #define __STDAIR_BOM_PERIODSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_types.hpp>
00012 #include <stdair/basic/StructAbstract.hpp>
00013 #include <stdair/bom/DoWStruct.hpp>
00014
00015 namespace stdair {
00016
00019     struct PeriodStruct : public StructAbstract {
00020     public:
00021         // //////////// Getters ////////////
00023         const DatePeriod_T& getDateRange () const {
00024             return _dateRange;
00025         }
00026         const DoWStruct& getDoW () const {
00027             return _dow;
00028         }
00029
00030     public:
00031         // //////////// Setters ////////////
00033         void setDateRange (const DatePeriod_T& iDateRange) {
```

```

00034     _dateRange = iDateRange;
00035 }
00036 void setDoW (const DoWStruct& iDoW) { _dow = iDoW; }
00037
00038 public:
00040     const std::string describe() const;
00041
00043     const std::string describeShort() const;
00044
00045 public:
00046     // ////////// Business Methods //////////
00048     PeriodStruct addDateOffset (const DateOffset_T&) const;
00049
00052     PeriodStruct intersection (const PeriodStruct&) const;
00053
00055     const bool isValid () const;
00056
00057 public:
00059     PeriodStruct (const DatePeriod_T&, const DoWStruct&);
00061     PeriodStruct ();
00062     PeriodStruct (const PeriodStruct&);
00064     ~PeriodStruct () { }
00065
00066 private:
00067     // Attributes
00068     DatePeriod_T _dateRange;
00069     DoWStruct _dow;
00070 };
00071
00072 }
00073 #endif // __STDAIR_BOM_PERIODSTRUCT_HPP

```

### 35.369 stdair/bom/PosChannel.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/PosChannel.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.370 PosChannel.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>

```

```

00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/PosChannel.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 PosChannel::PosChannel()
00016     : _key (DEFAULT_POS,
00017           DEFAULT_CHANNEL),
00018     _parent (NULL) {
00019     // That constructor is used by the serialisation process
00020 }
00021
00022 // //////////////////////////////////////
00023 PosChannel::PosChannel (const PosChannel& iPosChannel)
00024     : _key (iPosChannel.getKey()), _parent (NULL) {
00025     assert (false);
00026 }
00027
00028 // //////////////////////////////////////
00029 PosChannel::PosChannel (const Key_T& iKey)
00030     : _key (iKey), _parent (NULL) {
00031 }
00032
00033 // //////////////////////////////////////
00034 PosChannel::~PosChannel () {
00035 }
00036
00037 // //////////////////////////////////////
00038 std::string PosChannel::toString() const {
00039     std::ostringstream oStr;
00040     oStr << describeKey();
00041     return oStr.str();
00042 }
00043 }

```

### 35.371 stdair/bom/PosChannel.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/PosChannelKey.hpp>
#include <stdair/bom/PosChannelTypes.hpp>

```

#### Classes

- class [stdair::PosChannel](#)  
Class representing the actual attributes for a fare point of sale.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.372 PosChannel.hpp

```

00001 #ifndef __STDAIR_BOM_POSCHANNEL_HPP
00002 #define __STDAIR_BOM_POSCHANNEL_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/PosChannelKey.hpp>
00010 #include <stdair/bom/PosChannelTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00015     class PosChannel : public BomAbstract {
00016     public:
00017         template <typename BOM> friend class FacBom;
00018         friend class FacBomManager;
00019
00020         // ////////// Type definitions
00021         typedef PosChannelKey Key_T;
00022
00023     public:
00024         // ////////// Display support methods //////////
00025         void toStream (std::ostream& ioOut) const {
00026             ioOut << toString();
00027         }
00028
00029         void fromStream (std::istream& ioIn) {
00030
00031         }
00032
00033         std::string toString() const;
00034
00035         const std::string describeKey() const {
00036             return _key.toString();
00037         }
00038
00039     public:
00040         // ////////// Getters //////////
00041         const Key_T& getKey() const {
00042             return _key;
00043         }
00044
00045         BomAbstract* const getParent() const {
00046             return _parent;
00047         }
00048
00049         const stdair::HolderMap_T& getHolderMap() const {
00050             return _holderMap;
00051         }
00052
00053         const CityCode_T& getPos() const {
00054             return _key.getPos();
00055         }
00056
00057         const ChannelLabel_T& getChannel() const {
00058             return _key.getChannel();
00059         }
00060
00061     protected:

```

```

00099 // ////////// Constructors and destructors //////////
00103 PosChannel (const Key_T&);
00104
00108 virtual ~PosChannel ();
00109
00110 private:
00114 PosChannel ();
00115
00119 PosChannel (const PosChannel&);
00120
00121 protected:
00122 // ////////// Attributes //////////
00126 Key_T _key;
00127
00131 BomAbstract* _parent;
00132
00136 HolderMap_T _holderMap;
00137
00138 };
00139
00140 }
00141 #endif // __STDAIR_BOM_POSCHANNEL_HPP
00142

```

### 35.373 stdair/bom/PosChannelKey.cpp File Reference

```

#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/PosChannelKey.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.374 PosChannelKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_BomDisplay.hpp>
00009 #include <stdair/basic/BasConst_Request.hpp>
00010 #include <stdair/bom/PosChannelKey.hpp>
00011
00012 namespace stdair {
00013

```

```

00014 // //////////////////////////////////////
00015 PosChannelKey::PosChannelKey()
00016 : _pos (DEFAULT_POS),
00017   _channel (DEFAULT_CHANNEL) {
00018     assert (false);
00019 }
00020
00021 // //////////////////////////////////////
00022 PosChannelKey::PosChannelKey (const CityCode_T& iPos,
00023                               const ChannelLabel_T& iChannel)
00024 : _pos (iPos), _channel(iChannel) {
00025 }
00026
00027 // //////////////////////////////////////
00028 PosChannelKey::PosChannelKey (const PosChannelKey& iKey)
00029 : _pos (iKey._pos), _channel (iKey._channel) {
00030 }
00031
00032 // //////////////////////////////////////
00033 PosChannelKey::~PosChannelKey () {
00034 }
00035
00036 // //////////////////////////////////////
00037 void PosChannelKey::toStream (std::ostream& ioOut) const {
00038   ioOut << "PosChannelKey: " << toString() << std::endl;
00039 }
00040
00041 // //////////////////////////////////////
00042 void PosChannelKey::fromStream (std::istream& ioIn) {
00043 }
00044
00045 // //////////////////////////////////////
00046 const std::string PosChannelKey::toString() const {
00047   std::ostringstream ostr;
00048   ostr << _pos << DEFAULT_KEY_SUB_FLD_DELIMITER
00049     << " " << _channel;
00050   return ostr.str();
00051 }
00052
00053 }

```

### 35.375 stdair/bom/PosChannelKey.hpp File Reference

```
#include <stdair/bom/KeyAbstract.hpp>
```

```
#include <stdair/stdair_types.hpp>
```

#### Classes

- struct [stdair::PosChannelKey](#)  
*Key of point of sale and channel.*

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.376 PosChannelKey.hpp

```

00001 #ifndef __STDAIR_BOM_POSCHANNELKEY_HPP
00002 #define __STDAIR_BOM_POSCHANNELKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // SIMFQT
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_types.hpp>
00010
00011 namespace stdair {
00015     struct PosChannelKey : public KeyAbstract {
00016
00017     public:
00018         // ////////////////////////////////// Construction //////////////////////////////////
00022         PosChannelKey (const stdair::CityCode_T&, const stdair::ChannelLabel_T&);
00026         PosChannelKey (const PosChannelKey&);
00030         ~PosChannelKey ();
00031     private:
00035         PosChannelKey ();
00036
00037     public:
00038         // ////////////////////////////////// Getters //////////////////////////////////
00039
00043         const stdair::CityCode_T& getPos() const {
00044             return _pos;
00045         }
00046
00050         const stdair::ChannelLabel_T& getChannel() const {
00051             return _channel;
00052         }
00053
00054     public:
00055         // ////////////////////////////////// Display support methods //////////////////////////////////
00060         void toStream (std::ostream& ioOut) const;
00061
00066         void fromStream (std::istream& ioIn);
00067
00072         const std::string toString() const;
00073
00074     private:
00075         // ////////////////////////////////// Attributes //////////////////////////////////
00079         CityCode_T _pos;
00080
00085         ChannelLabel_T _channel;
00086
00087     };
00088 }
00089
00090 #endif // __STDAIR_BOM_POSCHANNELKEY_HPP

```

## 35.377 stdair/bom/PosChannelTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

## Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

## Typedefs

- typedef `std::list< PosChannel * >` `stdair::PosChannelList_T`
- typedef `std::map< const MapKey_T, PosChannel * >` `stdair::PosChannelMap_T`
- typedef `std::pair< MapKey_T, PosChannel * >` `stdair::PosChannelWithKey_T`
- typedef `std::list< PosChannelWithKey_T >` `stdair::PosChannelDetailedList_T`

## 35.378 PosChannelTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_POSCHANNELTYPES_HPP
00003 #define __STDAIR_BOM_POSCHANNELTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class PosChannel;
00018
00020     typedef std::list<PosChannel*> PosChannelList_T;
00021
00023     typedef std::map<const MapKey_T, PosChannel*> PosChannelMap_T;
00024
00026     typedef std::pair<MapKey_T, PosChannel*> PosChannelWithKey_T;
00027     typedef std::list<PosChannelWithKey_T> PosChannelDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_POSCHANNELTYPES_HPP

```

## 35.379 stdair/bom/RMEventStruct.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/bom/RMEventStruct.hpp>

```

## Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*



## 35.380 RMEventStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/RMEventStruct.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 RMEventStruct::RMEventStruct() {
00014     assert (false);
00015 }
00016
00017 // //////////////////////////////////////
00018 RMEventStruct::
00019 RMEventStruct (const RMEventStruct& iRMEvent)
00020     : _airlineCode (iRMEvent._airlineCode),
00021       _flightDateDescription (iRMEvent._flightDateDescription),
00022       _snapshotTime (iRMEvent._snapshotTime) {
00023 }
00024
00025 // //////////////////////////////////////
00026 RMEventStruct::
00027 RMEventStruct (const AirlineCode_T& iAirlineCode,
00028               const KeyDescription_T& iFlightDateDescription,
00029               const DateTime_T& iRMEventTime)
00030     : _airlineCode (iAirlineCode),
00031       _flightDateDescription (iFlightDateDescription),
00032       _snapshotTime (iRMEventTime) {
00033 }
00034
00035 // //////////////////////////////////////
00036 RMEventStruct::~RMEventStruct() {
00037 }
00038
00039 // //////////////////////////////////////
00040 void RMEventStruct::toStream (std::ostream& ioOut) const {
00041     ioOut << describe();
00042 }
00043
00044 // //////////////////////////////////////
00045 void RMEventStruct::fromStream (std::istream& ioIn) {
00046 }
00047
00048 // //////////////////////////////////////
00049 const std::string RMEventStruct::describe() const {
00050     std::ostringstream oStr;
00051     oStr << _airlineCode << ", " << _flightDateDescription << ", "
00052         << _snapshotTime;
00053     return oStr.str();
00054 }
00055
00056 }

```

**35.381 stdair/bom/RMEventStruct.hpp File Reference**

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/RMEventTypes.hpp>
```

**Classes**

- struct [stdair::RMEventStruct](#)

**Namespaces**

- namespace [stdair](#)  
Handle on the StdAir library context.

**35.382 RMEventStruct.hpp**

```
00001 #ifndef __STDAIR_BOM_RMEVENTSTRUCT_HPP
00002 #define __STDAIR_BOM_RMEVENTSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/RMEventTypes.hpp>
00015
00016 namespace stdair {
00017
00019     struct RMEventStruct : public StructAbstract {
00020     public:
00021         // ////////////////////////////////// Getters //////////////////////////////////
00023         const AirlineCode_T& getAirlineCode() const {
00024             return _airlineCode;
00025         }
00026
00028         const KeyDescription_T& getFlightDateDescription() const {
00029             return _flightDateDescription;
00030         }
00031
00033         const DateTime_T& getRMEventTime() const {
00034             return _snapshotTime;
00035         }
00036     }
```

```

00036
00037 // //////////// Display support method ////////////
00040 void toStream (std::ostream& ioOut) const;
00041
00044 void fromStream (std::istream& ioIn);
00045
00047 const std::string describe() const;
00048
00049
00050 // //////////// Constructors and Destructors ////////////
00051 public:
00053 RMEventStruct (const AirlineCode_T&, const KeyDescription_T&,
00054               const DateTime_T&);
00055
00057 RMEventStruct (const RMEventStruct&);
00058
00061 RMEventStruct ();
00062
00063 public:
00065 ~RMEventStruct ();
00066
00067
00068 private:
00069 // //////////// Attributes ////////////
00071 const AirlineCode_T _airlineCode;
00072
00074 const KeyDescription_T _flightDateDescription;
00075
00077 const DateTime_T _snapshotTime;
00078 };
00079
00080 }
00081 #endif // __STDAIR_BOM_RMEVENTSTRUCT_HPP

```

### 35.383 stdair/bom/RMEventTypes.hpp File Reference

```

#include <list>
#include <boost/shared_ptr.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef boost::shared\_ptr< RMEventStruct > [stdair::RMEventPtr\\_T](#)
- typedef std::list< RMEventStruct > [stdair::RMEventList\\_T](#)

### 35.384 RMEventTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_RMEVENTTYPES_HPP

```

```

00003 #define __STDAIR_BOM_RMEVENTTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <list>
00010 // Boost
00011 #include <boost/shared_ptr.hpp>
00012
00013 namespace stdair {
00014
00015     // Forward declarations
00016     struct RMEventStruct;
00017
00018     // ////////////////////////////////// Type definitions //////////////////////////////////
00020     typedef boost::shared_ptr<RMEventStruct> RMEventPtr_T;
00021
00023     typedef std::list<RMEventStruct> RMEventList_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_RMEVENTTYPES_HPP
00027

```

### 35.385 stdair/bom/SegmentCabin.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.386 SegmentCabin.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>

```

```

00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/basic/BasConst_BomDisplay.hpp>
00011 #include <stdair/bom/BomManager.hpp>
00012 #include <stdair/bom/SegmentDate.hpp>
00013 #include <stdair/bom/SegmentCabin.hpp>
00014
00015 namespace stdair {
00016
00017 // //////////////////////////////////////
00018 SegmentCabin::SegmentCabin() : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 SegmentCabin::SegmentCabin (const SegmentCabin&)
00024 : _key (DEFAULT_CABIN_CODE), _parent (NULL) {
00025     assert (false);
00026 }
00027
00028 // //////////////////////////////////////
00029 SegmentCabin::SegmentCabin (const Key_T& iKey)
00030 : _key (iKey), _parent (NULL),
00031   _capacity (DEFAULT_CABIN_CAPACITY),
00032   _blockSpace (DEFAULT_BLOCK_SPACE),
00033   _bookingCounter (DEFAULT_CLASS_NB_OF_BOOKINGS),
00034   _committedSpace (DEFAULT_COMMITTED_SPACE),
00035   _availabilityPool (DEFAULT_AVAILABILITY),
00036   _bidPriceVector (DEFAULT_BID_PRICE_VECTOR),
00037   _currentBidPrice (DEFAULT_BID_PRICE),
00038   _fareFamilyActivation (false) {
00039 }
00040
00041 // //////////////////////////////////////
00042 SegmentCabin::~SegmentCabin() {
00043 }
00044
00045 // //////////////////////////////////////
00046 const MapKey_T SegmentCabin::getFullerKey() const {
00047     const SegmentDate& lSegmentDate = BomManager::getParent<SegmentDate>(*this);
00048
00049     const MapKey_T oFullKey =
00050         lSegmentDate.describeKey() + DEFAULT_KEY_FLD_DELIMITER + getCabinCode();
00051     return oFullKey;
00052 }
00053
00054 // //////////////////////////////////////
00055 std::string SegmentCabin::toString() const {
00056     std::ostringstream oStr;
00057     oStr << describeKey();
00058     return oStr.str();
00059 }
00060
00061 // //////////////////////////////////////
00062 void SegmentCabin::
00063 updateFromReservation (const NbOfBookings_T& iNbOfBookings) {
00064     _committedSpace += iNbOfBookings;
00065 }
00066
00067 }
00068

```

**35.387 stdair/bom/SegmentCabin.hpp File Reference**

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/SegmentCabinKey.hpp>
#include <stdair/bom/SegmentCabinTypes.hpp>
```

**Classes**

- class [stdair::SegmentCabin](#)  
*Class representing the actual attributes for an airline segment-cabin.*

**Namespaces**

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

**35.388 SegmentCabin.hpp**

```
00001 #ifndef __STDAIR_BOM_SEGMENTCABIN_HPP
00002 #define __STDAIR_BOM_SEGMENTCABIN_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/SegmentCabinKey.hpp>
00014 #include <stdair/bom/SegmentCabinTypes.hpp>
00015
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021
00022 namespace stdair {
00023     // Forward declarations
00024     class GuillotineBlock;
00025 }
00026
```

```
00031 class SegmentCabin : public BomAbstract {
00032     template <typename BOM> friend class FacBom;
00033     friend class FacBomManager;
00034     friend class boost::serialization::access;
00035
00036 public:
00037     // //////////// Type definitions ////////////
00041     typedef SegmentCabinKey Key_T;
00042
00043
00044 public:
00045     // //////////// Getters ////////////
00049     const Key_T& getKey() const {
00050         return _key;
00051     }
00052
00056     BomAbstract* const getParent() const {
00057         return _parent;
00058     }
00059
00063     const HolderMap_T& getHolderMap() const {
00064         return _holderMap;
00065     }
00066
00070     const CabinCode_T& getCabinCode() const {
00071         return _key.getCabinCode();
00072     }
00073
00082     const MapKey_T getFullerKey() const;
00083
00085     const GuillotineBlock& getGuillotineBlock() const {
00086         assert (_guillotineBlock != NULL);
00087         return *_guillotineBlock;
00088     }
00089
00091     const CabinCapacity_T& getCapacity() const {
00092         return _capacity;
00093     }
00094
00096     const BlockSpace_T& getBlockSpace() const {
00097         return _blockSpace;
00098     }
00099
00101     const BlockSpace_T& getMIN() const {
00102         return _min;
00103     }
00104
00106     const UPR_T& getUPR() const {
00107         return _upr;
00108     }
00109
00111     const NbOfBookings_T& getBookingCounter() const {
00112         return _bookingCounter;
00113     }
00114
00116     const CommittedSpace_T& getCommittedSpace() const {
00117         return _committedSpace;
00118     }
00119
00121     const Availability_T& getAvailabilityPool() const {
00122         return _availabilityPool;
00123     }
```

```
00124
00126     const BidPrice_T& getCurrentBidPrice() const {
00127         return _currentBidPrice;
00128     }
00129
00131     const BidPriceVector_T& getBidPriceVector() const {
00132         return _bidPriceVector;
00133     }
00134
00136     const bool getFareFamilyStatus() const {
00137         return _fareFamilyActivation;
00138     }
00139
00140 public:
00141     // ////////// Setters //////////
00143     void setGuillotineBlock (GuillotineBlock& ioGuillotine) {
00144         _guillotineBlock = &ioGuillotine;
00145     }
00146
00148     void setCapacity (const CabinCapacity_T& iCapacity) {
00149         _capacity = iCapacity;
00150     }
00151
00153     void setBlockSpace (const BlockSpace_T& iBlockSpace) {
00154         _blockSpace = iBlockSpace;
00155     }
00156
00158     void setMIN (const BlockSpace_T& iMIN) {
00159         _min = iMIN;
00160     }
00161
00163     void setUPR (const UPR_T& iUPR) {
00164         _upr = iUPR;
00165     }
00166
00168     void setBookingCounter (const NbOfBookings_T& iBookingCounter) {
00169         _bookingCounter = iBookingCounter;
00170     }
00171
00173     void setCommittedSpace (const CommittedSpace_T& iCommittedSpace) {
00174         _committedSpace = iCommittedSpace;
00175     }
00176
00178     void setAvailabilityPool (const Availability_T& iAvailabilityPool) {
00179         _availabilityPool = iAvailabilityPool;
00180     }
00181
00183     void setBidPriceVector (const BidPriceVector_T& iBPV) {
00184         _bidPriceVector = iBPV;
00185     }
00186
00188     void activateFareFamily () {
00189         _fareFamilyActivation = true;
00190     }
00191
00192 public:
00193     // ////////// Business methods //////////
00195     void updateFromReservation (const NbOfBookings_T&);
00196
00197
00198 public:
00199     // ////////// Display support methods //////////
```



```

00205     void toStream (std::ostream& ioOut) const {
00206         ioOut << toString();
00207     }
00208
00214     void fromStream (std::istream& ioIn) {
00215     }
00216
00220     std::string toString() const;
00221
00225     const std::string describeKey() const {
00226         return _key.toString();
00227     }
00228
00229
00230 public:
00231     // ////////// (Boost) Serialisation support methods //////////
00235     template<class Archive>
00236     void serialize (Archive& ar, const unsigned int iFileVersion);
00237
00238 private:
00246     void serialisationImplementationExport() const;
00247     void serialisationImplementationImport();
00248
00249
00250 protected:
00251     // ////////// Constructors and destructors //////////
00255     SegmentCabin (const Key_T&);
00256
00260     virtual ~SegmentCabin();
00261
00262 private:
00266     SegmentCabin();
00267
00271     SegmentCabin (const SegmentCabin&);
00272
00273
00274 protected:
00275     // ////////// Attributes //////////
00279     Key_T _key;
00280
00284     BomAbstract* _parent;
00285
00289     HolderMap_T _holderMap;
00290
00294     GuillotineBlock* _guillotineBlock;
00295
00297     CabinCapacity_T _capacity;
00298
00300     BlockSpace_T _blockSpace;
00301
00303     BlockSpace_T _min;
00304
00306     UPR_T _upr;
00307
00309     NbOfBookings_T _bookingCounter;
00310
00312     CommittedSpace_T _committedSpace;
00313
00315     Availability_T _availabilityPool;
00316
00318     BidPriceVector_T _bidPriceVector;
00319

```

```

00321     BidPrice_T _currentBidPrice;
00322
00324     bool _fareFamilyActivation;
00325 };
00326
00327 }
00328 #endif // __STDAIR_BOM_SEGMENTCABIN_HPP
00329

```

### 35.389 stdair/bom/SegmentCabinKey.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/SegmentCabinKey.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Functions

- template void [stdair::SegmentCabinKey::serialize< ba::text\\_oarchive >](#) (ba::text\_oarchive &, unsigned int)
- template void [stdair::SegmentCabinKey::serialize< ba::text\\_iarchive >](#) (ba::text\_iarchive &, unsigned int)

### 35.390 SegmentCabinKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/bom/SegmentCabinKey.hpp>
00014
00015 namespace stdair {

```

```
00016
00017 // //////////////////////////////////////
00018 SegmentCabinKey::SegmentCabinKey() : _cabinCode (DEFAULT_CABIN_CODE) {
00019     assert (false);
00020 }
00021
00022 // //////////////////////////////////////
00023 SegmentCabinKey::SegmentCabinKey (const CabinCode_T& iCabinCode)
00024     : _cabinCode (iCabinCode) {
00025 }
00026
00027 // //////////////////////////////////////
00028 SegmentCabinKey::SegmentCabinKey (const SegmentCabinKey& iKey)
00029     : _cabinCode (iKey._cabinCode) {
00030 }
00031
00032 // //////////////////////////////////////
00033 SegmentCabinKey::~SegmentCabinKey () {
00034 }
00035
00036 // //////////////////////////////////////
00037 void SegmentCabinKey::toStream (std::ostream& ioOut) const {
00038     ioOut << "SegmentCabinKey: " << toString();
00039 }
00040
00041 // //////////////////////////////////////
00042 void SegmentCabinKey::fromStream (std::istream& ioIn) {
00043 }
00044
00045 // //////////////////////////////////////
00046 const std::string SegmentCabinKey::toString() const {
00047     std::ostringstream oStr;
00048     oStr << _cabinCode;
00049     return oStr.str();
00050 }
00051
00052 // //////////////////////////////////////
00053 void SegmentCabinKey::serialisationImplementationExport() const {
00054     std::ostringstream oStr;
00055     boost::archive::text_oarchive oa (oStr);
00056     oa << *this;
00057 }
00058
00059 // //////////////////////////////////////
00060 void SegmentCabinKey::serialisationImplementationImport() {
00061     std::istringstream iStr;
00062     boost::archive::text_iarchive ia (iStr);
00063     ia >> *this;
00064 }
00065
00066 // //////////////////////////////////////
00067 template<class Archive>
00068 void SegmentCabinKey::serialize (Archive& ioArchive,
00069     const unsigned int iFileVersion) {
00074     ioArchive & _cabinCode;
00075 }
00076
00077 // //////////////////////////////////////
00078 // Explicit template instantiation
00079 namespace ba = boost::archive;
00080 template void SegmentCabinKey::
00081 serialize<ba::text_oarchive> (ba::text_oarchive&, unsigned int);
```

```

00082     template void SegmentCabinKey::
00083     serialize<ba::text_iarchive> (ba::text_iarchive&, unsigned int);
00084     // //////////////////////////////////////
00085
00086 }

```

### 35.391 stdair/bom/SegmentCabinKey.hpp File Reference

```

#include <iosfwd>
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::SegmentCabinKey](#)  
Key of a given segment-cabin, made of a cabin code (only).

#### Namespaces

- namespace [boost](#)  
Forward declarations.
- namespace [boost::serialization](#)
- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.392 SegmentCabinKey.hpp

```

00001 #ifndef __STDAIR_BOM_SEGMENTCABINKEY_HPP
00002 #define __STDAIR_BOM_SEGMENTCABINKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/bom/KeyAbstract.hpp>
00013
00015 namespace boost {
00016     namespace serialization {
00017         class access;
00018     }
00019 }
00020
00021 namespace stdair {
00022
00026     struct SegmentCabinKey : public KeyAbstract {

```

```

00027     friend class boost::serialization::access;
00028
00029     // ////////// Constructors and destructors //////////
00030 private:
00031     SegmentCabinKey();
00032
00033 public:
00034     SegmentCabinKey (const CabinCode_T& iCabinCode);
00035
00036     SegmentCabinKey (const SegmentCabinKey&);
00037
00038     ~SegmentCabinKey();
00039
00040 public:
00041     // ////////// Getters //////////
00042     const CabinCode_T& getCabinCode() const {
00043         return _cabinCode;
00044     }
00045
00046 public:
00047     // ////////// Display support methods //////////
00048     void toStream (std::ostream& ioOut) const;
00049
00050     void fromStream (std::istream& ioIn);
00051
00052     const std::string toString() const;
00053
00054 public:
00055     // ////////// (Boost) Serialisation support methods //////////
00056     template<class Archive>
00057     void serialize (Archive& ar, const unsigned int iFileVersion);
00058
00059 private:
00060     void serialisationImplementationExport() const;
00061     void serialisationImplementationImport();
00062
00063 private:
00064     // ////////// Attributes //////////
00065     CabinCode_T _cabinCode;
00066 };
00067
00068 }
00069 #endif // __STDAIR_BOM_SEGMENTCABINKEY_HPP

```

### 35.393 stdair/bom/SegmentCabinTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

#### Typedefs

- typedef std::list< SegmentCabin \* > [stdair::SegmentCabinList\\_T](#)
- typedef std::map< const MapKey\_T, SegmentCabin \* > [stdair::SegmentCabinMap\\_T](#)

#### 35.394 SegmentCabinTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SEGMENTCABINTYPES_HPP
00003 #define __STDAIR_BOM_SEGMENTCABINTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class SegmentCabin;
00018
00020     typedef std::list<SegmentCabin*> SegmentCabinList_T;
00021
00023     typedef std::map<const MapKey_T, SegmentCabin*> SegmentCabinMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_SEGMENTCABINTYPES_HPP
00027

```

#### 35.395 stdair/bom/SegmentDate.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>

```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.396 SegmentDate.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/basic/BasConst_Inventory.hpp>
00010 #include <stdair/bom/BomManager.hpp>
00011 #include <stdair/bom/SegmentDate.hpp>
00012 #include <stdair/bom/SegmentCabin.hpp>
00013
00014 namespace stdair {
00015
00016 // //////////////////////////////////////
00017 SegmentDate::SegmentDate()
00018 : _key (DEFAULT_ORIGIN, DEFAULT_DESTINATION), _parent (NULL),
00019   _operatingSegmentDate (NULL) {
00020   assert (false);
00021 }
00022
00023 // //////////////////////////////////////
00024 SegmentDate::SegmentDate (const SegmentDate&)
00025 : _key (DEFAULT_ORIGIN, DEFAULT_DESTINATION), _parent (NULL),
00026   _operatingSegmentDate (NULL) {
00027   assert (false);
00028 }
00029
00030 // //////////////////////////////////////
00031 SegmentDate::SegmentDate (const Key_T& iKey)
00032 : _key (iKey), _parent (NULL),
00033   _operatingSegmentDate (NULL) {
00034 }
00035
00036 // //////////////////////////////////////
00037 SegmentDate::~SegmentDate () {
00038 }
00039
00040 // //////////////////////////////////////
00041 std::string SegmentDate::toString() const {
00042   std::ostringstream oStr;
00043   oStr << describeKey();
00044   return oStr.str();
00045 }
00046
00047 // //////////////////////////////////////
00048 const Duration_T SegmentDate::getTimeOffset() const {
00049   // TimeOffset = (OffTime - BoardingTime) + (OffDate - BoardingDate) * 24
00050   //             - ElapsedTime
00051   Duration_T oTimeOffset = (_offTime - _boardingTime);
00052   const DateOffset_T& lDateOffset = getDateOffset();
00053   const Duration_T lDateOffsetInHours (lDateOffset.days() * 24, 0, 0);
00054   oTimeOffset += lDateOffsetInHours - _elapsedTime;
00055   return oTimeOffset;
00056 }

```

```
00057 }
00058
```

### 35.397 stdair/bom/SegmentDate.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
#include <stdair/bom/SegmentDateTypes.hpp>
```

#### Classes

- class [stdair::SegmentDate](#)  
*Class representing the actual attributes for an airline segment-date.*

#### Namespaces

- namespace [boost](#)  
*Forward declarations.*
- namespace [boost::serialization](#)
- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.398 SegmentDate.hpp

```
00001 #ifndef __STDAIR_BOM_SEGMENTDATE_HPP
00002 #define __STDAIR_BOM_SEGMENTDATE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/bom/BomAbstract.hpp>
00013 #include <stdair/bom/SegmentDateKey.hpp>
00014 #include <stdair/bom/SegmentDateTypes.hpp>
00015
00016 namespace boost {
00017     namespace serialization {
00018         class access;
00019     }
00020 }
00021 }
00022
```



```
00023 namespace stdair {
00024
00026     struct SegmentCabinKey;
00027     class SegmentCabin;
00028
00033     class SegmentDate : public BomAbstract {
00034     template <typename BOM> friend class FacBom;
00035     friend class FacBomManager;
00036     friend class boost::serialization::access;
00037
00038     public:
00039         // //////////// Type definitions ////////////
00043         typedef SegmentDateKey Key_T;
00044
00045
00046     public:
00047         // //////////// Getters ////////////
00049         const Key_T& getKey() const {
00050             return _key;
00051         }
00052
00054         BomAbstract* const getParent() const {
00055             return _parent;
00056         }
00057
00059         const AirportCode_T& getBoardingPoint() const {
00060             return _key.getBoardingPoint();
00061         }
00062
00064         const AirportCode_T& getOffPoint() const {
00065             return _key.getOffPoint();
00066         }
00067
00069         const HolderMap_T& getHolderMap() const {
00070             return _holderMap;
00071         }
00072
00074         const Date_T& getBoardingDate() const {
00075             return _boardingDate;
00076         }
00077
00079         const Duration_T& getBoardingTime() const {
00080             return _boardingTime;
00081         }
00082
00084         const Date_T& getOffDate() const {
00085             return _offDate;
00086         }
00087
00089         const Duration_T& getOffTime() const {
00090             return _offTime;
00091         }
00092
00094         const Duration_T& getElapsedTime() const {
00095             return _elapsedTime;
00096         }
00097
00099         const Distance_T& getDistance() const {
00100             return _distance;
00101         }
00102
00104         const DateOffset_T getDateOffset() const {
```

```
00105         return _offDate - _boardingDate;
00106     }
00107
00116     const Duration_T getTimeOffset() const;
00117
00121     SegmentDate* getOperatingSegmentDate () const {
00122         return _operatingSegmentDate;
00123     }
00124
00128     const SegmentDateList_T& getMarketingSegmentDateList () const {
00129         return _marketingSegmentDateList;
00130     }
00131
00132     public:
00133         // ////////// Setters //////////
00135         void setBoardingDate (const Date_T& iBoardingDate) {
00136             _boardingDate = iBoardingDate;
00137         }
00138
00140         void setBoardingTime (const Duration_T& iBoardingTime) {
00141             _boardingTime = iBoardingTime;
00142         }
00143
00145         void setOffDate (const Date_T& iOffDate) {
00146             _offDate = iOffDate;
00147         }
00148
00150         void setOffTime (const Duration_T& iOffTime) {
00151             _offTime = iOffTime;
00152         }
00153
00155         void setElapsedTime (const Duration_T& iElapsedTime) {
00156             _elapsedTime = iElapsedTime;
00157         }
00158
00160         void setDistance (const Distance_T& iDistance) {
00161             _distance = iDistance;
00162         }
00163
00165         void linkWithOperating (SegmentDate& iSegmentDate) {
00166             _operatingSegmentDate = &iSegmentDate;
00167         }
00168
00169     public:
00170         // ////////// Display support methods //////////
00176         void toStream (std::ostream& ioOut) const {
00177             ioOut << toString();
00178         }
00179
00185         void fromStream (std::istream& ioIn) {
00186         }
00187
00191         std::string toString() const;
00192
00196         const std::string describeKey() const {
00197             return _key.toString();
00198         }
00199
00200
00201     public:
00202         // ////////// (Boost) Serialisation support methods //////////
00206         template<class Archive>
```

```

00207     void serialize (Archive& ar, const unsigned int iFileVersion);
00208
00209 private:
00217     void serialisationImplementationExport() const;
00218     void serialisationImplementationImport();
00219
00220
00221 protected:
00222     // ////////// Constructors and destructors //////////
00226     SegmentDate (const Key_T&);
00227
00231     virtual ~SegmentDate();
00232
00233 private:
00237     SegmentDate();
00238
00242     SegmentDate (const SegmentDate&);
00243
00244
00245 protected:
00246     // ////////// Attributes //////////
00250     Key_T _key;
00251
00255     BomAbstract* _parent;
00256
00260     HolderMap_T _holderMap;
00261
00268     SegmentDate* _operatingSegmentDate;
00269
00276     SegmentDateList_T _marketingSegmentDateList;
00277
00281     Date_T _boardingDate;
00282
00286     Duration_T _boardingTime;
00287
00291     Date_T _offDate;
00292
00296     Duration_T _offTime;
00297
00301     Duration_T _elapsedTime;
00302
00306     Distance_T _distance;
00307 };
00308
00309 }
00310 #endif // __STDAIR_BOM_SEGMENTDATE_HPP
00311

```

### 35.399 stdair/bom/SegmentDateKey.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>

```

```
#include <stdair/basic/BasConst_BomDisplay.hpp>
#include <stdair/bom/SegmentDateKey.hpp>
```

### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### Functions

- template void `stdair::SegmentDateKey::serialize< ba::text_oarchive >` (ba::text\_oarchive &, unsigned int)
- template void `stdair::SegmentDateKey::serialize< ba::text_iarchive >` (ba::text\_iarchive &, unsigned int)

### 35.400 SegmentDateKey.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/access.hpp>
00011 // StdAir
00012 #include <stdair/basic/BasConst_Inventory.hpp>
00013 #include <stdair/basic/BasConst_BomDisplay.hpp>
00014 #include <stdair/bom/SegmentDateKey.hpp>
00015
00016 namespace stdair {
00017
00018 // //////////////////////////////////////
00019 SegmentDateKey::SegmentDateKey()
00020 : _boardingPoint (DEFAULT_ORIGIN), _offPoint (DEFAULT_DESTINATION) {
00021     assert (false);
00022 }
00023
00024 // //////////////////////////////////////
00025 SegmentDateKey::SegmentDateKey (const AirportCode_T& iBoardingPoint,
00026                                 const AirportCode_T& iOffPoint)
00027 : _boardingPoint (iBoardingPoint), _offPoint (iOffPoint) {
00028 }
00029
00030 // //////////////////////////////////////
00031 SegmentDateKey::SegmentDateKey (const SegmentDateKey& iKey)
00032 : _boardingPoint (iKey._boardingPoint), _offPoint (iKey._offPoint) {
00033 }
00034
00035 // //////////////////////////////////////
00036 SegmentDateKey::~SegmentDateKey() {
00037 }
```

```

00038
00039 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00040 void SegmentDateKey::toStream (std::ostream& ioOut) const {
00041     ioOut << "SegmentDateKey: " << toString() << std::endl;
00042 }
00043
00044 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00045 void SegmentDateKey::fromStream (std::istream& ioIn) {
00046 }
00047
00048 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00049 const std::string SegmentDateKey::toString() const {
00050     std::ostringstream ostr;
00051     ostr << _boardingPoint
00052         << DEFAULT_KEY_SUB_FLD_DELIMITER << " " << _offPoint;
00053     return ostr.str();
00054 }
00055
00056 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00057 void SegmentDateKey::serialisationImplementationExport() const {
00058     std::ostringstream ostr;
00059     boost::archive::text_oarchive oa (ostr);
00060     oa << *this;
00061 }
00062
00063 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00064 void SegmentDateKey::serialisationImplementationImport() {
00065     std::istringstream istr;
00066     boost::archive::text_iarchive ia (istr);
00067     ia >> *this;
00068 }
00069
00070 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00071 template<class Archive>
00072 void SegmentDateKey::serialize (Archive& ioArchive,
00073                                 const unsigned int iFileVersion) {
00074     ioArchive & _boardingPoint & _offPoint;
00075 }
00076
00077 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00078 // Explicit template instantiation
00079 namespace ba = boost::archive;
00080 template void SegmentDateKey::serialize<ba::text_oarchive>(ba::text_oarchive&,
00081                                                            unsigned int);
00082 template void SegmentDateKey::serialize<ba::text_iarchive>(ba::text_iarchive&,
00083                                                            unsigned int);
00084 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00085
00086 }

```

### 35.401 stdair/bom/SegmentDateKey.hpp File Reference

```

#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::SegmentDateKey](#)

*Key of a given segment-date, made of an origin and a destination airports.*

#### Namespaces

- namespace `boost`  
*Forward declarations.*
- namespace `boost::serialization`
- namespace `stdair`  
*Handle on the StdAir library context.*

#### 35.402 SegmentDateKey.hpp

```

00001 #ifndef __STDAIR_BOM_SEGMENTDATEKEY_HPP
00002 #define __STDAIR_BOM_SEGMENTDATEKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00012 namespace boost {
00013     namespace serialization {
00014         class access;
00015     }
00016 }
00017
00018 namespace stdair {
00019
00024     struct SegmentDateKey : public KeyAbstract {
00025         friend class boost::serialization::access;
00026
00027         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00028     private:
00032         SegmentDateKey();
00033
00034     public:
00038         SegmentDateKey (const AirportCode_T&, const AirportCode_T&);
00042         SegmentDateKey (const SegmentDateKey&);
00046         ~SegmentDateKey();
00047
00048
00049         // ////////////////////////////////// Getters //////////////////////////////////
00051         const AirportCode_T& getBoardingPoint() const {
00052             return _boardingPoint;
00053         }
00054
00056         const AirportCode_T& getOffPoint() const {
00057             return _offPoint;
00058         }
00059
00060
00061         // ////////////////////////////////// Display support methods //////////////////////////////////
00067         void toStream (std::ostream& ioOut) const;
00068
00074         void fromStream (std::istream& ioIn);

```

```

00075
00085     const std::string toString() const;
00086
00087
00088 public:
00089     // //////////// (Boost) Serialisation support methods ////////////
00093     template<class Archive>
00094     void serialize (Archive& ar, const unsigned int iFileVersion);
00095
00096 private:
00101     void serialisationImplementationExport() const;
00102     void serialisationImplementationImport();
00103
00104
00105 private:
00106     // ////////////////////////////////// Attributes //////////////////////////////////
00110     AirportCode_T _boardingPoint;
00111
00115     AirportCode_T _offPoint;
00116 };
00117
00118 }
00119 #endif // __STDAIR_BOM_SEGMENTDATEKEY_HPP

```

### 35.403 stdair/bom/SegmentDateTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< SegmentDate \* > `stdair::SegmentDateList_T`
- typedef std::map< const MapKey\_T, SegmentDate \* > `stdair::SegmentDateMap_T`

### 35.404 SegmentDateTypes.hpp

```

00001 // ////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SEGMENTDATETYPES_HPP
00003 #define __STDAIR_BOM_SEGMENTDATETYPES_HPP
00004
00005 // ////////////////////////////////////////////
00006 // Import section
00007 // ////////////////////////////////////////////
00008 // STL
00009 #include <map>

```

```

00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class SegmentDate;
00018
00020     typedef std::list<SegmentDate*> SegmentDateList_T;
00021
00023     typedef std::map<const MapKey_T, SegmentDate*> SegmentDateMap_T;
00024 }
00025
00026 #endif // __STDAIR_BOM_SEGMENTDATETYPES_HPP
00027

```

### 35.405 stdair/bom/SegmentPeriod.cpp File Reference

```

#include <cassert>

#include <stdair/basic/BasConst_BookingClass.hpp>

#include <stdair/bom/SegmentPeriod.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.406 SegmentPeriod.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // STDAIR
00007 #include <stdair/basic/BasConst_BookingClass.hpp>
00008 #include <stdair/bom/SegmentPeriod.hpp>
00009
00010 namespace stdair {
00011
00012     // //////////////////////////////////////
00013     SegmentPeriod::SegmentPeriod (const Key_T& iKey)
00014         : _key (iKey), _parent (NULL), _boardingDateOffset (0), _offDateOffset (0) {
00015     }
00016
00017     // //////////////////////////////////////
00018     SegmentPeriod::~SegmentPeriod () {
00019     }
00020
00021     // //////////////////////////////////////
00022     std::string SegmentPeriod::toString() const {
00023         std::ostringstream oStr;

```



```

00024     ostr << describeKey();
00025     return ostr.str();
00026 }
00027
00028 // //////////////////////////////////////
00029 void SegmentPeriod::
00030 addCabinBookingClassList (const CabinCode_T& iCabinCode,
00031                          const ClassList_String_T& iClassCodeList) {
00032     const bool insert = _cabinBookingClassMap.
00033         insert (CabinBookingClassMap_T::value_type (iCabinCode,
00034                                                     iClassCodeList)).second;
00035     assert (insert == true);
00036 }
00037
00038 }

```

### 35.407 stdair/bom/SegmentPeriod.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/SegmentPeriodKey.hpp>
#include <stdair/bom/SegmentPeriodTypes.hpp>

```

#### Classes

- class [stdair::SegmentPeriod](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.408 SegmentPeriod.hpp

```

00001 #ifndef __STDAIR_BOM_SEGMENTPERIOD_HPP
00002 #define __STDAIR_BOM_SEGMENTPERIOD_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/SegmentPeriodKey.hpp>
00010 #include <stdair/bom/SegmentPeriodTypes.hpp>
00011
00012 namespace stdair {
00013
00015     class SegmentPeriod : public BomAbstract {
00016     template <typename BOM> friend class FacBom;
00017     friend class FacBomManager;
00018
00019     public:
00020         // Type definitions.

```

```

00022     typedef SegmentPeriodKey Key_T;
00023
00024 public:
00025     // //////////// Getters ////////////
00027     const Key_T& getKey() const { return _key; }
00028
00030     BomAbstract* const getParent() const { return _parent; }
00031
00033     const AirportCode_T& getBoardingPoint () const {
00034         return _key.getBoardingPoint();
00035     }
00036
00038     const AirportCode_T& getOffPoint () const { return _key.getOffPoint(); }
00039
00041     const Duration_T& getBoardingTime () const { return _boardingTime; }
00042
00044     const Duration_T& getOffTime () const { return _offTime; }
00045
00047     const DateOffset_T& getBoardingDateOffset () const {
00048         return _boardingDateOffset;
00049     }
00050
00052     const DateOffset_T& getOffDateOffset () const { return _offDateOffset; }
00053
00055     const Duration_T& getElapsedTime() const { return _elapsedTime; }
00056
00058     const CabinBookingClassMap_T& getCabinBookingClassMap () const {
00059         return _cabinBookingClassMap;
00060     }
00061
00063     const HolderMap_T& getHolderMap() const { return _holderMap; }
00064
00065 public:
00066     // //////////// Setters ////////////
00068     void setBoardingTime (const Duration_T& iBoardingTime) {
00069         _boardingTime = iBoardingTime;
00070     }
00071
00073     void setOffTime (const Duration_T& iOffTime) { _offTime = iOffTime; }
00074
00076     void setBoardingDateOffset (const DateOffset_T& iDateOffset) {
00077         _boardingDateOffset = iDateOffset;
00078     }
00079
00081     void setOffDateOffset (const DateOffset_T& iDateOffset) {
00082         _offDateOffset = iDateOffset;
00083     }
00084
00086     void setElapsedTime (const Duration_T& iElapsedTime) {
00087         _elapsedTime = iElapsedTime;
00088     }
00089
00092     void addCabinBookingClassList (const CabinCode_T&,
00093                                     const ClassList_String_T&);
00094
00095 public:
00096     // //////////// Display support methods ////////////
00099     void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00100
00103     void fromStream (std::istream& ioIn) { }
00104
00106     std::string toString() const;

```

```

00107
00109     const std::string describeKey() const { return _key.toString(); }
00110
00111 protected:
00112     SegmentPeriod (const Key_T&);
00113     SegmentPeriod (const SegmentPeriod&);
00114     ~SegmentPeriod();
00115
00116 protected:
00117     // Attributes
00118     Key_T _key;
00119     BomAbstract* _parent;
00120     Duration_T _boardingTime;
00121     Duration_T _offTime;
00122     DateOffset_T _boardingDateOffset;
00123     DateOffset_T _offDateOffset;
00124     Duration_T _elapsedTime;
00125     CabinBookingClassMap_T _cabinBookingClassMap;
00126     HolderMap_T _holderMap;
00127 };
00128
00129 }
00130
00131 }
00132 #endif // __STDAIR_BOM_SEGMENTPERIOD_HPP
00133

```

### 35.409 stdair/bom/SegmentPeriodKey.cpp File Reference

```

#include <sstream>
#include <stdair/bom/SegmentPeriodKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### 35.410 SegmentPeriodKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <sstream>
00006 // StdAir
00007 #include <stdair/bom/SegmentPeriodKey.hpp>
00008
00009 namespace stdair {
00010
00011     // //////////////////////////////////////
00012     SegmentPeriodKey::SegmentPeriodKey (const AirportCode_T& iBoardingPoint,
00013                                         const AirportCode_T& iOffPoint)
00014     : _boardingPoint (iBoardingPoint), _offPoint (iOffPoint) {
00015     }
00016
00017     // //////////////////////////////////////
00018     SegmentPeriodKey::SegmentPeriodKey (const SegmentPeriodKey& iKey)

```

```

00019     : _boardingPoint (iKey._boardingPoint), _offPoint (iKey._offPoint) {
00020     }
00021
00022     // //////////////////////////////////////
00023     SegmentPeriodKey::~SegmentPeriodKey () {
00024     }
00025
00026     // //////////////////////////////////////
00027     void SegmentPeriodKey::toStream (std::ostream& ioOut) const {
00028         ioOut << "SegmentPeriodKey: " << toString() << std::endl;
00029     }
00030
00031     // //////////////////////////////////////
00032     void SegmentPeriodKey::fromStream (std::istream& ioIn) {
00033     }
00034
00035     // //////////////////////////////////////
00036     const std::string SegmentPeriodKey::toString() const {
00037         std::ostringstream ostr;
00038         ostr << _boardingPoint << "-" << _offPoint;
00039         return ostr.str();
00040     }
00041
00042 }

```

### 35.411 stdair/bom/SegmentPeriodKey.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
```

```
#include <stdair/bom/KeyAbstract.hpp>
```

#### Classes

- struct [stdair::SegmentPeriodKey](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.412 SegmentPeriodKey.hpp

```

00001 #ifndef __STDAIR_BOM_SEGMENTPERIODKEY_HPP
00002 #define __STDAIR_BOM_SEGMENTPERIODKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_basic_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012

```

```

00014 struct SegmentPeriodKey : public KeyAbstract {
00015
00016 private:
00017     // //////////// Default constructor ////////////
00018     SegmentPeriodKey () { };
00019 public:
00020     // //////////// Construction ////////////
00022     SegmentPeriodKey (const AirportCode_T&, const AirportCode_T&);
00023     SegmentPeriodKey (const SegmentPeriodKey&);
00025     ~SegmentPeriodKey ();
00026
00027     // //////////// Getters ////////////
00029     const AirportCode_T& getBoardingPoint() const {
00030         return _boardingPoint;
00031     }
00032
00034     const AirportCode_T& getOffPoint() const {
00035         return _offPoint;
00036     }
00037
00038     // //////////// Display support methods ////////////
00041     void toStream (std::ostream& ioOut) const;
00042
00045     void fromStream (std::istream& ioIn);
00046
00052     const std::string toString() const;
00053
00054 private:
00055     // Attributes
00057     AirportCode_T _boardingPoint;
00058
00060     AirportCode_T _offPoint;
00061 };
00062
00063 }
00064 #endif // __STDAIR_BOM_SEGMENTPERIODKEY_HPP

```

### 35.413 stdair/bom/SegmentPeriodTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< SegmentPeriod \* > [stdair::SegmentPeriodList\\_T](#)
- typedef std::map< const MapKey\_T, SegmentPeriod \* > [stdair::SegmentPeriodMap\\_T](#)

- typedef std::pair< MapKey\_T, SegmentPeriod \* > [stdair::SegmentPeriodWithKey\\_T](#)
- typedef std::list< SegmentPeriodWithKey\_T > [stdair::SegmentPeriodDetailedList\\_T](#)

### 35.414 SegmentPeriodTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SEGMENTPERIODTYPES_HPP
00003 #define __STDAIR_BOM_SEGMENTPERIODTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class SegmentPeriod;
00018
00020     typedef std::list<SegmentPeriod*> SegmentPeriodList\_T;
00021
00023     typedef std::map<const MapKey_T, SegmentPeriod*> SegmentPeriodMap\_T;
00024
00026     typedef std::pair<MapKey_T, SegmentPeriod*> SegmentPeriodWithKey\_T;
00027     typedef std::list<SegmentPeriodWithKey_T> SegmentPeriodDetailedList\_T;
00028 }
00029 #endif // __STDAIR_BOM_SEGMENTPERIODTYPES_HPP
00030

```

### 35.415 stdair/bom/SnapshotStruct.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/bom/SnapshotStruct.hpp>

```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.416 SnapshotStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////

```

```

00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/SnapshotStruct.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 SnapshotStruct::SnapshotStruct() {
00014     assert (false);
00015 }
00016
00017 // //////////////////////////////////////
00018 SnapshotStruct::
00019 SnapshotStruct (const SnapshotStruct& iSnapshot)
00020 : _airlineCode (iSnapshot._airlineCode),
00021   _snapshotTime (iSnapshot._snapshotTime) {
00022 }
00023
00024 // //////////////////////////////////////
00025 SnapshotStruct::
00026 SnapshotStruct (const AirlineCode_T& iAirlineCode,
00027                const DateTime_T& iSnapshotTime)
00028 : _airlineCode (iAirlineCode), _snapshotTime (iSnapshotTime) {
00029 }
00030
00031 // //////////////////////////////////////
00032 SnapshotStruct::~SnapshotStruct() {
00033 }
00034
00035 // //////////////////////////////////////
00036 void SnapshotStruct::toStream (std::ostream& ioOut) const {
00037     ioOut << describe();
00038 }
00039
00040 // //////////////////////////////////////
00041 void SnapshotStruct::fromStream (std::istream& ioIn) {
00042 }
00043
00044 // //////////////////////////////////////
00045 const std::string SnapshotStruct::describe() const {
00046     std::ostringstream oStr;
00047     oStr << _airlineCode << ", " << _snapshotTime;
00048     return oStr.str();
00049 }
00050
00051 }

```

### 35.417 stdair/bom/SnapshotStruct.hpp File Reference

```

#include <iosfwd>

#include <string>

#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/basic/StructAbstract.hpp>

```

```
#include <stdair/bom/SnapshotTypes.hpp>
```

#### Classes

- struct `stdair::SnapshotStruct`

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.418 SnapshotStruct.hpp

```
00001 #ifndef __STDAIR_BOM_SNAPSHOTSTRUCT_HPP
00002 #define __STDAIR_BOM_SNAPSHOTSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/SnapshotTypes.hpp>
00015
00016 namespace stdair {
00017
00019     struct SnapshotStruct : public StructAbstract {
00020     public:
00021         // ////////////////////////////////// Getters //////////////////////////////////
00022         const AirlineCode_T& getAirlineCode() const {
00023             return _airlineCode;
00024         }
00025
00026         const DateTime_T& getSnapshotTime() const {
00027             return _snapshotTime;
00028         }
00029
00030         // ////////////////////////////////// Display support method //////////////////////////////////
00031         void toStream (std::ostream& ioOut) const;
00032
00033         void fromStream (std::istream& ioIn);
00034
00035         const std::string describe() const;
00036
00037         // ////////////////////////////////// Constructors and Destructors //////////////////////////////////
00038     public:
00039         SnapshotStruct (const AirlineCode_T&, const DateTime_T&);
00040
00041         SnapshotStruct (const SnapshotStruct&);
00042
00043     private:
```



```

00056     SnapshotStruct ();
00057
00058 public:
00060     ~SnapshotStruct ();
00061
00062
00063 private:
00064     // ////////////////////////////////// Attributes //////////////////////////////////
00066     const AirlineCode_T _airlineCode;
00067
00069     const DateTime_T _snapshotTime;
00070 };
00071
00072 }
00073 #endif // __STDAIR_BOM_SNAPSHOTSTRUCT_HPP

```

### 35.419 stdair/bom/SnapshotTypes.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef boost::shared\_ptr< SnapshotStruct > [stdair::SnapshotPtr\\_T](#)

### 35.420 SnapshotTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_SNAPSHOTTYPES_HPP
00003 #define __STDAIR_BOM_SNAPSHOTTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // Boost
00009 #include <boost/shared_ptr.hpp>
00010
00011 namespace stdair {
00012
00013     // Forward declarations
00014     struct SnapshotStruct;
00015
00016     // ////////////////////////////////// Type definitions //////////////////////////////////
00018     typedef boost::shared_ptr<SnapshotStruct> SnapshotPtr_T;
00019
00020 }
00021 #endif // __STDAIR_BOM_SNAPSHOTTYPES_HPP
00022

```

## 35.421 stdair/bom/TimePeriod.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/TimePeriod.hpp>
```

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.422 TimePeriod.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/TimePeriod.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 TimePeriod::TimePeriod()
00016 : _key (DEFAULT_EPSILON_DURATION, DEFAULT_EPSILON_DURATION),
00017   _parent (NULL) {
00018     // That constructor is used by the serialisation process
00019 }
00020
00021 // //////////////////////////////////////
00022 TimePeriod::TimePeriod (const TimePeriod& iTimePeriod)
00023 : _key (iTimePeriod.getKey()), _parent (NULL) {
00024     assert (false);
00025 }
00026
00027 // //////////////////////////////////////
00028 TimePeriod::TimePeriod (const Key_T& iKey)
00029 : _key (iKey), _parent (NULL) {
00030 }
00031
00032 // //////////////////////////////////////
00033 TimePeriod::~TimePeriod () {
00034 }
00035
00036 // //////////////////////////////////////
00037 std::string TimePeriod::toString() const {
00038     std::ostringstream oStr;
00039     oStr << describeKey();
```

```

00040     return oStr.str();
00041 }
00042
00043 // //////////////////////////////////////
00044 bool TimePeriod::
00045 isDepartureTimeValid (const Time_T& iFlightTime) const {
00046
00047     const Time_T& lTimeRangeStart = getTimeRangeStart();
00048     const Time_T& lTimeRangeEnd = getTimeRangeEnd();
00049
00050     // Check if the departure time is within the time range.
00051     if (lTimeRangeStart >= iFlightTime) {
00052         // DEBUG
00053         STDAIR_LOG_DEBUG ("Time range begin: " << lTimeRangeStart << ", "
00054             << "time: " << iFlightTime);
00055         return false;
00056     }
00057     if (lTimeRangeEnd <= iFlightTime) {
00058         // DEBUG
00059         STDAIR_LOG_DEBUG ("Time range end: " << lTimeRangeEnd << ", "
00060             << "time: " << iFlightTime);
00061         return false;
00062     }
00063     return true;
00064 }
00065 }
00066
00067 }
00068

```

### 35.423 stdair/bom/TimePeriod.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/TimePeriodKey.hpp>
#include <stdair/bom/TimePeriodTypes.hpp>

```

#### Classes

- class [stdair::TimePeriod](#)  
Class representing the actual attributes for a fare time-period.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.424 TimePeriod.hpp

```

00001 #ifndef __STDAIR_BOM_FARETIMEPERIOD_HPP
00002 #define __STDAIR_BOM_FARETIMEPERIOD_HPP
00003
00004 // //////////////////////////////////////

```

```
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/TimePeriodKey.hpp>
00010 #include <stdair/bom/TimePeriodTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00015     class TimePeriod : public BomAbstract {
00016     public:
00017         template <typename BOM> friend class FacBom;
00018         friend class FacBomManager;
00019
00020     public:
00021         // ////////////////////////////////// Type definitions //////////////////////////////////
00022         typedef TimePeriodKey Key_T;
00023
00024     public:
00025         // ////////////////////////////////// Display support methods //////////////////////////////////
00026         // ////////////////////////////////// Display support methods //////////////////////////////////
00027         void toStream (std::ostream& ioOut) const {
00028             ioOut << toString();
00029         }
00030
00031         void fromStream (std::istream& ioIn) {
00032         }
00033
00034         std::string toString() const;
00035
00036         const std::string describeKey() const {
00037             return _key.toString();
00038         }
00039
00040     public:
00041         // ////////////////////////////////// Getters //////////////////////////////////
00042         const Key_T& getKey() const {
00043             return _key;
00044         }
00045
00046         BomAbstract* const getParent() const {
00047             return _parent;
00048         }
00049
00050         const HolderMap_T& getHolderMap() const {
00051             return _holderMap;
00052         }
00053
00054         const Time_T& getTimeRangeStart() const {
00055             return _key.getTimeRangeStart();
00056         }
00057
00058         const Time_T& getTimeRangeEnd() const {
00059             return _key.getTimeRangeEnd();
00060         }
00061
00062     public:
00063         // ////////////////////////////////// Business methods //////////////////////////////////
00064         bool isDepartureTimeValid (const Time_T&) const;
00065
00066     protected:
00067         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00068
```

```

00111     TimePeriod (const Key_T&);
00115     virtual ~TimePeriod();
00116
00117 private:
00121     TimePeriod();
00125     TimePeriod (const TimePeriod&);
00126
00127 protected:
00128     // //////////// Attributes ////////////
00132     Key_T _key;
00133
00137     BomAbstract* _parent;
00138
00142     HolderMap_T _holderMap;
00143
00144 };
00145
00146 }
00147 #endif // __STDAIR_BOM_FARETIMEPERIOD_HPP
00148

```

### 35.425 stdair/bom/TimePeriodKey.cpp File Reference

```

#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/bom/TimePeriodKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.426 TimePeriodKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // STDAIR
00008 #include <stdair/basic/BasConst_General.hpp>
00009 #include <stdair/bom/TimePeriodKey.hpp>
00010
00011 namespace stdair {
00012
00013     // //////////////////////////////////////
00014     TimePeriodKey::TimePeriodKey ()
00015         : _timeRangeStart (DEFAULT_EPSILON_DURATION),
00016         _timeRangeEnd (DEFAULT_EPSILON_DURATION) {
00017         assert (false);
00018     }

```

```

00019
00020 // //////////////////////////////////////
00021 TimePeriodKey::TimePeriodKey (const Time_T& iTimeRangeStart,
00022                               const Time_T& iTimeRangeEnd)
00023     : _timeRangeStart(iTimeRangeStart),
00024       _timeRangeEnd(iTimeRangeEnd) {
00025 }
00026
00027 // //////////////////////////////////////
00028 TimePeriodKey::TimePeriodKey (const TimePeriodKey& iKey)
00029     : _timeRangeStart(iKey.getTimeRangeStart()),
00030       _timeRangeEnd(iKey.getTimeRangeEnd()) {
00031 }
00032
00033 // //////////////////////////////////////
00034 TimePeriodKey::~TimePeriodKey () {
00035 }
00036
00037 // //////////////////////////////////////
00038 void TimePeriodKey::toStream (std::ostream& ioOut) const {
00039     ioOut << "TimePeriodKey: " << toString() << std::endl;
00040 }
00041
00042 // //////////////////////////////////////
00043 void TimePeriodKey::fromStream (std::istream& ioIn) {
00044 }
00045
00046 // //////////////////////////////////////
00047 const std::string TimePeriodKey::toString() const {
00048     std::ostringstream ostr;
00049     ostr << _timeRangeStart << "-" << _timeRangeEnd;
00050     return ostr.str();
00051 }
00052
00053 }

```

## 35.427 stdair/bom/TimePeriodKey.hpp File Reference

```

#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>

```

### Classes

- struct [stdair::TimePeriodKey](#)  
*Key of time-period.*

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.428 TimePeriodKey.hpp

```

00001 #ifndef __STDAIR_BOM_TIMEPERIODKEY_HPP
00002 #define __STDAIR_BOM_TIMEPERIODKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STDAIR
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010
00011 namespace stdair {
00015     struct TimePeriodKey : public KeyAbstract {
00016
00017     public:
00018         // ////////////////////////////////// Construction //////////////////////////////////
00020         TimePeriodKey (const Time_T&,
00021             const Time_T&);
00023         TimePeriodKey (const TimePeriodKey&);
00025         ~TimePeriodKey ();
00026     private:
00028         TimePeriodKey ();
00029
00030     public:
00031         // ////////////////////////////////// Getter //////////////////////////////////
00035         const Time_T& getTimeRangeStart() const {
00036             return _timeRangeStart;
00037         }
00038
00042         const Time_T& getTimeRangeEnd() const {
00043             return _timeRangeEnd;
00044         }
00045
00046         // ////////////////////////////////// Display support methods //////////////////////////////////
00052         void toStream (std::ostream& ioOut) const;
00053
00059         void fromStream (std::istream& ioIn);
00060
00066         const std::string toString() const;
00067
00068     private:
00069         // ////////////////////////////////// Attributes //////////////////////////////////
00073         Time_T _timeRangeStart;
00074
00078         Time_T _timeRangeEnd;
00079
00080     };
00081
00082 }
00083 #endif // __STDAIR_BOM_TIMEPERIODKEY_HPP

```

## 35.429 stdair/bom/TimePeriodTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## Typedefs

- typedef `std::list< TimePeriod * >` `stdair::TimePeriodList_T`
- typedef `std::map< const MapKey_T, TimePeriod * >` `stdair::TimePeriodMap_T`
- typedef `std::pair< MapKey_T, TimePeriod * >` `stdair::TimePeriodWithKey_T`
- typedef `std::list< TimePeriodWithKey_T >` `stdair::TimePeriodDetailedList_T`

## 35.430 TimePeriodTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_TIMEPERIODTYPES_HPP
00003 #define __STDAIR_BOM_TIMEPERIODTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class TimePeriod;
00018
00020     typedef std::list<TimePeriod*> TimePeriodList_T;
00021
00023     typedef std::map<const MapKey_T, TimePeriod*> TimePeriodMap_T;
00024
00026     typedef std::pair<MapKey_T, TimePeriod*> TimePeriodWithKey_T;
00027     typedef std::list<TimePeriodWithKey_T> TimePeriodDetailedList_T;
00028 }
00029 #endif // __STDAIR_BOM_TIMEPERIODTYPES_HPP
00030

```

## 35.431 stdair/bom/TravelSolutionStruct.cpp File Reference

```

#include <cassert>

#include <sstream>

#include <stdair/basic/BasConst_BookingClass.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/BomKeyManager.hpp>
#include <stdair/bom/ParsedKey.hpp>

```



## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.432 TravelSolutionStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_BookingClass.hpp>
00009 #include <stdair/bom/TravelSolutionStruct.hpp>
00010 #include <stdair/bom/BomKeyManager.hpp>
00011 #include <stdair/bom/ParsedKey.hpp>
00012
00013 namespace stdair {
00014 // //////////////////////////////////////
00015 TravelSolutionStruct::TravelSolutionStruct() : _chosenFareOption (NULL) {
00016 }
00017
00018 // //////////////////////////////////////
00019 TravelSolutionStruct::~TravelSolutionStruct() {
00020 }
00021
00022 // //////////////////////////////////////
00023 void TravelSolutionStruct::toStream (std::ostream& ioOut) const {
00024     ioOut << describe();
00025 }
00026
00027 // //////////////////////////////////////
00028 void TravelSolutionStruct::fromStream (std::istream& ioIn) {
00029 }
00030
00031 // //////////////////////////////////////
00032 const std::string TravelSolutionStruct::describe() const {
00033     std::ostringstream oStr;
00034
00035     //
00036     oStr << "Segment path: ";
00037     unsigned short idx = 0;
00038     for (SegmentPath_T::const_iterator lItSegmentPath = _segmentPath.begin();
00039          lItSegmentPath != _segmentPath.end(); ++lItSegmentPath, ++idx) {
00040         if (idx != 0) {
00041             oStr << "-";
00042         }
00043         const std::string& lSegmentPathString = *lItSegmentPath;
00044         const stdair::ParsedKey& lSegmentParsedKey =
00045             stdair::BomKeyManager::extractKeys (lSegmentPathString);
00046         const std::string& lSegmentKey = lSegmentParsedKey.toString();
00047         oStr << lSegmentKey;
00048     }
00049     oStr << " ### ";
00050
00051     //
00052     if (_chosenFareOption != NULL) {
00053         oStr << "Chosen fare option: " << _chosenFareOption->describe()

```

```

00054         << " ## Among: ";
00055     } else {
00056         ostr << "Fare options: ";
00057     }
00058
00059     //
00060     idx = 0;
00061     for (FareOptionList_T::const_iterator lItFareOption= _fareOptionList.begin();

00062         lItFareOption != _fareOptionList.end(); ++lItFareOption, ++idx) {
00063         if (idx != 0) {
00064             ostr << " , ";
00065         }
00066         const FareOptionStruct& lFareOption = *lItFareOption;
00067         ostr << lFareOption.describe();
00068     }
00069
00070     return ostr.str();
00071 }
00072
00073 // //////////////////////////////////////
00074 const std::string TravelSolutionStruct::display() const {
00075     std::ostringstream ostr;
00076
00077     // List of segment keys (one per segment)
00078     unsigned short idx = 0;
00079     for (SegmentPath_T::const_iterator itSegPath = _segmentPath.begin();
00080         itSegPath != _segmentPath.end(); ++itSegPath, ++idx) {
00081         if (idx != 0) {
00082             ostr << " ; ";
00083         }
00084         const std::string& lSegmentPathString = *itSegPath;
00085         const stdair::ParsedKey& lSegmentParsedKey =
00086             stdair::BomKeyManager::extractKeys(lSegmentPathString);
00087         const std::string& lSegmentKey = lSegmentParsedKey.toString();
00088         ostr << "[" << idx << " ] " << lSegmentKey;
00089     }
00090
00091     // List of fare options (for the whole O&D)
00092     ostr << " --- ";
00093     idx = 0;
00094     for (FareOptionList_T::const_iterator itFareOption = _fareOptionList.begin();

00095         itFareOption != _fareOptionList.end(); ++itFareOption, ++idx) {
00096         if (idx != 0) {
00097             ostr << " , ";
00098         }
00099         const FareOptionStruct& lFareOption = *itFareOption;
00100         ostr << lFareOption.display();
00101     }
00102
00103     // List of booking class availability maps: one map per segment
00104     ostr << " --- ";
00105     idx = 0;
00106     for (ClassAvailabilityMapHolder_T::const_iterator itSegMap =
00107         _classAvailabilityMapHolder.begin();
00108         itSegMap != _classAvailabilityMapHolder.end(); ++itSegMap, ++idx) {
00109         if (idx != 0) {
00110             ostr << " ; ";
00111         }
00112         // Retrieve the booking class availability map
00113         const ClassAvailabilityMap_T& lClassAvlMap = *itSegMap;

```

```

00114         ostr << "[" << idx << "]" ";
00115
00116         // List (map) of booking class availabilities
00117         unsigned short jdx = 0;
00118         for (ClassAvailabilityMap_T::const_iterator itClass = lClassAvlMap.begin();
00119
00119             itClass != lClassAvlMap.end(); ++itClass, ++jdx) {
00120             if (jdx != 0) {
00121                 ostr << " ";
00122             }
00123             const ClassCode_T& lClassCode = itClass->first;
00124             const Availability_T& lAvl = itClass->second;
00125             ostr << lClassCode << ":" << lAvl;
00126         }
00127     }
00128
00129     return ostr.str();
00130 }
00131
00132 // //////////////////////////////////////
00133 void TravelSolutionStruct::addSegment (const std::string& iKey) {
00134     _segmentPath.push_back (iKey);
00135 }
00136
00137 // //////////////////////////////////////
00138 void TravelSolutionStruct::
00139 addClassAvailabilityMap (const ClassAvailabilityMap_T& iMap) {
00140     _classAvailabilityMapHolder.push_back (iMap);
00141 }
00142
00143 // //////////////////////////////////////
00144 void TravelSolutionStruct::
00145 addClassYieldMap (const ClassYieldMap_T& iMap) {
00146     _classYieldMapHolder.push_back (iMap);
00147 }
00148
00149 // //////////////////////////////////////
00150 void TravelSolutionStruct::
00151 addBidPriceVector (const BidPriceVector_T& iBpv) {
00152     _bidPriceVectorHolder.push_back (iBpv);
00153 }
00154
00155 // //////////////////////////////////////
00156 void TravelSolutionStruct::
00157 addClassBpvMap (const ClassBpvMap_T& iMap) {
00158     _classBpvMapHolder.push_back (iMap);
00159 }
00160
00161 // //////////////////////////////////////
00162 void TravelSolutionStruct::
00163 addFareOption (const FareOptionStruct& iFareOption) {
00164     _fareOptionList.push_back (iFareOption);
00165 }
00166
00167 }

```

### 35.433 stdair/bom/TravelSolutionStruct.hpp File Reference

```
#include <iosfwd>
```

```

#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/bom/BookingClassTypes.hpp>
#include <stdair/bom/FareOptionStruct.hpp>
#include <stdair/bom/FareOptionTypes.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>

```

### Classes

- struct [stdair::TravelSolutionStruct](#)  
Structure holding the elements of a travel solution.

### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.434 TravelSolutionStruct.hpp

```

00001 #ifndef __STDAIR_BOM_TRAVELSOLUTIONSTRUCT_HPP
00002 #define __STDAIR_BOM_TRAVELSOLUTIONSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/basic/StructAbstract.hpp>
00014 #include <stdair/bom/BookingClassTypes.hpp>
00015 #include <stdair/bom/FareOptionStruct.hpp>
00016 #include <stdair/bom/FareOptionTypes.hpp>
00017 #include <stdair/bom/TravelSolutionTypes.hpp>
00018
00019 namespace stdair {
00020
00024     struct TravelSolutionStruct : public StructAbstract {
00025     public:
00026         // //////////// Getters ////////////
00028         const SegmentPath_T& getSegmentPath() const {
00029             return _segmentPath;
00030         }
00031
00033         const ClassAvailabilityMapHolder_T& getClassAvailabilityMapHolder() const {
00034             return _classAvailabilityMapHolder;

```

```

00035     }
00036
00038     const ClassYieldMapHolder_T& getClassYieldMapHolder() const {
00039         return _classYieldMapHolder;
00040     }
00041
00043     const BidPriceVectorHolder_T& getBidPriceVectorHolder() const {
00044         return _bidPriceVectorHolder;
00045     }
00046
00048     const ClassBvpMapHolder_T& getClassBvpMapHolder() const {
00049         return _classBvpMapHolder;
00050     }
00051
00053     const FareOptionList_T& getFareOptionList() const {
00054         return _fareOptionList;
00055     }
00056
00058     FareOptionList_T& getFareOptionListRef() {
00059         return _fareOptionList;
00060     }
00061
00063     const FareOptionStruct& getChosenFareOption() const {
00064         assert (_chosenFareOption != NULL);
00065         return *_chosenFareOption;
00066     }
00067
00068 public:
00069     // /////////// Setters ///////////
00071     void addSegment (const std::string&);
00072
00074     void addClassAvailabilityMap (const ClassAvailabilityMap_T&);
00075
00077     void addClassYieldMap (const ClassYieldMap_T&);
00078
00080     void addBidPriceVector (const BidPriceVector_T&);
00081
00083     void addClassBvpMap (const ClassBvpMap_T&);
00084
00086     void addFareOption (const FareOptionStruct&);
00087
00089     void setChosenFareOption (const FareOptionStruct& iChosenFO) {
00090         _chosenFareOption = &iChosenFO;
00091     }
00092
00093
00094 public:
00095     // /////////// Display support method ///////////
00101     void toStream (std::ostream& ioOut) const;
00102
00107     void fromStream (std::istream& ioIn);
00108
00112     const std::string describe() const;
00113
00117     const std::string display() const;
00118
00119
00120 public:
00121     // /////////// Constructors & Destructor ///////////
00125     TravelSolutionStruct();
00126
00130     ~TravelSolutionStruct();

```

```

00131
00132
00133 private:
00134     // ////////////////////////////////// Attributes //////////////////////////////////
00138     SegmentPath_T _segmentPath;
00139
00143     ClassAvailabilityMapHolder_T _classAvailabilityMapHolder;
00144
00148     ClassYieldMapHolder_T _classYieldMapHolder;
00149
00153     BidPriceVectorHolder_T _bidPriceVectorHolder;
00154
00158     ClassBpvMapHolder_T _classBpvMapHolder;
00159
00163     FareOptionList_T _fareOptionList;
00164
00168     const FareOptionStruct* _chosenFareOption;
00169 };
00170
00171 }
00172 #endif // __STDAIR_BOM_TRAVELSOLUTIONSTRUCT_HPP

```

### 35.435 stdair/bom/TravelSolutionTypes.hpp File Reference

```

#include <list>

#include <map>

#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/key_types.hpp>
#include <stdair/stdair_inventory_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< TravelSolutionStruct > [stdair::TravelSolutionList\\_T](#)
- typedef KeyList\_T [stdair::SegmentPath\\_T](#)
- typedef std::list< SegmentPath\_T > [stdair::SegmentPathList\\_T](#)
- typedef std::map< const ClassCode\_T, Availability\_T > [stdair::ClassAvailabilityMap\\_T](#)
- typedef std::list< ClassAvailabilityMap\_T > [stdair::ClassAvailabilityMapHolder\\_T](#)
- typedef std::map< const ClassCode\_T, YieldValue\_T > [stdair::ClassYieldMap\\_T](#)
- typedef std::list< ClassYieldMap\_T > [stdair::ClassYieldMapHolder\\_T](#)
- typedef std::list< BidPriceVector\_T > [stdair::BidPriceVectorHolder\\_T](#)
- typedef std::map< const ClassCode\_T, const BidPriceVector\_T\* > [stdair::ClassBpvMap\\_T](#)
- typedef std::list< ClassBpvMap\_T > [stdair::ClassBpvMapHolder\\_T](#)

## 35.436 TravelSolutionTypes.hpp

```

00001 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00002 #ifndef __STDAIR_BOM_TRAVELSOLUTIONTYPES_HPP
00003 #define __STDAIR_BOM_TRAVELSOLUTIONTYPES_HPP
00004
00005 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00006 // Import section
00007 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00008 // STL
00009 #include <list>
00010 #include <map>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/bom/key_types.hpp>
00014 #include <stdair/stdair_inventory_types.hpp> // bid price related types.
00015
00016 namespace stdair {
00017
00018     // Forward declarations.
00019     struct TravelSolutionStruct;
00020
00022     typedef std::list<TravelSolutionStruct> TravelSolutionList_T;
00023
00025     typedef KeyList_T SegmentPath_T;
00026
00028     typedef std::list<SegmentPath_T> SegmentPathList_T;
00029
00031     typedef std::map<const ClassCode_T, Availability_T> ClassAvailabilityMap_T;
00032
00034     typedef std::list<ClassAvailabilityMap_T> ClassAvailabilityMapHolder_T;
00035
00037     typedef std::map<const ClassCode_T, YieldValue_T> ClassYieldMap_T;
00038
00040     typedef std::list<ClassYieldMap_T> ClassYieldMapHolder_T;
00041
00043     typedef std::list<BidPriceVector_T> BidPriceVectorHolder_T;
00044
00046     typedef std::map<const ClassCode_T, const BidPriceVector_T*> ClassBpvMap_T;
00047
00049     typedef std::list<ClassBpvMap_T> ClassBpvMapHolder_T;
00050 }
00051 #endif // __STDAIR_BOM_TRAVELSOLUTIONTYPES_HPP
00052

```

## 35.437 stdair/bom/VirtualClassStruct.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/bom/VirtualClassStruct.hpp>
#include <stdair/bom/BookingClass.hpp>

```

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.438 VirtualClassStruct.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/VirtualClassStruct.hpp>
00009 #include <stdair/bom/BookingClass.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 VirtualClassStruct::VirtualClassStruct() : _bookingClass (NULL) {
00015     assert (false);
00016 }
00017
00018 // //////////////////////////////////////
00019 VirtualClassStruct::VirtualClassStruct (const VirtualClassStruct& iVC)
00020     : _bookingClass (iVC._bookingClass), _yield (iVC._yield),
00021       _mean (iVC._mean), _stdDev (iVC._stdDev) {
00022 }
00023
00024 // //////////////////////////////////////
00025 VirtualClassStruct::VirtualClassStruct (BookingClass& ioBookingClass) {
00026     _bookingClass = &ioBookingClass;
00027 }
00028
00029 // //////////////////////////////////////
00030 VirtualClassStruct::~VirtualClassStruct() {
00031     _bookingClass = NULL;
00032 }
00033
00034 // //////////////////////////////////////
00035 void VirtualClassStruct::toStream (std::ostream& ioOut) const {
00036     ioOut << describe();
00037 }
00038
00039 // //////////////////////////////////////
00040 void VirtualClassStruct::fromStream (std::istream& ioIn) {
00041 }
00042
00043 // //////////////////////////////////////
00044 const std::string VirtualClassStruct::describe() const {
00045     std::ostringstream oStr;
00046     oStr << "Yield: " << _yield
00047         << ", Demand N (" << _mean << ", " << _stdDev << ")";
00048     return oStr.str();
00049 }
00050
00051 // //////////////////////////////////////
00052 const GeneratedDemandVector_T& VirtualClassStruct::
00053 getGeneratedDemandVector() const {
00054     assert (_bookingClass != NULL);
00055     return _bookingClass->getGeneratedDemandVector();
00056 }

```



```
00057 }
```

### 35.439 stdair/bom/VirtualClassStruct.hpp File Reference

```
#include <iosfwd>
#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
```

#### Classes

- struct [stdair::VirtualClassStruct](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.440 VirtualClassStruct.hpp

```
00001 #ifndef __STDAIR_BOM_VIRTUALCLASSSTRUCT_HPP
00002 #define __STDAIR_BOM_VIRTUALCLASSSTRUCT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <string>
00010 #include <vector>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013 #include <stdair/stdair_inventory_types.hpp>
00014 #include <stdair/stdair_maths_types.hpp>
00015 #include <stdair/stdair_rm_types.hpp>
00016 #include <stdair/basic/StructAbstract.hpp>
00017
00018 namespace stdair {
00019     // Forward declarations.
00020     class BookingClass;
00021
00023     struct VirtualClassStruct : public StructAbstract {
00024     public:
00025         // //////////// Getters ////////////
```

```

00027     const Yield_T& getYield() const {
00028         return _yield;
00029     }
00030
00032     const MeanValue_T& getMean() const {
00033         return _mean;
00034     }
00035
00037     const StdDevValue_T& getStdDev() const {
00038         return _stdDev;
00039     }
00040
00042     const BookingLimit_T& getCumulatedBookingLimit () const {
00043         return _cumulatedBookingLimit;
00044     }
00045
00047     const ProtectionLevel_T& getCumulatedProtection () const {
00048         return _cumulatedProtection;
00049     }
00050
00052     const GeneratedDemandVector_T& getGeneratedDemandVector () const;
00053
00054 public:
00055     // /////////// Setters ///////////
00057     void setYield (const Yield_T& iYield) {
00058         _yield = iYield;
00059     }
00060
00062     void setMean (const MeanValue_T& iMean) {
00063         _mean = iMean;
00064     }
00065
00067     void setStdDev (const StdDevValue_T& iStdDev) {
00068         _stdDev = iStdDev;
00069     }
00070
00072     void setCumulatedBookingLimit (const BookingLimit_T& iBL) {
00073         _cumulatedBookingLimit = iBL;
00074     }
00075
00077     void setCumulatedProtection (const ProtectionLevel_T& iP) {
00078         _cumulatedProtection = iP;
00079     }
00080
00081 public:
00082     // /////////// Display support method ///////////
00085     void toStream (std::ostream& ioOut) const;
00086
00089     void fromStream (std::istream& ioIn);
00090
00092     const std::string describe() const;
00093
00094
00095 public:
00096     // /////////// Constructors & Destructor ///////////
00098     VirtualClassStruct (const VirtualClassStruct&);
00100     VirtualClassStruct (BookingClass&);
00102     ~VirtualClassStruct ();
00103
00104 private:
00106     VirtualClassStruct ();
00107

```

```

00108
00109     private:
00110         // ////////////////////////////////// Attributes //////////////////////////////////
00111         BookingClass* _bookingClass;
00112
00113         Yield_T _yield;
00114
00115         MeanValue_T _mean;
00116
00117         StdDevValue_T _stdDev;
00118
00119         BookingLimit_T _cumulatedBookingLimit;
00120
00121         ProtectionLevel_T _cumulatedProtection;
00122     };
00123 }
00124 #endif // __STDAIR_BOM_VIRTUALCLASSTYPES_HPP

```

### 35.441 stdair/bom/VirtualClassTypes.hpp File Reference

```

#include <list>
#include <map>
#include <stdair/stdair_basic_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::list< VirtualClassStruct > [stdair::VirtualClassList\\_T](#)
- typedef std::map< const Yield\_T, VirtualClassStruct > [stdair::VirtualClassMap\\_T](#)

### 35.442 VirtualClassTypes.hpp

```

00001 // //////////////////////////////////
00002 #ifndef __STDAIR_BOM_VIRTUALCLASSTYPES_HPP
00003 #define __STDAIR_BOM_VIRTUALCLASSTYPES_HPP
00004
00005 // //////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////
00008 // STL
00009 #include <list>
00010 #include <map>
00011 // STDAIR
00012 #include <stdair/stdair_basic_types.hpp>
00013
00014 namespace stdair {

```

```

00015
00016 // Forward declarations.
00017 struct VirtualClassStruct;
00018
00020 typedef std::list<VirtualClassStruct> VirtualClassList_T;
00021
00023 typedef std::map<const Yield_T, VirtualClassStruct> VirtualClassMap_T;
00024 }
00025 #endif // __STDAIR_BOM_VIRTUALCLASSTYPES_HPP
00026

```

### 35.443 stdair/bom/YieldFeatures.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/bom/YieldFeatures.hpp>

```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.444 YieldFeatures.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/service/Logger.hpp>
00010 #include <stdair/bom/YieldFeatures.hpp>
00011
00012 namespace stdair {
00013
00014 // //////////////////////////////////////
00015 YieldFeatures::YieldFeatures()
00016 : _key (TRIP_TYPE_ONE_WAY,
00017        DEFAULT_PREFERRED_CABIN),
00018   _parent (NULL) {
00019 // That constructor is used by the serialisation process
00020 }
00021
00022 // //////////////////////////////////////
00023 YieldFeatures::YieldFeatures (const YieldFeatures& iFeatures)
00024 : _key (iFeatures.getKey()), _parent (NULL) {
00025     assert (false);
00026 }

```

```

00027
00028 ///////////////////////////////////////////////////////////////////
00029 YieldFeatures::YieldFeatures (const Key_T& iKey)
00030     : _key (iKey), _parent (NULL)  {
00031 }
00032
00033 ///////////////////////////////////////////////////////////////////
00034 YieldFeatures::~YieldFeatures () {
00035 }
00036
00037 ///////////////////////////////////////////////////////////////////
00038 std::string YieldFeatures::toString() const {
00039     std::ostringstream ostr;
00040     ostr << describeKey();
00041     return ostr.str();
00042 }
00043
00044 ///////////////////////////////////////////////////////////////////
00045 bool YieldFeatures::
00046 isTripTypeValid (const TripType_T& iBookingRequestTripType) const {
00047     bool oIsTripTypeValidFlag = true;
00048
00049     // Check whether the yield trip type is the same as the booking request
00050     // trip type
00051     const TripType_T& lYieldTripType = getTripType();
00052     if (iBookingRequestTripType == lYieldTripType) {
00053         // One way case
00054         return oIsTripTypeValidFlag;
00055     }
00056
00057     if (iBookingRequestTripType == TRIP_TYPE_INBOUND ||
00058         iBookingRequestTripType == TRIP_TYPE_OUTBOUND) {
00059         // Round trip case.
00060         if (lYieldTripType == TRIP_TYPE_ROUND_TRIP) {
00061             return oIsTripTypeValidFlag;
00062         }
00063     }
00064
00065     oIsTripTypeValidFlag = false;
00066     return false;
00067 }
00068
00069 }
00070

```

### 35.445 stdair/bom/YieldFeatures.hpp File Reference

```

#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/YieldFeaturesKey.hpp>
#include <stdair/bom/YieldFeaturesTypes.hpp>

```

#### Classes

- class [stdair::YieldFeatures](#)

*Class representing the actual attributes for a yield date-period.*

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.446 YieldFeatures.hpp

```

00001 #ifndef __STDAIR_BOM_YELDFEATURES_HPP
00002 #define __STDAIR_BOM_YELDFEATURES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/BomAbstract.hpp>
00009 #include <stdair/bom/YieldFeaturesKey.hpp>
00010 #include <stdair/bom/YieldFeaturesTypes.hpp>
00011
00012 // Forward declaration
00013 namespace stdair {
00014
00015     class YieldFeatures : public BomAbstract {
00020     template <typename BOM> friend class FacBom;
00021     friend class FacBomManager;
00022
00023     public:
00024         // ////////// Type definitions
00028         typedef YieldFeaturesKey Key_T;
00029
00030     public:
00031         // ////////// Display support methods //////////
00037         void toStream (std::ostream& ioOut) const {
00038             ioOut << toString();
00039         }
00040
00046         void fromStream (std::istream& ioIn) {
00047         }
00048
00052         std::string toString() const;
00053
00057         const std::string describeKey() const {
00058             return _key.toString();
00059         }
00060
00061     public:
00062         // ////////// Getters //////////
00066         const Key_T& getKey() const {
00067             return _key;
00068         }
00069
00073         BomAbstract* const getParent() const {
00074             return _parent;
00075         }
00076
00080         const HolderMap_T& getHolderMap() const {
00081             return _holderMap;
00082         }
00083
00087         const CabinCode_T& getCabinCode() const {
00088             return _key.getCabinCode();

```

```

00089     }
00090
00094     const TripType_T& getTripType() const {
00095         return _key.getTripType();
00096     }
00097
00098
00099 public:
00100     // //////////// Business methods ////////////
00105     bool isTripTypeValid (const TripType_T&) const;
00106
00107
00108 protected:
00109     // //////////// Constructors and destructors ////////////
00113     YieldFeatures (const Key_T&);
00114
00118     virtual ~YieldFeatures();
00119
00120 private:
00124     YieldFeatures();
00125
00129     YieldFeatures (const YieldFeatures&);
00130
00131
00132 protected:
00133     // //////////// Attributes ////////////
00137     Key_T _key;
00138
00142     BomAbstract* _parent;
00143
00147     HolderMap_T _holderMap;
00148 };
00149
00150 }
00151 #endif // __STDAIR_BOM_YIELDFEATURES_HPP
00152

```

### 35.447 stdair/bom/YieldFeaturesKey.cpp File Reference

```

#include <ostream>
#include <sstream>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/YieldFeaturesKey.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.448 YieldFeaturesKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section

```

```

00003 // //////////////////////////////////////
00004 // STL
00005 #include <ostream>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/basic/BasConst_Request.hpp>
00009 #include <stdair/bom/YieldFeaturesKey.hpp>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 YieldFeaturesKey::YieldFeaturesKey()
00015     : _tripType (TRIP_TYPE_ONE_WAY),
00016       _cabinCode (DEFAULT_PREFERRED_CABIN) {
00017     assert (false);
00018 }
00019
00020 // //////////////////////////////////////
00021 YieldFeaturesKey::YieldFeaturesKey (const stdair::TripType_T& iTripType,
00022                                     const stdair::CabinCode_T& iCabin)
00023     : _tripType (iTripType), _cabinCode (iCabin) {
00024 }
00025
00026 // //////////////////////////////////////
00027 YieldFeaturesKey::YieldFeaturesKey (const YieldFeaturesKey& iKey)
00028     : _tripType (iKey.getTripType()), _cabinCode (iKey.getCabinCode()) {
00029 }
00030
00031 // //////////////////////////////////////
00032 YieldFeaturesKey::~YieldFeaturesKey () {
00033 }
00034
00035 // //////////////////////////////////////
00036 void YieldFeaturesKey::toStream (std::ostream& ioOut) const {
00037     ioOut << "YieldFeaturesKey: " << toString() << std::endl;
00038 }
00039
00040 // //////////////////////////////////////
00041 void YieldFeaturesKey::fromStream (std::istream& ioIn) {
00042 }
00043
00044 // //////////////////////////////////////
00045 const std::string YieldFeaturesKey::toString() const {
00046     std::ostringstream oStr;
00047     oStr << _tripType << " -- " << _cabinCode;
00048     return oStr.str();
00049 }
00050
00051 }

```

### 35.449 stdair/bom/YieldFeaturesKey.hpp File Reference

```

#include <stdair/bom/KeyAbstract.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_inventory_types.hpp>

```



## Classes

- struct `stdair::YieldFeaturesKey`

*Key of date-period.*

## Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

## 35.450 YieldFeaturesKey.hpp

```

00001 #ifndef __STDAIR_BOM_YIELDFEATURESKEY_HPP
00002 #define __STDAIR_BOM_YIELDFEATURESKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/bom/KeyAbstract.hpp>
00009 #include <stdair/stdair_date_time_types.hpp>
00010 #include <stdair/stdair_demand_types.hpp>
00011 #include <stdair/stdair_inventory_types.hpp>
00012
00013 namespace stdair {
00014
00015     struct YieldFeaturesKey : public KeyAbstract {
00016     public:
00017         // ////////////////////////////////// Construction //////////////////////////////////
00018         YieldFeaturesKey (const TripType_T&, const CabinCode_T&);
00019         YieldFeaturesKey (const YieldFeaturesKey&);
00020         ~YieldFeaturesKey ();
00021     private:
00022         YieldFeaturesKey ();
00023
00024     public:
00025         // ////////////////////////////////// Getters //////////////////////////////////
00026         const TripType_T& getTripType() const {
00027             return _tripType;
00028         }
00029         const CabinCode_T& getCabinCode() const {
00030             return _cabinCode;
00031         }
00032     public:
00033         // ////////////////////////////////// Display support methods //////////////////////////////////
00034         void toStream (std::ostream& ioOut) const;
00035         void fromStream (std::istream& ioIn);
00036         const std::string toString() const;
00037     private:
00038         // ////////////////////////////////// Attributes //////////////////////////////////
00039         TripType_T _tripType;
00040
00041     };
00042
00043 }
00044
00045 #endif

```

```

00086     CabinCode_T _cabinCode;
00087 };
00088
00089 }
00090 #endif // __STDAIR_BOM_YIELDFEATURESKEY_HPP

```

## 35.451 stdair/bom/YieldFeaturesTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

### Namespaces

- namespace `stdair`  
Handle on the *StdAir* library context.

### Typedefs

- typedef std::list< YieldFeatures \* > `stdair::YieldFeaturesList_T`
- typedef std::map< const MapKey\_T, YieldFeatures \* > `stdair::YieldFeaturesMap_T`
- typedef std::pair< MapKey\_T, YieldFeatures \* > `stdair::YieldFeaturesWithKey_T`
- typedef std::list< YieldFeaturesWithKey\_T > `stdair::YieldFeaturesDetailedList_T`

## 35.452 YieldFeaturesTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_YIELDFEATURESTYPES_HPP
00003 #define __STDAIR_BOM_YIELDFEATURESTYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // STDAIR
00012 #include <stdair/bom/key_types.hpp>
00013
00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class YieldFeatures;
00018
00019     typedef std::list<YieldFeatures*> YieldFeaturesList_T;
00020
00021     typedef std::map<const MapKey_T, YieldFeatures*> YieldFeaturesMap_T;
00022
00023     typedef std::pair<MapKey_T, YieldFeatures*> YieldFeaturesWithKey_T;
00024
00025     typedef std::list<YieldFeaturesWithKey_T> YieldFeaturesDetailedList_T;

```

```

00028 }
00029 #endif // __STDAIR_BOM_YIELDFEATURESTYPES_HPP
00030

```

### 35.453 stdair/bom/YieldStore.cpp File Reference

```

#include <cassert>
#include <sstream>
#include <stdair/bom/YieldStore.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.454 YieldStore.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // StdAir
00008 #include <stdair/bom/YieldStore.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 YieldStore::YieldStore (const Key_T& iKey) : _key (iKey), _parent (NULL) {
00014 }
00015
00016 // //////////////////////////////////////
00017 YieldStore::~YieldStore () {
00018 }
00019
00020 // //////////////////////////////////////
00021 std::string YieldStore::toString() const {
00022     std::ostringstream oStr;
00023     oStr << _key.toString();
00024     return oStr.str();
00025 }
00026
00027 }
00028

```

### 35.455 stdair/bom/YieldStore.hpp File Reference

```

#include <string>
#include <stdair/stdair_inventory_types.hpp>

```

```
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/bom/YieldStoreKey.hpp>
#include <stdair/bom/YieldStoreTypes.hpp>
```

#### Classes

- class [stdair::YieldStore](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.456 YieldStore.hpp

```
00001 #ifndef __STDAIR_BOM_YIELDSTORE_HPP
00002 #define __STDAIR_BOM_YIELDSTORE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/BomAbstract.hpp>
00012 #include <stdair/bom/YieldStoreKey.hpp>
00013 #include <stdair/bom/YieldStoreTypes.hpp>
00014
00015 namespace stdair {
00016
00017     class YieldStore : public BomAbstract {
00018     template <typename BOM> friend class FacBom;
00019     friend class FacBomManager;
00020
00021     public :
00022         // Type definitions
00023         typedef YieldStoreKey Key_T;
00024
00025     public:
00026         // ////////// Display support methods //////////
00027         void toStream (std::ostream& ioOut) const { ioOut << toString(); }
00028
00029         BomAbstract* const getParent() const { return _parent; }
00030
00031         void fromStream (std::istream& ioIn) { }
00032
00033         std::string toString() const;
00034
00035         const std::string describeKey() const { return _key.toString(); }
00036
00037     public:
00038         // ////////// Getters //////////
00039         const Key_T& getKey() const { return _key; }
```

```

00050
00052     const AirlineCode_T& getAirlineCode () const {
00053         return _key.getAirlineCode();
00054     }
00055
00056 protected:
00058     YieldStore (const Key_T&);
00059     YieldStore (const YieldStore&);
00061     ~YieldStore();
00062
00063 protected:
00064     // Attributes
00066     Key_T _key;
00067     BomAbstract* _parent;
00068 };
00069
00070 }
00071 #endif // __STDAIR_BOM_YIELDSTORE_HPP
00072

```

### 35.457 stdair/bom/YieldStoreKey.cpp File Reference

```
#include <stdair/bom/YieldStoreKey.hpp>
```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.458 YieldStoreKey.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/bom/YieldStoreKey.hpp>
00006
00007 namespace stdair {
00008
00009     // //////////////////////////////////////
00010     YieldStoreKey::YieldStoreKey (const AirlineCode_T& iAirlineCode)
00011         : _airlineCode (iAirlineCode) {
00012     }
00013     // //////////////////////////////////////
00014     YieldStoreKey::YieldStoreKey (const YieldStoreKey& iKey)
00015         : _airlineCode (iKey._airlineCode) {
00016     }
00017
00018     // //////////////////////////////////////
00019     YieldStoreKey::~YieldStoreKey () {
00020     }
00021
00022     // //////////////////////////////////////
00023     void YieldStoreKey::toStream (std::ostream& ioOut) const {
00024         ioOut << "YieldStoreKey: " << toString() << std::endl;
00025     }

```

```

00026
00027 // //////////////////////////////////////
00028 void YieldStoreKey::fromStream (std::istream& ioIn) {
00029 }
00030
00031 // //////////////////////////////////////
00032 const std::string YieldStoreKey::toString() const {
00033     std::ostringstream oStr;
00034     oStr << _airlineCode;
00035     return oStr.str();
00036 }
00037
00038 }

```

### 35.459 stdair/bom/YieldStoreKey.hpp File Reference

```

#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/KeyAbstract.hpp>

```

#### Classes

- struct [stdair::YieldStoreKey](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.460 YieldStoreKey.hpp

```

00001 #ifndef __STDAIR_BOM_YIELDSTOREKEY_HPP
00002 #define __STDAIR_BOM_YIELDSTOREKEY_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/bom/KeyAbstract.hpp>
00010
00011 namespace stdair {
00012
00013     struct YieldStoreKey : public KeyAbstract {
00014     private:
00015         // /////////////// Default constructor ///////////////
00016         YieldStoreKey () { };
00017     public:
00018         // /////////////// Construction ///////////////
00019         YieldStoreKey (const AirlineCode_T& iAirlineCode);
00020         YieldStoreKey (const YieldStoreKey&);
00021         ~YieldStoreKey ();

```

```

00027
00028     // //////////// Getters ////////////
00030     const AirlineCode_T& getAirlineCode() const {
00031         return _airlineCode;
00032     }
00033
00034     // //////////// Display support methods ////////////
00037     void toStream (std::ostream& ioOut) const;
00038
00041     void fromStream (std::istream& ioIn);
00042
00048     const std::string toString() const;
00049
00050 private:
00051     // Attributes
00053     AirlineCode_T _airlineCode;
00054 };
00055
00056 }
00057 #endif // __STDAIR_BOM_YIELDSTOREKEY_HPP

```

## 35.461 stdair/bom/YieldStoreTypes.hpp File Reference

```

#include <map>
#include <list>
#include <stdair/bom/key_types.hpp>

```

### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### Typedefs

- typedef `std::list< YieldStore * >` `stdair::YieldStoreList_T`
- typedef `std::map< const MapKey_T, YieldStore * >` `stdair::YieldStoreMap_T`

## 35.462 YieldStoreTypes.hpp

```

00001 // //////////////////////////////////////
00002 #ifndef __STDAIR_BOM_YIELDSTORETYPES_HPP
00003 #define __STDAIR_BOM_YIELDSTORETYPES_HPP
00004
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <map>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/bom/key_types.hpp>
00013

```

```

00014 namespace stdair {
00015
00016     // Forward declarations.
00017     class YieldStore;
00018
00020     typedef std::list<YieldStore*> YieldStoreList_T;
00021
00023     typedef std::map<const MapKey_T, YieldStore*> YieldStoreMap_T;
00024
00025 }
00026 #endif // __STDAIR_BOM_YIELDSTORETYPES_HPP
00027

```

### 35.463 stdair/command/CmdAbstract.cpp File Reference

```
#include <stdair/command/CmdAbstract.hpp>
```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.464 CmdAbstract.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/command/CmdAbstract.hpp>
00006
00007 namespace stdair {
00008
00009 }

```

### 35.465 stdair/command/CmdAbstract.hpp File Reference

#### Classes

- class [stdair::CmdAbstract](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.466 CmdAbstract.hpp

```

00001 #ifndef __STDAIR_CMD_CMDABSTRACT_HPP
00002 #define __STDAIR_CMD_CMDABSTRACT_HPP

```



```
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007
00008 namespace stdair {
00009
00011     class CmdAbstract {
00012     public:
00013
00014     };
00015
00016 }
00017 #endif // __STDAIR_CMD_CMDABSTRACT_HPP
```

## 35.467 stdair/command/CmdBomManager.cpp File Reference

### 35.468 CmdBomManager.cpp

```
00001
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 #include <sstream>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/basic/BasConst_DefaultObject.hpp>
00014 #include <stdair/basic/BasConst_Request.hpp>
00015 #include <stdair/basic/BasConst_Inventory.hpp>
00016 #include <stdair/bom/BomRetriever.hpp>
00017 #include <stdair/bom/BomRoot.hpp>
00018 #include <stdair/bom/Inventory.hpp>
00019 #include <stdair/bom/FlightDate.hpp>
00020 #include <stdair/bom/LegDate.hpp>
00021 #include <stdair/bom/LegCabin.hpp>
00022 #include <stdair/bom/SegmentDate.hpp>
00023 #include <stdair/bom/SegmentCabin.hpp>
00024 #include <stdair/bom/FareFamily.hpp>
00025 #include <stdair/bom/BookingClass.hpp>
00026 #include <stdair/bom/AirportPair.hpp>
00027 #include <stdair/bom/PosChannel.hpp>
00028 #include <stdair/bom/DatePeriod.hpp>
00029 #include <stdair/bom/TimePeriod.hpp>
00030 #include <stdair/bom/FareFeatures.hpp>
00031 #include <stdair/bom/YieldFeatures.hpp>
00032 #include <stdair/bom/AirlineClassList.hpp>
00033 #include <stdair/bom/BomManager.hpp>
00034 #include <stdair/bom/TravelSolutionStruct.hpp>
00035 #include <stdair/bom/BookingRequestStruct.hpp>
00036 #include <stdair/factory/FacBomManager.hpp>
00037 #include <stdair/factory/FacBom.hpp>
00038 #include <stdair/command/CmdBomManager.hpp>
00039 #include <stdair/service/Logger.hpp>
00040 #include <stdair/bom/OnDDate.hpp>
00041 #include <stdair/bom/SegmentPeriod.hpp>
00042 #include <stdair/bom/FlightPeriod.hpp>
00043
00044 namespace stdair {
```

```

00045
00046 // //////////////////////////////////////
00047 void CmdBomManager::buildSampleBom (BomRoot& ioBomRoot) {
00048
00049     // DEBUG
00050     STDAIR_LOG_DEBUG ("StdAir is building the BOM tree from built-in "
00051                     << "specifications.");
00052
00053     // ===== Basic Bom Tree =====
00054     // Build the inventory (flight-dates) and the schedule (flight period) parts.
00055
00056     buildSampleInventorySchedule (ioBomRoot);
00057
00058     // Build the pricing (fare rules) and revenue accounting (yields) parts.
00059     buildSamplePricing (ioBomRoot);
00060
00061     // ===== Partnership Bom Tree =====
00062     // Build the inventory (flight-dates) and the schedule (flight period) parts.
00063
00064     buildPartnershipsSampleInventoryAndRM (ioBomRoot);
00065
00066     // Build the pricing (fare rules) and revenue accounting (yields) parts.
00067     buildPartnershipsSamplePricing (ioBomRoot);
00068
00069     // Build a dummy inventory, needed by RMOL.
00070     buildCompleteDummyInventory (ioBomRoot);
00071 }
00072
00073 // //////////////////////////////////////
00074 void CmdBomManager::buildSampleInventorySchedule (BomRoot& ioBomRoot) {
00075
00076     // Inventory
00077     // Step 0.1: Inventory level
00078     // Create an Inventory for BA
00079     const InventoryKey lBAKey ("BA");
00080     Inventory& lBAInv = FacBom<Inventory>::instance().create (lBAKey);
00081     FacBomManager::addToListAndMap (ioBomRoot, lBAInv);
00082     FacBomManager::linkWithParent (ioBomRoot, lBAInv);
00083
00084     // Create an Inventory for AF
00085     const InventoryKey lAFKey ("AF");
00086     Inventory& lAFInv = FacBom<Inventory>::instance().create (lAFKey);
00087     FacBomManager::addToListAndMap (ioBomRoot, lAFInv);
00088     FacBomManager::linkWithParent (ioBomRoot, lAFInv);
00089
00090     // BA
00091     // Step 0.2: Flight-date level
00092     // Create a FlightDate (BA9/10-JUN-2011) for BA's Inventory
00093     FlightNumber_T lFlightNumber = 9;
00094     Date_T lDate (2011, 6, 10);
00095     FlightDateKey lFlightDateKey (lFlightNumber, lDate);
00096
00097     FlightDate& lBA9_20110610_FD =
00098         FacBom<FlightDate>::instance().create (lFlightDateKey);
00099     FacBomManager::addToListAndMap (lBAInv, lBA9_20110610_FD);
00100     FacBomManager::linkWithParent (lBAInv, lBA9_20110610_FD);
00101
00102     // Display the flight-date
00103     STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());
00104
00105     // Step 0.3: Segment-date level
00106     // Create a first SegmentDate (LHR-SYD) for BA's Inventory

```

```

00105     // See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
        arrier=BA&FlightNumber=0009&from=LHR&to=SYD&depDate=100611&SellingClass=O
00106     const AirportCode_T lLHR ("LHR");
00107     const AirportCode_T lSYD ("SYD");
00108     const DateOffset_T l1Day (1);
00109     const DateOffset_T l2Days (2);
00110     const Duration_T l2135 (21, 45, 0);
00111     const Duration_T l0610 (6, 10, 0);
00112     const Duration_T l2205 (22, 05, 0);
00113     SegmentDateKey lSegmentDateKey (lLHR, lSYD);
00114
00115     SegmentDate& lLHRSYDSegment =
00116         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00117     FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRSYDSegment);
00118     FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRSYDSegment);
00119
00120     // Fill the SegmentDate content
00121     lLHRSYDSegment.setBoardingDate (lDate);
00122     lLHRSYDSegment.setOffDate (lDate + l2Days);
00123     lLHRSYDSegment.setBoardingTime (l2135);
00124     lLHRSYDSegment.setOffTime (l0610);
00125     lLHRSYDSegment.setElapsedTime (l2135);
00126
00127     // Display the segment-date
00128     // STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRSYDSegment);
00129
00130     // Create a second SegmentDate (LHR-BKK) for BA's Inventory
00131     // See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
        arrier=BA&FlightNumber=0009&from=LHR&to=BKK&depDate=100611&SellingClass=O
00132     const AirportCode_T lBKK ("BKK");
00133     const Duration_T l1540 (15, 40, 0);
00134     const Duration_T l1105 (11, 5, 0);
00135     lSegmentDateKey = SegmentDateKey (lLHR, lBKK);
00136
00137     SegmentDate& lLHRBKKSegment =
00138         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00139     FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRBKKSegment);
00140     FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRBKKSegment);
00141
00142     // Fill the SegmentDate content
00143     lLHRBKKSegment.setBoardingDate (lDate);
00144     lLHRBKKSegment.setOffDate (lDate + l1Day);
00145     lLHRBKKSegment.setBoardingTime (l2135);
00146     lLHRBKKSegment.setOffTime (l1540);
00147     lLHRBKKSegment.setElapsedTime (l1105);
00148
00149     // Display the segment-date
00150     // STDAIR_LOG_DEBUG ("SegmentDate: " << lLHRBKKSegment);
00151
00152     // Create a third SegmentDate (BKK-SYD) for BA's Inventory
00153     // See http://www.britishairways.com/travel/flightinformation/public/fr_fr?&C
        arrier=BA&FlightNumber=0009&from=BKK&to=SYD&depDate=110611&SellingClass=O
00154     const Duration_T l1705 (17, 5, 0);
00155     const Duration_T l0905 (9, 5, 0);
00156     lSegmentDateKey = SegmentDateKey (lBKK, lSYD);
00157
00158     SegmentDate& lBKKSYSYDSegment =
00159         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00160     FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKSYSYDSegment);
00161     FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKSYSYDSegment);
00162
00163     // Fill the SegmentDate content

```

```

00164     lBKKSYSYDSegment.setBoardingDate (lDate + 11Day);
00165     lBKKSYSYDSegment.setOffDate (lDate + 12Days);
00166     lBKKSYSYDSegment.setBoardingTime (11705);
00167     lBKKSYSYDSegment.setOffTime (11540);
00168     lBKKSYSYDSegment.setElapsedTime (10905);
00169
00170     // Display the segment-date
00171     // STDAIR_LOG_DEBUG ("SegmentDate: " << lBKKSYSYDSegment);
00172
00173     // Step 0.4: Leg-date level
00174     // Create a first LegDate (LHR) for BA's Inventory
00175     LegDateKey lLegDateKey (lLHR);
00176
00177     LegDate& lLHRLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00178     FacBomManager::addToListAndMap (lBA9_20110610_FD, lLHRLeg);
00179     FacBomManager::linkWithParent (lBA9_20110610_FD, lLHRLeg);
00180
00181     // Fill the LegDate content
00182     lLHRLeg.setOffPoint (lBKK);
00183     lLHRLeg.setBoardingDate (lDate);
00184     lLHRLeg.setOffDate (lDate + 11Day);
00185     lLHRLeg.setBoardingTime (12135);
00186     lLHRLeg.setOffTime (11540);
00187     lLHRLeg.setElapsedTime (11105);
00188
00189     // Display the leg-date
00190     // STDAIR_LOG_DEBUG ("LegDate: " << lLHRLeg.toString());
00191
00192     // Create a second LegDate (BKK)
00193     lLegDateKey = LegDateKey (lBKK);
00194
00195     LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00196     FacBomManager::addToListAndMap (lBA9_20110610_FD, lBKKLeg);
00197     FacBomManager::linkWithParent (lBA9_20110610_FD, lBKKLeg);
00198
00199     // Display the leg-date
00200     // STDAIR_LOG_DEBUG ("LegDate: " << lBKKLeg.toString());
00201
00202     // Fill the LegDate content
00203     lBKKLeg.setOffPoint (lSYD);
00204     lBKKLeg.setBoardingDate (lDate + 11Day);
00205     lBKKLeg.setOffDate (lDate + 12Days);
00206     lBKKLeg.setBoardingTime (11705);
00207     lBKKLeg.setOffTime (11540);
00208     lBKKLeg.setElapsedTime (10905);
00209
00210     // Link the segment-dates with the leg-dates
00211     FacBomManager::addToListAndMap (lLHRLeg, lLHRSYDSegment);
00212     FacBomManager::addToListAndMap (lLHRLeg, lLHRBKKSegment);
00213     FacBomManager::addToListAndMap (lBKKLeg, lLHRSYDSegment);
00214     FacBomManager::addToListAndMap (lBKKLeg, lBKKSYSYDSegment);
00215     FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRLeg);
00216     FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRLeg);
00217     FacBomManager::addToListAndMap (lLHRSYDSegment, lBKKLeg);
00218     FacBomManager::addToListAndMap (lBKKSYSYDSegment, lBKKLeg);
00219
00220
00221     // Step 0.5: segment-cabin level
00222     // Create a SegmentCabin (Y) for the Segment LHR-BKK of BA's Inventory
00223     const CabinCode_T lY ("Y");
00224     SegmentCabinKey lYSegmentCabinKey (lY);
00225

```

```

00226     SegmentCabin& lLHRBKKSegmentYCabin =
00227         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00228     FacBomManager::addToListAndMap (lLHRBKKSegment, lLHRBKKSegmentYCabin);
00229     FacBomManager::linkWithParent (lLHRBKKSegment, lLHRBKKSegmentYCabin);
00230
00231     // Display the segment-cabin
00232     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRBKKSegmentYCabin.toString());
00233
00234     // Create a SegmentCabin (Y) of the Segment BKK-SYD;
00235     SegmentCabin& lBKKSYSYDSegmentYCabin =
00236         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00237     FacBomManager::addToListAndMap (lBKKSYSYDSegment, lBKKSYSYDSegmentYCabin);
00238     FacBomManager::linkWithParent (lBKKSYSYDSegment, lBKKSYSYDSegmentYCabin);
00239
00240
00241     // Display the segment-cabin
00242     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lBKKSYSYDSegmentYCabin.toString());
00243
00244     // Create a SegmentCabin (Y) of the Segment LHR-SYD;
00245     SegmentCabin& lLHRSYDSegmentYCabin =
00246         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00247     FacBomManager::addToListAndMap (lLHRSYDSegment, lLHRSYDSegmentYCabin);
00248     FacBomManager::linkWithParent (lLHRSYDSegment, lLHRSYDSegmentYCabin);
00249
00250     // Display the segment-cabin
00251     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lLHRSYDSegmentYCabin.toString());
00252
00253     // Step 0.6: leg-cabin level
00254     // Create a LegCabin (Y) for the Leg LHR-BKK on BA's Inventory
00255     LegCabinKey lYLegCabinKey (lY);
00256
00257     LegCabin& lLHRLegYCabin =
00258         FacBom<LegCabin>::instance().create (lYLegCabinKey);
00259     FacBomManager::addToListAndMap (lLHRLeg, lLHRLegYCabin);
00260     FacBomManager::linkWithParent (lLHRLeg, lLHRLegYCabin);
00261
00262     // Display the leg-cabin
00263     // STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());
00264
00265     // Create a LegCabin (Y) for the Leg BKK-SYD
00266     LegCabin& lBKKLegYCabin =
00267         FacBom<LegCabin>::instance().create (lYLegCabinKey);
00268     FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
00269     FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);
00270     // Display the leg-cabin
00271     // STDAIR_LOG_DEBUG ("LegCabin: " << lBKKLegYCabin.toString());
00272
00283     FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRSYDSegmentYCabin,
00284                                     lLHRSYDSegmentYCabin.getFullerKey());
00285     FacBomManager::addToListAndMap (lLHRLegYCabin, lLHRBKKSegmentYCabin,
00286                                     lLHRBKKSegmentYCabin.getFullerKey());
00287     FacBomManager::addToListAndMap (lBKKLegYCabin, lLHRSYDSegmentYCabin,
00288                                     lLHRSYDSegmentYCabin.getFullerKey());
00289     FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKSYSYDSegmentYCabin,
00290                                     lBKKSYSYDSegmentYCabin.getFullerKey());
00291
00302     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lLHRLegYCabin,
00303                                     lLHRLegYCabin.getFullerKey());
00304     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin, lLHRLegYCabin,
00305                                     lLHRLegYCabin.getFullerKey());
00306     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin, lBKKLegYCabin,
00307                                     lBKKLegYCabin.getFullerKey());

```

```

00308     FacBomManager::addToListAndMap (lBKKSYSYDSegmentYCabin, lBKKLegYCabin,
00309                                     lBKKLegYCabin.getFullerKey());
00310
00311
00312     // Step 0.7: fare family level
00313     // Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
00314     const FamilyCode_T l1 ("EcoSaver");
00315     FareFamilyKey l1FareFamilyKey (l1);
00316
00317     FareFamily& lLHRBKKSegmentYCabin1Family =
00318         FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00319     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
00320                                     lLHRBKKSegmentYCabin1Family);
00321     FacBomManager::linkWithParent (lLHRBKKSegmentYCabin,
00322                                     lLHRBKKSegmentYCabin1Family);
00323
00324     // Display the booking class
00325     // STDAIR_LOG_DEBUG ("FareFamily: "
00326     //                     << lLHRBKKSegmentYCabin1Family.toString());
00327
00328     // Create a FareFamily (1) for the Segment BKK-SYD, cabin Y on BA's Inv
00329     FareFamily& lBKKSYSYDSegmentYCabin1Family =
00330         FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00331     FacBomManager::addToListAndMap (lBKKSYSYDSegmentYCabin,
00332                                     lBKKSYSYDSegmentYCabin1Family);
00333     FacBomManager::linkWithParent (lBKKSYSYDSegmentYCabin,
00334                                     lBKKSYSYDSegmentYCabin1Family);
00335
00336     // Display the booking class
00337     // STDAIR_LOG_DEBUG ("FareFamily: "
00338     //                     << lLHRBKKSegmentYCabin1Family.toString());
00339
00340     // Create a FareFamily (1) for the Segment LHR-SYD, cabin Y on BA's Inv
00341     FareFamily& lLHRSYDSegmentYCabin1Family =
00342         FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00343     FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
00344                                     lLHRSYDSegmentYCabin1Family);
00345     FacBomManager::linkWithParent (lLHRSYDSegmentYCabin,
00346                                     lLHRSYDSegmentYCabin1Family);
00347
00348     // Display the booking class
00349     // STDAIR_LOG_DEBUG ("FareFamily: "
00350     //                     << lLHRBKKSegmentYCabin1Family.toString());
00351
00352
00353     // Step 0.8: booking class level
00354     // Create a BookingClass (Q) for the Segment LHR-BKK, cabin Y,
00355     // fare family 1 on BA's Inv
00356     const ClassCode_T lQ ("Q");
00357     BookingClassKey lQBookingClassKey (lQ);
00358
00359     BookingClass& lLHRBKKSegmentYCabin1FamilyQClass =
00360         FacBom<BookingClass>::instance().create (lQBookingClassKey);
00361     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin1Family,
00362                                     lLHRBKKSegmentYCabin1FamilyQClass);
00363     FacBomManager::linkWithParent (lLHRBKKSegmentYCabin1Family,
00364                                     lLHRBKKSegmentYCabin1FamilyQClass);
00365
00366     FacBomManager::addToListAndMap (lLHRBKKSegmentYCabin,
00367                                     lLHRBKKSegmentYCabin1FamilyQClass);
00368     FacBomManager::addToListAndMap (lLHRBKKSegment,
00369                                     lLHRBKKSegmentYCabin1FamilyQClass);

```

```

00370
00371 // Display the booking class
00372 // STDAIR_LOG_DEBUG ("BookingClass: "
00373 //                  << lLHRBKKSegmentYCabinlFamilyQClass.toString());
00374
00375 // Create a BookingClass (Q) for the Segment BKK-SYD, cabin Y,
00376 // fare family 1 on BA's Inv
00377 BookingClass& lBKKSYDSegmentYCabinlFamilyQClass =
00378     FacBom<BookingClass>::instance().create (lQBookingClassKey);
00379 FacBomManager::addToListAndMap (lBKKSYDSegmentYCabinlFamily,
00380     lBKKSYDSegmentYCabinlFamilyQClass);
00381 FacBomManager::linkWithParent (lBKKSYDSegmentYCabinlFamily,
00382     lBKKSYDSegmentYCabinlFamilyQClass);
00383
00384 FacBomManager::addToListAndMap (lBKKSYDSegmentYCabin,
00385     lBKKSYDSegmentYCabinlFamilyQClass);
00386 FacBomManager::addToListAndMap (lBKKSYDSegment,
00387     lBKKSYDSegmentYCabinlFamilyQClass);
00388
00389 // Display the booking class
00390 // STDAIR_LOG_DEBUG ("BookingClass: "
00391 //                  << lLHRBKKSegmentYCabinlFamilyQClass.toString());
00392
00393 // Create a BookingClass (Q) for the Segment LHR-SYD, cabin Y,
00394 // fare family 1 on BA's Inv
00395 BookingClass& lLHRSYDSegmentYCabinlFamilyQClass =
00396     FacBom<BookingClass>::instance().create (lQBookingClassKey);
00397 FacBomManager::addToListAndMap (lLHRSYDSegmentYCabinlFamily,
00398     lLHRSYDSegmentYCabinlFamilyQClass);
00399 FacBomManager::linkWithParent (lLHRSYDSegmentYCabinlFamily,
00400     lLHRSYDSegmentYCabinlFamilyQClass);
00401
00402 FacBomManager::addToListAndMap (lLHRSYDSegmentYCabin,
00403     lLHRSYDSegmentYCabinlFamilyQClass);
00404 FacBomManager::addToListAndMap (lLHRSYDSegment,
00405     lLHRSYDSegmentYCabinlFamilyQClass);
00406
00407 // Display the booking class
00408 // STDAIR_LOG_DEBUG ("BookingClass: "
00409 //                  << lLHRBKKSegmentYCabinlFamilyQClass.toString());
00410
00411
00412 // ===== AF =====
00413 // Step 0.2: Flight-date level
00414 // Create a FlightDate (AF084/20-MAR-2011) for AF's Inventory
00415 lFlightNumber = 84;
00416 lDate = Date_T (2011, 3, 20);
00417 lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
00418
00419 FlightDate& lAF084_20110320_FD =
00420     FacBom<FlightDate>::instance().create (lFlightDateKey);
00421 FacBomManager::addToListAndMap (lAFInv, lAF084_20110320_FD);
00422 FacBomManager::linkWithParent (lAFInv, lAF084_20110320_FD);
00423
00424 // Display the flight-date
00425 // STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());
00426
00427 // Step 0.3: Segment-date level
00428 // Create a SegmentDate (CDG-SFO) for AF's Inventory
00429 const AirportCode_T lCDG ("CDG");
00430 const AirportCode_T lSFO ("SFO");
00431 const Duration_T l1040 (10, 40, 0);

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```
00432     const Duration_T l1250 (12, 50, 0);
00433     const Duration_T l1110 (11, 10, 0);
00434     lSegmentDateKey = SegmentDateKey (lCDG, lSFO);
00435
00436     SegmentDate& lCDGSFOSegment =
00437         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00438     FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGSFOSegment);
00439     FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGSFOSegment);
00440
00441     // Display the segment-date
00442     // STDAIR_LOG_DEBUG ("SegmentDate: " << lCDGSFOSegment.toString());
00443
00444     // Fill the SegmentDate content
00445     lCDGSFOSegment.setBoardingDate (lDate);
00446     lCDGSFOSegment.setOffDate (lDate);
00447     lCDGSFOSegment.setBoardingTime (l1040);
00448     lCDGSFOSegment.setOffTime (l1250);
00449     lCDGSFOSegment.setElapsedTime (l1110);
00450
00451     // Step 0.4: Leg-date level
00452     // Create a LegDate (CDG) for AF's Inventory
00453     lLegDateKey = LegDateKey (lCDG);
00454
00455     LegDate& lCDGLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00456     FacBomManager::addToListAndMap (lAF084_20110320_FD, lCDGLeg);
00457     FacBomManager::linkWithParent (lAF084_20110320_FD, lCDGLeg);
00458
00459     // Fill the LegDate content
00460     lCDGLeg.setOffPoint (lSFO);
00461     lCDGLeg.setBoardingDate (lDate);
00462     lCDGLeg.setOffDate (lDate);
00463     lCDGLeg.setBoardingTime (l1040);
00464     lCDGLeg.setOffTime (l1250);
00465     lCDGLeg.setElapsedTime (l1110);
00466
00467     // Display the leg-date
00468     // STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());
00469
00470     // Link the segment-dates with the leg-dates
00471     FacBomManager::addToListAndMap (lCDGLeg, lCDGSFOSegment);
00472     FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGLeg);
00473
00474     // Step 0.5: segment-cabin level
00475     // Create a SegmentCabin (Y) for the Segment CDG-SFO of AF's Inventory
00476     SegmentCabin& lCDGSFOSegmentYCabin =
00477         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
00478     FacBomManager::addToListAndMap (lCDGSFOSegment, lCDGSFOSegmentYCabin);
00479     FacBomManager::linkWithParent (lCDGSFOSegment, lCDGSFOSegmentYCabin);
00480
00481     // Display the segment-cabin
00482     // STDAIR_LOG_DEBUG ("SegmentCabin: " << lCDGSFOSegmentYCabin.toString());
00483
00484     // Step 0.6: leg-cabin level
00485     // Create a LegCabin (Y) for the Leg CDG-SFO on AF's Inventory
00486     LegCabin& lCDGLegYCabin =
00487         FacBom<LegCabin>::instance().create (lYLegCabinKey);
00488     FacBomManager::addToListAndMap (lCDGLeg, lCDGLegYCabin);
00489     FacBomManager::linkWithParent (lCDGLeg, lCDGLegYCabin);
00490
00491     // Display the leg-cabin
00492     // STDAIR_LOG_DEBUG ("LegCabin: " << lLHRLegYCabin.toString());
```



```

00494
00495 // Link the segment-dates with the leg-dates
00496 FacBomManager::addToListAndMap (lCDGLegYCabin, lCDGSFOSegmentYCabin,
00497                                 lCDGSFOSegmentYCabin.getFullerKey());
00498 FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin, lCDGLegYCabin,
00499                                 lCDGLegYCabin.getFullerKey());
00500
00501
00502 // Step 0.7: fare family level
00503 // Create a fareFamily (1) for the Segment CDG-SFO, cabin Y on AF's Inv
00504 FareFamily& lCDGSFOSegmentYCabinlFamily =
00505     FacBom<FareFamily>::instance().create (1lFareFamilyKey);
00506 FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
00507                                 lCDGSFOSegmentYCabinlFamily);
00508 FacBomManager::linkWithParent (lCDGSFOSegmentYCabin,
00509                                 lCDGSFOSegmentYCabinlFamily);
00510
00511 // Display the fare family
00512 // STDAIR_LOG_DEBUG ("fareFamily: "
00513 //
00514 //                     << lCDGSFOSegmentYCabinlFamily.toString());
00515
00516 // Step 0.8: booking class level Create a BookingClass (Q) for the
00517 // Segment CDG-SFO, cabin Y, fare family 1 on AF's Inv
00518 BookingClass& lCDGSFOSegmentYCabinlFamilyQClass =
00519     FacBom<BookingClass>::instance().create (1QBookingClassKey);
00520 FacBomManager::addToListAndMap (lCDGSFOSegmentYCabinlFamily,
00521                                 lCDGSFOSegmentYCabinlFamilyQClass);
00522 FacBomManager::linkWithParent (lCDGSFOSegmentYCabinlFamily,
00523                                 lCDGSFOSegmentYCabinlFamilyQClass);
00524
00525 FacBomManager::addToListAndMap (lCDGSFOSegmentYCabin,
00526                                 lCDGSFOSegmentYCabinlFamilyQClass);
00527 FacBomManager::addToListAndMap (lCDGSFOSegment,
00528                                 lCDGSFOSegmentYCabinlFamilyQClass);
00529
00530 // Display the booking class
00531 // STDAIR_LOG_DEBUG ("BookingClass: "
00532 //                     << lCDGSFOSegmentYCabinlFamilyQClass.toString());
00533
00534 /*=====
00535 =====
00536 =====
00537 */
00537 // Schedule:
00538 // BA:
00539 // Step 1: flight period level
00540 // Create a flight period for BA9:
00541 const DoWStruct lDoWSrtuct ("1111111");
00542 const Date_T lBA9DateRangeStart (2010, boost::gregorian::Jun, 6);
00543 const Date_T lBA9DateRangeEnd (2010, boost::gregorian::Jun, 7);
00544 const DatePeriod_T lBA9DatePeriod (lBA9DateRangeStart, lBA9DateRangeEnd);
00545 const PeriodStruct lBA9PeriodStruct (lBA9DatePeriod, lDoWSrtuct);
00546
00547 lFlightNumber = FlightNumber_T (9);
00548
00549 FlightPeriodKey lBA9FlightPeriodKey (lFlightNumber, lBA9PeriodStruct);
00550
00551 FlightPeriod& lBA9FlightPeriod =
00552     FacBom<FlightPeriod>::instance().create (lBA9FlightPeriodKey);

```

```

00553     FacBomManager::addToListAndMap (lBAInv, lBA9FlightPeriod);
00554     FacBomManager::linkWithParent (lBAInv, lBA9FlightPeriod);
00555
00556     // Step 2: segment period level
00557     // Create a segment period for SIN-BKK:
00558
00559     SegmentPeriodKey lLHRSYDSegmentPeriodKey (lLHR, lSYD);
00560
00561     SegmentPeriod& lLHRSYDSegmentPeriod =
00562         FacBom<SegmentPeriod>::instance().create (lLHRSYDSegmentPeriodKey);
00563     FacBomManager::addToListAndMap (lBA9FlightPeriod, lLHRSYDSegmentPeriod);
00564     FacBomManager::linkWithParent (lBA9FlightPeriod, lLHRSYDSegmentPeriod);
00565
00566     lLHRSYDSegmentPeriod.setBoardingTime (l2135);
00567     lLHRSYDSegmentPeriod.setOffTime (l1540);
00568     lLHRSYDSegmentPeriod.setElapsedTime (l1105);
00569     ClassList_String_T lYM ("YM");
00570     lLHRSYDSegmentPeriod.addCabinBookingClassList (lY,lYM);
00571
00572     // AF:
00573     // Step 1: flight period level
00574     // Create a flight period for AF84:
00575     const Date_T lAF84DateRangeStart (2011, boost::gregorian::Mar, 20);
00576     const Date_T lAF84DateRangeEnd (2011, boost::gregorian::Mar, 21);
00577     const DatePeriod_T lAF84DatePeriod (lAF84DateRangeStart, lAF84DateRangeEnd);
00578     const PeriodStruct lAF84PeriodStruct (lAF84DatePeriod, lDoWSrtuct);
00579
00580     lFlightNumber = FlightNumber_T (84);
00581
00582     FlightPeriodKey lAF84FlightPeriodKey (lFlightNumber, lAF84PeriodStruct);
00583
00584     FlightPeriod& lAF84FlightPeriod =
00585         FacBom<FlightPeriod>::instance().create (lAF84FlightPeriodKey);
00586     FacBomManager::addToListAndMap (lAFInv, lAF84FlightPeriod);
00587     FacBomManager::linkWithParent (lAFInv, lAF84FlightPeriod);
00588
00589     // Step 2: segment period level
00590     // Create a segment period for SIN-BKK:
00591
00592     SegmentPeriodKey lCDGSFOSegmentPeriodKey (lCDG, lSFO);
00593
00594     SegmentPeriod& lCDGSFOSegmentPeriod =
00595         FacBom<SegmentPeriod>::instance().create (lCDGSFOSegmentPeriodKey);
00596     FacBomManager::addToListAndMap (lAF84FlightPeriod, lCDGSFOSegmentPeriod);
00597     FacBomManager::linkWithParent (lAF84FlightPeriod, lCDGSFOSegmentPeriod);
00598
00599     lCDGSFOSegmentPeriod.setBoardingTime (l1040);
00600     lCDGSFOSegmentPeriod.setOffTime (l1250);
00601     lCDGSFOSegmentPeriod.setElapsedTime (l1110);
00602     lCDGSFOSegmentPeriod.addCabinBookingClassList (lY,lYM);
00603
00604     /*=====
00605     =====
00606     =====
00607     =====*/
00607     // O&D
00608     // Create an O&D Date (BA;9,2010-Jun-06;LHR,SYD) for BA's Inventory
00609     OnDString_T lBALHRSYDOnDStr = "BA;9,2010-Jun-06;LHR,SYD";
00610     OnDStringList_T lBAOnDStrList;
00611     lBAOnDStrList.push_back (lBALHRSYDOnDStr);

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00612
00613     OnDDateKey lBAOnDDateKey (lBAOnDStrList);
00614     OnDDate& lBA_LHRSYD_OnDDate =
00615         FacBom<OnDDate>::instance().create (lBAOnDDateKey);
00616     // Link to the inventory
00617     FacBomManager::addToListAndMap (lBAInv, lBA_LHRSYD_OnDDate);
00618     FacBomManager::linkWithParent (lBAInv, lBA_LHRSYD_OnDDate);
00619
00620     // Add the segment
00621     FacBomManager::addToListAndMap (lBA_LHRSYD_OnDDate, lLHRSYDSegment);
00622
00623     // Add total forecast info for cabin Y.
00624     const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
00625     const WTP_T lWTP750 = 750.0;
00626     const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
00627     lBA_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
00628
00629     // Create an O&D Date (AF;84,2011-Mar-21;CDG,SFO) for AF's Inventory
00630     OnDString_T lAFLHRSYDOnDStr = "AF;9,2011-Mar-20;CDG,SFO";
00631     OnDStringList_T lAFOnDStrList;
00632     lAFOnDStrList.push_back (lAFLHRSYDOnDStr);
00633
00634     OnDDateKey lAFOnDDateKey (lAFOnDStrList);
00635     OnDDate& lAF_LHRSYD_OnDDate =
00636         FacBom<OnDDate>::instance().create (lAFOnDDateKey);
00637     // Link to the inventory
00638     FacBomManager::addToListAndMap (lAFInv, lAF_LHRSYD_OnDDate);
00639     FacBomManager::linkWithParent (lAFInv, lAF_LHRSYD_OnDDate);
00640
00641     // Add the segment
00642     FacBomManager::addToListAndMap (lAF_LHRSYD_OnDDate, lLHRSYDSegment);
00643
00644     // Add total forecast info for cabin Y.
00645     lAF_LHRSYD_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
00646
00647 }
00648 // //////////////////////////////////////
00649 void CmdBomManager::buildCompleteDummyInventory (BomRoot& ioBomRoot) {
00650
00651     // Build a dummy inventory, containing a dummy flight-date with a
00652     // single segment-cabin and a single leg-cabin.
00653     const CabinCapacity_T lCapacity = DEFAULT_CABIN_CAPACITY;
00654     buildDummyInventory (ioBomRoot, lCapacity);
00655
00656     // Retrieve the (sample) segment-cabin.
00657     SegmentCabin& lDummySegmentCabin =
00658         BomRetriever::retrieveDummySegmentCabin (ioBomRoot);
00659
00660     // Retrieve the (sample) leg-cabin.
00661     LegCabin& lDummyLegCabin =
00662         BomRetriever::retrieveDummyLegCabin (ioBomRoot);
00663
00664     // Add some booking classes to the dummy segment-cabin and some
00665     // virtual ones to the dummy leg-cabin.
00666     // First booking class yield and demand information.
00667     Yield_T lYield = 100;
00668     MeanValue_T lMean = 20;
00669     StdDevValue_T lStdDev = 9;
00670     BookingClassKey lBCKKey (DEFAULT_CLASS_CODE);
00671
00672     BookingClass& lDummyBookingClass =
00673         FacBom<BookingClass>::instance().create (lBCKKey);

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```

00674     lDummyBookingClass.setYield (lYield);
00675     lDummyBookingClass.setMean (lMean);
00676     lDummyBookingClass.setStdDev (lStdDev);
00677     // Add a booking class to the segment-cabin.
00678     FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);
00679
00680     VirtualClassStruct lDummyVirtualClass (lDummyBookingClass);
00681     lDummyVirtualClass.setYield (lYield);
00682     lDummyVirtualClass.setMean (lMean);
00683     lDummyVirtualClass.setStdDev (lStdDev);
00684     // Add the corresponding virtual class to the leg-cabin.
00685     lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
00686
00687     // Second booking class yield and demand information.
00688     lYield = 70;
00689     lMean = 45;
00690     lStdDev= 12;
00691     lDummyBookingClass.setYield (lYield);
00692     lDummyBookingClass.setMean (lMean);
00693     lDummyBookingClass.setStdDev (lStdDev);
00694     // Add a booking class to the segment-cabin.
00695     FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);
00696
00697     lDummyVirtualClass.setYield (lYield);
00698     lDummyVirtualClass.setMean (lMean);
00699     lDummyVirtualClass.setStdDev (lStdDev);
00700     // Add the corresponding virtual class to the leg-cabin.
00701     lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
00702
00703     // Third booking class yield and demand information.
00704     lYield = 42;
00705     lMean = 80;
00706     lStdDev= 16;
00707     lDummyBookingClass.setYield (lYield);
00708     lDummyBookingClass.setMean (lMean);
00709     lDummyBookingClass.setStdDev (lStdDev);
00710     // Add a booking class to the segment-cabin.
00711     FacBomManager::addToList (lDummySegmentCabin, lDummyBookingClass);
00712
00713     lDummyVirtualClass.setYield (lYield);
00714     lDummyVirtualClass.setMean (lMean);
00715     lDummyVirtualClass.setStdDev (lStdDev);
00716     // Add the corresponding virtual class to the leg-cabin.
00717     lDummyLegCabin.addVirtualClass (lDummyVirtualClass);
00718
00719 }
00720
00721 // //////////////////////////////////////
00722 void CmdBomManager::buildDummyInventory (BomRoot& ioBomRoot,
00723     const CabinCapacity_T& iCapacity) {
00724     // Inventory
00725     const InventoryKey lInventoryKey (DEFAULT_AIRLINE_CODE);
00726     Inventory& lInv = FacBom<Inventory>::instance().create (lInventoryKey);
00727     FacBomManager::addToListAndMap (ioBomRoot, lInv);
00728     FacBomManager::linkWithParent (ioBomRoot, lInv);
00729
00730     // Flight-date
00731     FlightDateKey lFlightDateKey (DEFAULT_FLIGHT_NUMBER, DEFAULT_DEPARTURE_DATE);
00732     FlightDate& lFlightDate =
00733         FacBom<FlightDate>::instance().create (lFlightDateKey);
00734     FacBomManager::addToListAndMap (lInv, lFlightDate);
00735     FacBomManager::linkWithParent (lInv, lFlightDate);

```

```

00736
00737 // Leg-date
00738 LegDateKey lLegDateKey (DEFAULT_ORIGIN);
00739 LegDate& lLeg = FacBom<LegDate>::instance().create (lLegDateKey);
00740 FacBomManager::addToListAndMap (lFlightDate, lLeg);
00741 FacBomManager::linkWithParent (lFlightDate, lLeg);
00742
00743 // Fill the LegDate content
00744 lLeg.setOffPoint (DEFAULT_DESTINATION);
00745 lLeg.setBoardingDate (DEFAULT_DEPARTURE_DATE);
00746 lLeg.setOffDate (DEFAULT_DEPARTURE_DATE);
00747 lLeg.setBoardingTime (Duration_T (14, 0, 0));
00748 lLeg.setOffTime (Duration_T (16, 0, 0));
00749 lLeg.setElapsedTime (Duration_T (8, 0, 0));
00750
00751 // Leg-cabin
00752 LegCabinKey lLegCabinKey (DEFAULT_CABIN_CODE);
00753 LegCabin& lLegCabin = FacBom<LegCabin>::instance().create (lLegCabinKey);
00754 FacBomManager::addToListAndMap (lLeg, lLegCabin);
00755 FacBomManager::linkWithParent (lLeg, lLegCabin);
00756
00757 lLegCabin.setCapacities (iCapacity);
00758 lLegCabin.setAvailabilityPool (iCapacity);
00759
00760 // Segment-date
00761 SegmentDateKey lSegmentDateKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
00762 SegmentDate& lSegment =
00763     FacBom<SegmentDate>::instance().create (lSegmentDateKey);
00764 FacBomManager::addToListAndMap (lFlightDate, lSegment);
00765 FacBomManager::linkWithParent (lFlightDate, lSegment);
00766
00767 // Links between the segment-date and the leg-date
00768 FacBomManager::addToListAndMap (lLeg, lSegment);
00769 FacBomManager::addToListAndMap (lSegment, lLeg);
00770
00771 // Fill the SegmentDate content
00772 lSegment.setBoardingDate (DEFAULT_DEPARTURE_DATE);
00773 lSegment.setOffDate (DEFAULT_DEPARTURE_DATE);
00774 lSegment.setBoardingTime (Duration_T (14, 0, 0));
00775 lSegment.setOffTime (Duration_T (16, 0, 0));
00776 lSegment.setElapsedTime (Duration_T (8, 0, 0));
00777
00778 // Segment-cabin
00779 SegmentCabinKey lSegmentCabinKey (DEFAULT_CABIN_CODE);
00780 SegmentCabin& lSegmentCabin =
00781     FacBom<SegmentCabin>::instance().create (lSegmentCabinKey);
00782 FacBomManager::addToListAndMap (lSegment, lSegmentCabin);
00783 FacBomManager::linkWithParent (lSegment, lSegmentCabin);
00784
00785 // Links between the segment-cabin and the leg-cabin
00786 FacBomManager::addToListAndMap (lLegCabin, lSegmentCabin,
00787     lSegmentCabin.getFullerKey());
00788 FacBomManager::addToListAndMap (lSegmentCabin, lLegCabin,
00789     lLegCabin.getFullerKey());
00790
00791 // Create a FareFamily (1) for the Segment LHR-BKK, cabin Y on BA's Inv
00792 const FamilyCode_T l1 ("EcoSaver");
00793 FareFamilyKey l1FareFamilyKey (l1);
00794
00795 FareFamily& lSegmentYCabin1Family =
00796     FacBom<FareFamily>::instance().create (l1FareFamilyKey);
00797 FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabin1Family);

```

```

00798     FacBomManager::linkWithParent (lSegmentCabin, lSegmentYCabinlFamily);
00799
00800     // Create a booking-class
00801     const ClassCode_T lQ ("Q");
00802     BookingClassKey lQBookingClassKey (lQ);
00803
00804     BookingClass& lSegmentYCabinlFamilyQClass =
00805         FacBom<BookingClass>::instance().create (lQBookingClassKey);
00806     FacBomManager::addToListAndMap (lSegmentYCabinlFamily,
00807                                     lSegmentYCabinlFamilyQClass);
00808     FacBomManager::linkWithParent (lSegmentYCabinlFamily,
00809                                     lSegmentYCabinlFamilyQClass);
00810
00811     FacBomManager::addToListAndMap (lSegmentCabin, lSegmentYCabinlFamilyQClass);
00812     FacBomManager::addToListAndMap (lSegment, lSegmentYCabinlFamilyQClass);
00813
00814     /*=====
=====
00815     =====
=====
00816     =====*/
00817     // Schedule:
00818     // XX:
00819     // Step 1: flight period level
00820     // Create a flight period for XX:
00821     const DoWStruct lDoWSrtuct ("1111111");
00822     const Date_T lXXDateRangeStart (DEFAULT_DEPARTURE_DATE);
00823     const Date_T lXXDateRangeEnd (DEFAULT_DEPARTURE_DATE);
00824     const DatePeriod_T lXXDatePeriod (lXXDateRangeStart, lXXDateRangeEnd);
00825     const PeriodStruct lXXPeriodStruct (lXXDatePeriod, lDoWSrtuct);
00826
00827     FlightPeriodKey lXXFlightPeriodKey (DEFAULT_FLIGHT_NUMBER, lXXPeriodStruct);
00828
00829     FlightPeriod& lXXFlightPeriod =
00830         FacBom<FlightPeriod>::instance().create (lXXFlightPeriodKey);
00831     FacBomManager::addToListAndMap (lInv, lXXFlightPeriod);
00832     FacBomManager::linkWithParent (lInv, lXXFlightPeriod);
00833
00834     // Step 2: segment period level
00835     // Create a segment period
00836
00837     SegmentPeriodKey lXXSegmentPeriodKey (DEFAULT_ORIGIN, DEFAULT_DESTINATION);
00838
00839     SegmentPeriod& lXXSegmentPeriod =
00840         FacBom<SegmentPeriod>::instance().create (lXXSegmentPeriodKey);
00841     FacBomManager::addToListAndMap (lXXFlightPeriod, lXXSegmentPeriod);
00842     FacBomManager::linkWithParent (lXXFlightPeriod, lXXSegmentPeriod);
00843
00844     lXXSegmentPeriod.setBoardingTime (Duration_T (14, 0, 0));
00845     lXXSegmentPeriod.setOffTime (Duration_T (16, 0, 0));
00846     lXXSegmentPeriod.setElapsedTime (Duration_T (8, 0, 0));
00847     const CabinCode_T lY ("Y");
00848     const ClassList_String_T lYQ ("YQ");
00849     lXXSegmentPeriod.addCabinBookingClassList (lY,lYQ);
00850
00851 }
00852
00853
00854 // =====
00855 void CmdBomManager::buildSamplePricing (BomRoot& ioBomRoot) {
00856

```

```

00857 // Set the airport-pair primary key.
00858 const AirportPairKey lAirportPairKey (AIRPORT_LHR, AIRPORT_SYD);
00859
00860 // Create the AirportPairKey object and link it to the BOM tree root.
00861 AirportPair& lAirportPair =
00862     FacBom<AirportPair>::instance().create (lAirportPairKey);
00863 FacBomManager::addToListAndMap (lBomRoot, lAirportPair);
00864 FacBomManager::linkWithParent (lBomRoot, lAirportPair);
00865
00866 // Set the fare date-period primary key.
00867 const Date_T lDateRangeStart (2011, boost::gregorian::Jan, 15);
00868 const Date_T lDateRangeEnd (2011, boost::gregorian::Dec, 31);
00869 const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
00870 const DatePeriodKey lDatePeriodKey (lDateRange);
00871
00872 // Create the DatePeriodKey object and link it to the PosChannel object.
00873 DatePeriod& lDatePeriod =
00874     FacBom<DatePeriod>::instance().create (lDatePeriodKey);
00875 FacBomManager::addToListAndMap (lAirportPair, lDatePeriod);
00876 FacBomManager::linkWithParent (lAirportPair, lDatePeriod);
00877
00878 // Set the point-of-sale-channel primary key.
00879 const PosChannelKey lPosChannelKey (POS_LHR, CHANNEL_DN);
00880
00881 // Create the PositionKey object and link it to the AirportPair object.
00882 PosChannel& lPosChannel =
00883     FacBom<PosChannel>::instance().create (lPosChannelKey);
00884 FacBomManager::addToListAndMap (lDatePeriod, lPosChannel);
00885 FacBomManager::linkWithParent (lDatePeriod, lPosChannel);
00886
00887 // Set the fare time-period primary key.
00888 const Time_T lTimeRangeStart (0, 0, 0);
00889 const Time_T lTimeRangeEnd (23, 0, 0);
00890 const TimePeriodKey lTimePeriodKey (lTimeRangeStart, lTimeRangeEnd);
00891
00892 // Create the TimePeriodKey and link it to the DatePeriod object.
00893 TimePeriod& lTimePeriod =
00894     FacBom<TimePeriod>::instance().create (lTimePeriodKey);
00895 FacBomManager::addToListAndMap (lPosChannel, lTimePeriod);
00896 FacBomManager::linkWithParent (lPosChannel, lTimePeriod);
00897
00898 // Pricing -- Generate the FareRule
00899 const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ROUND_TRIP,
00900                                         NO_ADVANCE_PURCHASE,
00901                                         SATURDAY_STAY,
00902                                         CHANGE_FEES,
00903                                         NON_REFUNDABLE,
00904                                         NO_STAY_DURATION);
00905
00906 // Create the FareFeaturesKey and link it to the TimePeriod object.
00907 FareFeatures& lFareFeatures =
00908     FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
00909 FacBomManager::addToListAndMap (lTimePeriod, lFareFeatures);
00910 FacBomManager::linkWithParent (lTimePeriod, lFareFeatures);
00911
00912 // Revenue Accounting -- Generate the YieldRule
00913 const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ROUND_TRIP,
00914                                           CABIN_Y);
00915
00916 // Create the YieldFeaturesKey and link it to the TimePeriod object.
00917 YieldFeatures& lYieldFeatures =
00918     FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);

```

```

00919     FacBomManager::addToListAndMap (lTimePeriod, lYieldFeatures);
00920     FacBomManager::linkWithParent (lTimePeriod, lYieldFeatures);
00921
00922     // Generate Segment Features and link them to their respective
00923     // fare and yield rules.
00924     AirlineCodeList_T lAirlineCodeList;
00925     lAirlineCodeList.push_back (AIRLINE_CODE_BA);
00926     ClassList_StringList_T lClassCodeList;
00927     lClassCodeList.push_back (CLASS_CODE_Y);
00928     const AirlineClassListKey lAirlineClassListKey (lAirlineCodeList,
00929                                                     lClassCodeList);
00930
00931     // Create the AirlineClassList
00932     AirlineClassList& lAirlineClassList =
00933         FacBom<AirlineClassList>::instance().create (lAirlineClassListKey);
00934     // Link the AirlineClassList to the FareFeatures object
00935     lAirlineClassList.setFare (900);
00936     FacBomManager::addToListAndMap (lFareFeatures, lAirlineClassList);
00937     FacBomManager::linkWithParent (lFareFeatures, lAirlineClassList);
00938
00939     // Link the AirlineClassList to the YieldFeatures object
00940     lAirlineClassList.setYield (900);
00941     FacBomManager::addToListAndMap (lYieldFeatures, lAirlineClassList);
00942     // \todo (gsabatier): the following calls overrides the parent for
00943     // lAirlineClassList. Check that it is what is actually wanted.
00944     FacBomManager::linkWithParent (lYieldFeatures, lAirlineClassList);
00945 }
00946
00947 // //////////////////////////////////////
00948 void CmdBomManager::
00949 buildSampleTravelSolutionForPricing (TravelSolutionList_T& ioTravelSolutionList
00950 ) {
00951     // Clean the list
00952     ioTravelSolutionList.clear();
00953
00954     //
00955     const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");
00956
00957     // Add the segment date key to the travel solution
00958     TravelSolutionStruct lTS;
00959     lTS.addSegment (lBA9_SegmentDateKey);
00960
00961     // Add the travel solution to the list
00962     ioTravelSolutionList.push_back (lTS);
00963 }
00964
00965 // //////////////////////////////////////
00966 void CmdBomManager::
00967 buildSampleTravelSolutions (TravelSolutionList_T& ioTravelSolutionList) {
00968     // Clean the list
00969     ioTravelSolutionList.clear();
00970
00971     //
00972     const std::string lBA9_SegmentDateKey ("BA, 9, 2011-06-10, LHR, SYD, 21:45");
00973
00974     // Add the segment date key to the travel solution
00975     TravelSolutionStruct lTS;
00976     lTS.addSegment (lBA9_SegmentDateKey);

```



```

00978
00979 // Fare option
00980 const ClassCode_T lClassPath (CLASS_CODE_Q);
00981 const Fare_T lFare (900);
00982 const ChangeFees_T lChangeFee (CHANGE_FEES);
00983 const NonRefundable_T isNonRefundable (NON_REFUNDABLE);
00984 const SaturdayStay_T lSaturdayStay (SATURDAY_STAY);
00985 const FareOptionStruct lFareOption (lClassPath, lFare, lChangeFee,
00986                                     isNonRefundable, lSaturdayStay);
00987
00988 // Add (a copy of) the fare option
00989 lTS.addFareOption (lFareOption);
00990
00991 // Map of class availabilities: set the availability for the Q
00992 // booking class (the one corresponding to the fare option) to 8.
00993 ClassAvailabilityMap_T lClassAvailabilityMap;
00994 const Availability_T lAvl (8);
00995 const bool hasInsertBeenSuccessful = lClassAvailabilityMap.
00996     insert (ClassAvailabilityMap_T::value_type (lClassPath, lAvl)).second;
00997 assert (hasInsertBeenSuccessful == true);
00998 // Add the map to the dedicated list held by the travel solution
00999 lTS.addClassAvailabilityMap (lClassAvailabilityMap);
01000
01001 // Add the travel solution to the list
01002 ioTravelSolutionList.push_back (lTS);
01003 }
01004
01005 // //////////////////////////////////////
01006 BookingRequestStruct CmdBomManager::buildSampleBookingRequest() {
01007     // Origin
01008     const AirportCode_T lOrigin (AIRPORT_LHR);
01009
01010     // Destination
01011     const AirportCode_T lDestination (AIRPORT_SYD);
01012
01013     // Point of Sale (POS)
01014     const CityCode_T lPOS (POS_LHR);
01015
01016     // Preferred departure date (10-JUN-2011)
01017     const Date_T lPreferredDepartureDate (2011, boost::gregorian::Jun, 10);
01018
01019     // Preferred departure time (08:00)
01020     const Duration_T lPreferredDepartureTime (8, 0, 0);
01021
01022     // Date of the request (15-MAY-2011)
01023     const Date_T lRequestDate (2011, boost::gregorian::May, 15);
01024
01025     // Time of the request (10:00)
01026     const Duration_T lRequestTime (10, 0, 0);
01027
01028     // Date-time of the request (made of the date and time above)
01029     const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);
01030
01031     // Preferred cabin (also named class of service sometimes)
01032     const CabinCode_T lPreferredCabin (CABIN_ECO);
01033
01034     // Number of persons in the party
01035     const PartySize_T lPartySize (3);
01036
01037     // Channel (direct/indirect, on-line/off-line)
01038     const ChannelLabel_T lChannel (CHANNEL_DN);
01039

```

```

01040 // Type of the trip (one-way, inbound/outbound of a return trip)
01041 const TripType_T lTripType (TRIP_TYPE_INBOUND);
01042
01043 // Duration of the stay (expressed as a number of days)
01044 const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);
01045
01046 // Frequent flyer tier (member, silver, gold, platinum, senator, etc)
01047 const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);
01048
01049 // Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
01050 const WTP_T lWTP (DEFAULT_WTP);
01051
01052 // Value of time, for the customer (expressed in monetary unit per
01053 // unit of time, e.g., EUR/hour)
01054 const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);
01055
01056 // Creation of the booking request structure
01057 BookingRequestStruct oBookingRequest (lOrigin, lDestination, lPOS,
01058                                     lPreferredDepartureDate,
01059                                     lRequestDateTime,
01060                                     lPreferredCabin,
01061                                     lPartySize, lChannel,
01062                                     lTripType, lStayDuration,
01063                                     lFrequentFlyerType,
01064                                     lPreferredDepartureTime,
01065                                     lWTP, lValueOfTime);
01066
01067 return oBookingRequest;
01068 }
01069
01070 // //////////////////////////////////////
01071 BookingRequestStruct CmdBomManager::buildSampleBookingRequestForCRS() {
01072 // Origin
01073 const AirportCode_T lOrigin (AIRPORT_SIN);
01074
01075 // Destination
01076 const AirportCode_T lDestination (AIRPORT_BKK);
01077
01078 // Point of Sale (POS)
01079 const CityCode_T lPOS (POS_SIN);
01080
01081 // Preferred departure date (30-JAN-2010)
01082 const Date_T lPreferredDepartureDate (2010, boost::gregorian::Jan, 30);
01083
01084 // Preferred departure time (10:00)
01085 const Duration_T lPreferredDepartureTime (10, 0, 0);
01086
01087 // Date of the request (22-JAN-2010)
01088 const Date_T lRequestDate (2010, boost::gregorian::Jan, 22);
01089
01090 // Time of the request (10:00)
01091 const Duration_T lRequestTime (10, 0, 0);
01092
01093 // Date-time of the request (made of the date and time above)
01094 const DateTime_T lRequestDateTime (lRequestDate, lRequestTime);
01095
01096 // Preferred cabin (also named class of service sometimes)
01097 const CabinCode_T lPreferredCabin (CABIN_ECO);
01098
01099 // Number of persons in the party
01100 const PartySize_T lPartySize (3);
01101

```

```

01102     // Channel (direct/indirect, on-line/off-line)
01103     const ChannelLabel_T lChannel (CHANNEL_IN);
01104
01105     // Type of the trip (one-way, inbound/outbound of a return trip)
01106     const TripType_T lTripType (TRIP_TYPE_INBOUND);
01107
01108     // Duration of the stay (expressed as a number of days)
01109     const DayDuration_T lStayDuration (DEFAULT_STAY_DURATION);
01110
01111     // Frequent flyer tier (member, silver, gold, platinum, senator, etc)
01112     const FrequentFlyer_T lFrequentFlyerType (FREQUENT_FLYER_MEMBER);
01113
01114     // Maximum willing-to-pay (WTP, expressed in monetary unit, e.g., EUR)
01115     const WTP_T lWTP (DEFAULT_WTP);
01116
01117     // Value of time, for the customer (expressed in monetary unit per
01118     // unit of time, e.g., EUR/hour)
01119     const PriceValue_T lValueOfTime (DEFAULT_VALUE_OF_TIME);
01120
01121     // Creation of the booking request structure
01122     BookingRequestStruct oBookingRequest (lOrigin,
01123                                           lDestination,
01124                                           lPOS,
01125                                           lPreferredDepartureDate,
01126                                           lRequestDateTime,
01127                                           lPreferredCabin,
01128                                           lPartySize, lChannel,
01129                                           lTripType, lStayDuration,
01130                                           lFrequentFlyerType,
01131                                           lPreferredDepartureTime,
01132                                           lWTP, lValueOfTime);
01133
01134     return oBookingRequest;
01135 }
01136
01137 // //////////////////////////////////////
01138 void CmdBomManager::buildPartnershipsSampleInventoryAndRM (BomRoot& ioBomRoot)
01139 {
01140     // Step 0.1: Inventory level
01141     // Create an Inventory for SQ
01142     const InventoryKey lSQKey ("SQ");
01143     Inventory& lSQInv = FacBom<Inventory>::instance().create (lSQKey);
01144     FacBomManager::addToListAndMap (ioBomRoot, lSQInv);
01145     FacBomManager::linkWithParent (ioBomRoot, lSQInv);
01146
01147     // Create an Inventory for CX
01148     const InventoryKey lCXKey ("CX");
01149     Inventory& lCXInv = FacBom<Inventory>::instance().create (lCXKey);
01150     FacBomManager::addToListAndMap (ioBomRoot, lCXInv);
01151     FacBomManager::linkWithParent (ioBomRoot, lCXInv);
01152
01153     // ===== SQ =====
01154     // Step 0.2: Flight-date level
01155     // Create a FlightDate (SQ11/08-FEB-2010) for SQ's Inventory
01156     FlightNumber_T lFlightNumber = 11;
01157     Date_T lDate (2010, 2, 8);
01158     FlightDateKey lFlightDateKey (lFlightNumber, lDate);
01159
01160     FlightDate& lSQ11_20100208_FD =
01161         FacBom<FlightDate>::instance().create (lFlightDateKey);

```

```

01163     FacBomManager::addToListAndMap (lSQInv, lSQ11_20100208_FD);
01164     FacBomManager::linkWithParent (lSQInv, lSQ11_20100208_FD);
01165
01166     // Create a (mkt) FlightDate (SQ1200/08-FEB-2010) for SQ's Inventory
01167     FlightNumber_T lMktFlightNumber = 1200;
01168     //lDate = Date_T (2010, 2, 8);
01169     FlightDateKey lMktFlightDateKey (lMktFlightNumber, lDate);
01170
01171     FlightDate& lSQ1200_20100208_FD =
01172         FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01173     FacBomManager::addToListAndMap (lSQInv, lSQ1200_20100208_FD);
01174     FacBomManager::linkWithParent (lSQInv, lSQ1200_20100208_FD);
01175
01176     // Display the flight-date
01177     // STDAIR_LOG_DEBUG ("FlightDate: " << lBA9_20110610_FD.toString());
01178
01179     // Step 0.3: Segment-date level
01180     // Create a first SegmentDate (SIN-BKK) for SQ's Inventory
01181     const AirportCode_T lSIN ("SIN");
01182     const AirportCode_T lBKK ("BKK");
01183     const DateOffset_T l1Day (1);
01184     const DateOffset_T l2Days (2);
01185     const Duration_T l0820 (8, 20, 0);
01186     const Duration_T l1100 (11, 0, 0);
01187     const Duration_T l0340 (3, 40, 0);
01188     SegmentDateKey lSegmentDateKey (lSIN, lBKK);
01189
01190     SegmentDate& lSINBKKSegment =
01191         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01192     FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINBKKSegment);
01193     FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINBKKSegment);
01194
01195     // Fill the SegmentDate content
01196     lSINBKKSegment.setBoardingDate (lDate);
01197     lSINBKKSegment.setOffDate (lDate);
01198     lSINBKKSegment.setBoardingTime (l0820);
01199     lSINBKKSegment.setOffTime (l1100);
01200     lSINBKKSegment.setElapsedTime (l0340);
01201
01202     // Create a second (mkt) SegmentDate (BKK-HKG) for SQ's Inventory
01203     const AirportCode_T lHKG ("HKG");
01204     const Duration_T l1200 (12, 0, 0);
01205     const Duration_T l1540 (15, 40, 0);
01206     const Duration_T l0240 (2, 40, 0);
01207     SegmentDateKey lMktSegmentDateKey (lBKK, lHKG);
01208
01209     SegmentDate& lMktBKKHKGSegment =
01210         FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01211     FacBomManager::addToListAndMap (lSQ1200_20100208_FD, lMktBKKHKGSegment);
01212     FacBomManager::linkWithParent (lSQ1200_20100208_FD, lMktBKKHKGSegment);
01213
01214     // Fill the (mkt) SegmentDate content
01215     lMktBKKHKGSegment.setBoardingDate (lDate);
01216     lMktBKKHKGSegment.setOffDate (lDate);
01217     lMktBKKHKGSegment.setBoardingTime (l1200);
01218     lMktBKKHKGSegment.setOffTime (l1540);
01219     lMktBKKHKGSegment.setElapsedTime (l0240);
01220
01221     // Step 0.4: Leg-date level
01222     // Create a first LegDate (SIN) for SQ's Inventory
01223     LegDateKey lLegDateKey (lSIN);
01224

```

```

01225     LegDate& lSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01226     FacBomManager::addToListAndMap (lSQ11_20100208_FD, lSINLeg);
01227     FacBomManager::linkWithParent (lSQ11_20100208_FD, lSINLeg);
01228
01229     // Fill the LegDate content
01230     lSINLeg.setOffPoint (lBKK);
01231     lSINLeg.setBoardingDate (lDate);
01232     lSINLeg.setOffDate (lDate);
01233     lSINLeg.setBoardingTime (l0820);
01234     lSINLeg.setOffTime (l1100);
01235     lSINLeg.setElapsedTime (l0340);
01236
01237
01238     // Link the segment-dates with the leg-dates
01239     FacBomManager::addToListAndMap (lSINLeg, lSINBKKSegment);
01240     FacBomManager::addToListAndMap (lSINBKKSegment, lSINLeg);
01241
01242     // Step 0.5: segment-cabin level
01243     // Create a SegmentCabin (Y) for the Segment SIN-BKK of SQ's Inventory
01244     const CabinCode_T lY ("Y");
01245     SegmentCabinKey lYSegmentCabinKey (lY);
01246
01247     SegmentCabin& lSINBKKSegmentYCabin =
01248         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01249     FacBomManager::addToListAndMap (lSINBKKSegment, lSINBKKSegmentYCabin);
01250     FacBomManager::linkWithParent (lSINBKKSegment, lSINBKKSegmentYCabin);
01251
01252     // Create a SegmentCabin (Y) for the (mkt) Segment BKK-HKG of SQ's Inventory
01253     SegmentCabin& lMktBKKHKGSegmentYCabin =
01254         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01255     FacBomManager::addToListAndMap (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);
01256     FacBomManager::linkWithParent (lMktBKKHKGSegment, lMktBKKHKGSegmentYCabin);
01257
01258
01259     // Step 0.6: leg-cabin level
01260     // Create a LegCabin (Y) for the Leg SIN-BKK on SQ's Inventory
01261     LegCabinKey lYLegCabinKey (lY);
01262
01263     LegCabin& lSINLegYCabin =
01264         FacBom<LegCabin>::instance().create (lYLegCabinKey);
01265     FacBomManager::addToListAndMap (lSINLeg, lSINLegYCabin);
01266     FacBomManager::linkWithParent (lSINLeg, lSINLegYCabin);
01267
01268     CabinCapacity_T lCapacity (100);
01269     lSINLegYCabin.setCapacities (lCapacity);
01270     lSINLegYCabin.setAvailabilityPool (lCapacity);
01271
01272     FacBomManager::addToListAndMap (lSINLegYCabin, lSINBKKSegmentYCabin,
01273                                     lSINBKKSegmentYCabin.getFullerKey());
01274
01275     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin, lSINLegYCabin,
01276                                     lSINLegYCabin.getFullerKey());
01277
01278
01279
01280
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01298
01299
01300     // Step 0.7: fare family level
01301     // Create a FareFamily (1) for the Segment SIN-BKK, cabin Y on SQ's Inv
01302     const FamilyCode_T l1 ("EcoSaver");
01303     FareFamilyKey l1FareFamilyKey (l1);
01304
01305     FareFamily& lSINBKKSegmentYCabin1Family =
01306         FacBom<FareFamily>::instance().create (l1FareFamilyKey);
01307     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,

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01308                                     lSINBKKSegmentYCabinlFamily);
01309     FacBomManager::linkWithParent (lSINBKKSegmentYCabin,
01310                                     lSINBKKSegmentYCabinlFamily);
01311
01312     // Create a FareFamily (l) for the (mkt) Segment BKK-HKG, cabin Y on SQ's Inv
01313
01313     FareFamily& lMktBKKHKGSegmentYCabinlFamily =
01314         FacBom<FareFamily>::instance().create (lFareFamilyKey);
01315     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
01316                                     lMktBKKHKGSegmentYCabinlFamily);
01317     FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabin,
01318                                     lMktBKKHKGSegmentYCabinlFamily);
01319
01320     // Step 0.8: booking class level
01321     // Create a BookingClass (Y) for the Segment SIN-BKK, cabin Y,
01322     // fare family 1 on SQ's Inv
01323     BookingClassKey lYBookingClassKey (lY);
01324
01325     BookingClass& lSINBKKSegmentYCabinlFamilyYClass =
01326         FacBom<BookingClass>::instance().create (lYBookingClassKey);
01327     FacBomManager::addToListAndMap (lSINBKKSegmentYCabinlFamily,
01328                                     lSINBKKSegmentYCabinlFamilyYClass);
01329     FacBomManager::linkWithParent (lSINBKKSegmentYCabinlFamily,
01330                                     lSINBKKSegmentYCabinlFamilyYClass);
01331
01332     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,
01333                                     lSINBKKSegmentYCabinlFamilyYClass);
01334     FacBomManager::addToListAndMap (lSINBKKSegment,
01335                                     lSINBKKSegmentYCabinlFamilyYClass);
01336
01337     lSINBKKSegmentYCabinlFamilyYClass.setYield(700);
01338
01339     // Create a BookingClass (Y) for the (mkt) Segment BKK-HKG, cabin Y,
01340     // fare family 1 on SQ's Inv
01341     BookingClass& lMktBKKHKGSegmentYCabinlFamilyYClass =
01342         FacBom<BookingClass>::instance().create (lYBookingClassKey);
01343     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabinlFamily,
01344                                     lMktBKKHKGSegmentYCabinlFamilyYClass);
01345     FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabinlFamily,
01346                                     lMktBKKHKGSegmentYCabinlFamilyYClass);
01347
01348     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
01349                                     lMktBKKHKGSegmentYCabinlFamilyYClass);
01350     FacBomManager::addToListAndMap (lMktBKKHKGSegment,
01351                                     lMktBKKHKGSegmentYCabinlFamilyYClass);
01352
01353     lMktBKKHKGSegmentYCabinlFamilyYClass.setYield(700);
01354
01355
01356     // Create a BookingClass (M) for the Segment SIN-BKK, cabin Y,
01357     // fare family 1 on SQ's Inv
01358     const ClassCode_T lM ("M");
01359     BookingClassKey lMBookingClassKey (lM);
01360
01361     BookingClass& lSINBKKSegmentYCabinlFamilyMClass =
01362         FacBom<BookingClass>::instance().create (lMBookingClassKey);
01363     FacBomManager::addToListAndMap (lSINBKKSegmentYCabinlFamily,
01364                                     lSINBKKSegmentYCabinlFamilyMClass);
01365     FacBomManager::linkWithParent (lSINBKKSegmentYCabinlFamily,
01366                                     lSINBKKSegmentYCabinlFamilyMClass);
01367
01368     FacBomManager::addToListAndMap (lSINBKKSegmentYCabin,

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01369         lSINBKKSegmentYCabinlFamilyMClass);
01370     FacBomManager::addToListAndMap (lSINBKKSegment,
01371         lSINBKKSegmentYCabinlFamilyMClass);
01372
01373     lSINBKKSegmentYCabinlFamilyMClass.setYield(500);
01374
01375     // Create a BookingClass (M) for the (mkt) Segment BKK-HKG, cabin Y,
01376     // fare family 1 on SQ's Inv
01377     BookingClass& lMktBKKHKGSegmentYCabinlFamilyMClass =
01378         FacBom<BookingClass>::instance().create (lMBookingClassKey);
01379     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabinlFamily,
01380         lMktBKKHKGSegmentYCabinlFamilyMClass);
01381     FacBomManager::linkWithParent (lMktBKKHKGSegmentYCabinlFamily,
01382         lMktBKKHKGSegmentYCabinlFamilyMClass);
01383
01384     FacBomManager::addToListAndMap (lMktBKKHKGSegmentYCabin,
01385         lMktBKKHKGSegmentYCabinlFamilyMClass);
01386     FacBomManager::addToListAndMap (lMktBKKHKGSegment,
01387         lMktBKKHKGSegmentYCabinlFamilyMClass);
01388
01389     lMktBKKHKGSegmentYCabinlFamilyMClass.setYield(500);
01390
01391     /* =====
===== */
01392     // Step 0.9: Partner Inventory
01393     // Create a partner Inventory CX for SQ
01394     const InventoryKey lPartnerCXKey ("CX");
01395     Inventory& lPartnerCXInv = FacBom<Inventory>::instance().create (lPartnerCXKe
y);
01396     FacBomManager::addToListAndMap (lSQInv, lPartnerCXInv);
01397     FacBomManager::linkWithParent (lSQInv, lPartnerCXInv);
01398
01399     // Step 0.9.2 : Flight-date level
01400     lFlightNumber = 12;
01401     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01402
01403     FlightDate& lPartnerCX12_20100208_FD =
01404         FacBom<FlightDate>::instance().create (lFlightDateKey);
01405     FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX12_20100208_FD);
01406     FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX12_20100208_FD);
01407
01408     lFlightNumber = 1100;
01409     lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01410
01411     FlightDate& lPartnerCX1100_20100208_FD =
01412         FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01413     FacBomManager::addToListAndMap (lPartnerCXInv, lPartnerCX1100_20100208_FD);
01414     FacBomManager::linkWithParent (lPartnerCXInv, lPartnerCX1100_20100208_FD);
01415
01416     // Step 0.9.3: Segment-date level
01417     lSegmentDateKey = SegmentDateKey (lBKK, lHKG);
01418
01419     SegmentDate& lPartnerBKKHKGSegment =
01420         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01421     FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegme
nt);
01422     FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKHKGSegmen
t);
01423
01424     lPartnerBKKHKGSegment.setBoardingDate (lDate);
01425     lPartnerBKKHKGSegment.setOffDate (lDate);
01426     lPartnerBKKHKGSegment.setBoardingTime (l1200);

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01427     lPartnerBKKHKGSegment.setOffTime (l1540);
01428     lPartnerBKKHKGSegment.setElapsedTime (l0240);
01429
01430     lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);
01431
01432     SegmentDate& lPartnerMktSINBKKSegment =
01433         FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01434     FacBomManager::addToListAndMap (lPartnerCX1100_20100208_FD, lPartnerMktSINBKK
Segment);
01435     FacBomManager::linkWithParent (lPartnerCX1100_20100208_FD, lPartnerMktSINBKKS
egment);
01436
01437     lPartnerMktSINBKKSegment.setBoardingDate (lDate);
01438     lPartnerMktSINBKKSegment.setOffDate (lDate);
01439     lPartnerMktSINBKKSegment.setBoardingTime (l0820);
01440     lPartnerMktSINBKKSegment.setOffTime (l1100);
01441     lPartnerMktSINBKKSegment.setElapsedTime (l0340);
01442
01443     // Step 0.9.4: Leg-date level
01444     lLegDateKey = LegDateKey (lBKK);
01445
01446     LegDate& lPartnerBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01447     FacBomManager::addToListAndMap (lPartnerCX12_20100208_FD, lPartnerBKKLeg);
01448     FacBomManager::linkWithParent (lPartnerCX12_20100208_FD, lPartnerBKKLeg);
01449
01450     lPartnerBKKLeg.setOffPoint (lHKG);
01451     lPartnerBKKLeg.setBoardingDate (lDate);
01452     lPartnerBKKLeg.setOffDate (lDate);
01453     lPartnerBKKLeg.setBoardingTime (l1200);
01454     lPartnerBKKLeg.setOffTime (l1540);
01455     lPartnerBKKLeg.setElapsedTime (l0240);
01456
01457     FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKHKGSegment);
01458     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKLeg);
01459
01460     // Step 9.0.5: segment-cabin level
01461
01462     SegmentCabin& lPartnerBKKHKGSegmentYCabin =
01463         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01464     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentY
Cabin);
01465     FacBomManager::linkWithParent (lPartnerBKKHKGSegment, lPartnerBKKHKGSegmentY
abin);
01466
01467     SegmentCabin& lPartnerMktSINBKKSegmentYCabin =
01468         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01469     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSe
gmentYCabin);
01470     FacBomManager::linkWithParent (lPartnerMktSINBKKSegment, lPartnerMktSINBKKSeg
mentYCabin);
01471
01472     // Step 9.0.6: leg-cabin level
01473
01474     LegCabin& lPartnerBKKLegYCabin =
01475         FacBom<LegCabin>::instance().create (lYLegCabinKey);
01476     FacBomManager::addToListAndMap (lPartnerBKKLeg, lPartnerBKKLegYCabin);
01477     FacBomManager::linkWithParent (lPartnerBKKLeg, lPartnerBKKLegYCabin);
01478
01479     lCapacity = CabinCapacity_T(999);
01480     lPartnerBKKLegYCabin.setCapacities (lCapacity);
01481     lPartnerBKKLegYCabin.setAvailabilityPool (lCapacity);
01482

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01483     FacBomManager::addToListAndMap (lPartnerBKKLegYCabin, lPartnerBKKHKGSegmentYC
abin,
01484                                     lPartnerBKKHKGSegmentYCabin.getFullerKey());
01485     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin, lPartnerBKKLegYC
abin,
01486                                     lPartnerBKKLegYCabin.getFullerKey());
01487
01488     // Step 9.0.7: fare family level
01489
01490     FareFamily& lPartnerBKKHKGSegmentYCabinlFamily =
01491         FacBom<FareFamily>::instance().create (lFareFamilyKey);
01492     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
01493                                     lPartnerBKKHKGSegmentYCabinlFamily);
01494     FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabin,
01495                                     lPartnerBKKHKGSegmentYCabinlFamily);
01496
01497     FareFamily& lPartnerMktSINBKKSegmentYCabinlFamily =
01498         FacBom<FareFamily>::instance().create (lFareFamilyKey);
01499     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
01500                                     lPartnerMktSINBKKSegmentYCabinlFamily);
01501     FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabin,
01502                                     lPartnerMktSINBKKSegmentYCabinlFamily);
01503
01504     // Step 9.0.8: booking class level
01505
01506     BookingClass& lPartnerBKKHKGSegmentYCabinlFamilyYClass =
01507         FacBom<BookingClass>::instance().create (lYBookingClassKey);
01508     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabinlFamily,
01509                                     lPartnerBKKHKGSegmentYCabinlFamilyYClass);
01510     FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabinlFamily,
01511                                     lPartnerBKKHKGSegmentYCabinlFamilyYClass);
01512
01513     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
01514                                     lPartnerBKKHKGSegmentYCabinlFamilyYClass);
01515     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
01516                                     lPartnerBKKHKGSegmentYCabinlFamilyYClass);
01517
01518     BookingClass& lPartnerMktSINBKKSegmentYCabinlFamilyYClass =
01519         FacBom<BookingClass>::instance().create (lYBookingClassKey);
01520     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabinlFamily,
01521                                     lPartnerMktSINBKKSegmentYCabinlFamilyYClass);
01522
01522     FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabinlFamily,
01523                                     lPartnerMktSINBKKSegmentYCabinlFamilyYClass);
01524
01525     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
01526                                     lPartnerMktSINBKKSegmentYCabinlFamilyYClass);
01527
01527     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
01528                                     lPartnerMktSINBKKSegmentYCabinlFamilyYClass);
01529
01529     BookingClass& lPartnerBKKHKGSegmentYCabinlFamilyMClass =
01530         FacBom<BookingClass>::instance().create (lMBookingClassKey);
01531     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabinlFamily,
01532                                     lPartnerBKKHKGSegmentYCabinlFamilyMClass);
01533     FacBomManager::linkWithParent (lPartnerBKKHKGSegmentYCabinlFamily,
01534                                     lPartnerBKKHKGSegmentYCabinlFamilyMClass);
01535
01536     FacBomManager::addToListAndMap (lPartnerBKKHKGSegmentYCabin,
01537                                     lPartnerBKKHKGSegmentYCabinlFamilyMClass);
01538     FacBomManager::addToListAndMap (lPartnerBKKHKGSegment,
01539                                     lPartnerBKKHKGSegmentYCabinlFamilyMClass);

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01540                                     lPartnerBKKHKGSegmentYCabinlFamilyMClass);
01541
01542     BookingClass& lPartnerMktSINBKKSegmentYCabinlFamilyMClass =
01543         FacBom<BookingClass>::instance().create (lMBookingClassKey);
01544     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabinlFamily,
01545                                     lPartnerMktSINBKKSegmentYCabinlFamilyMClass);
01546
01547     FacBomManager::linkWithParent (lPartnerMktSINBKKSegmentYCabinlFamily,
01548                                     lPartnerMktSINBKKSegmentYCabinlFamilyMClass);
01549
01550     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegmentYCabin,
01551                                     lPartnerMktSINBKKSegmentYCabinlFamilyMClass);
01552
01553     FacBomManager::addToListAndMap (lPartnerMktSINBKKSegment,
01554                                     lPartnerMktSINBKKSegmentYCabinlFamilyMClass);
01555
01556     // Step 9.0.9: link SQ inventory objects to Partner CX inventory objects
01557
01558     FacBomManager::addToList (lSINBKKSegment, lPartnerMktSINBKKSegment);
01559
01560     lMktBKKHKGSegment.linkWithOperating (lPartnerBKKHKGSegment);
01561
01562     /* ===== */
01563     // Step 1.0: O&D level
01564     // Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK-SQ1200/08-FEB-2010/BKK-HKG) f
01565     or SQ's Inventory
01566     OnDString_T lSQSINBKKOnDStr = "SQ;11,2010-Feb-08;SIN,BKK";
01567     OnDString_T lMktSQBKKHKGOnDStr = "SQ;1200,2010-Feb-08;BKK,HKG";
01568     OnDStringList_T lOnDStringList;
01569     lOnDStringList.push_back (lSQSINBKKOnDStr);
01570     lOnDStringList.push_back (lMktSQBKKHKGOnDStr);
01571
01572     OnDDateKey lOnDDateKey (lOnDStringList);
01573     OnDDate& lSQ_SINHKG_OnDDate =
01574         FacBom<OnDDate>::instance().create (lOnDDateKey);
01575     // Link to the inventory
01576     FacBomManager::addToListAndMap (lSQInv, lSQ_SINHKG_OnDDate);
01577     FacBomManager::linkWithParent (lSQInv, lSQ_SINHKG_OnDDate);
01578
01579     // Add the segments
01580     FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lSINBKKSegment);
01581     FacBomManager::addToListAndMap (lSQ_SINHKG_OnDDate, lMktBKKHKGSegment);
01582
01583     // Add total forecast info for cabin Y.
01584     const MeanStdDevPair_T lMean60StdDev6 (60.0, 6.0);
01585     const WTP_T lWTP750 = 750.0;
01586     const WTPDemandPair_T lWTP750Mean60StdDev6 (lWTP750, lMean60StdDev6);
01587     lSQ_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
01588
01589     // Add demand info (optional).
01590     // 2 legs here, so 2 CabinClassPair to add in the list.
01591     // First leg: cabin Y, class M.
01592     CabinClassPair_T lCC_YM1 (lY,lM);
01593     // Second leg: cabin Y, class M too.
01594     CabinClassPair_T lCC_YM2 (lY,lM);
01595     CabinClassPairList_T lCabinClassPairList;
01596     lCabinClassPairList.push_back(lCC_YM1);
01597     lCabinClassPairList.push_back(lCC_YM2);
01598     const MeanStdDevPair_T lMean20StdDev2 (20.0, 2.0);

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01597     const Yield_T lYield850 = 850.0;
01598     const YieldDemandPair_T lYield850Mean20StdDev2 (lYield850, lMean20StdDev2);
01599     lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
StdDev2);
01600
01601     CabinClassPair_T lCC_YY1 (lY,lY);
01602     CabinClassPair_T lCC_YY2 (lY,lY);
01603     lCabinClassPairList.clear();
01604     lCabinClassPairList.push_back(lCC_YY1);
01605     lCabinClassPairList.push_back(lCC_YY2);
01606     const MeanStdDevPair_T lMean10StdDev1 (10.0, 1.0);
01607     const Yield_T lYield1200 = 1200.0;
01608     const YieldDemandPair_T lYield1200Mean10StdDev1 (lYield1200, lMean10StdDev1);
01609
01609     lSQ_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1
0StdDev1);
01610
01611     // Create an O&D Date (SQ11/08-FEB-2010/SIN-BKK) for SQ's Inventory
01612     lOnDStringList.clear();
01613     lOnDStringList.push_back (lSQSINBKKOnDStr);
01614
01615     lOnDDateKey = OnDDateKey(lOnDStringList);
01616     OnDDate& lSQ_SINBKK_OnDDate =
01617         FacBom<OnDDate>::instance().create (lOnDDateKey);
01618     // Link to the inventory
01619     FacBomManager::addToListAndMap (lSQInv, lSQ_SINBKK_OnDDate);
01620     FacBomManager::linkWithParent (lSQInv, lSQ_SINBKK_OnDDate);
01621
01622     // Add the segments
01623     FacBomManager::addToListAndMap (lSQ_SINBKK_OnDDate, lSINBKKSegment);
01624
01625     // Add total forecast info for cabin Y.
01626     const WTP_T lWTP400 = 400.0;
01627     const WTPDemandPair_T lWTP400Mean60StdDev6 (lWTP400, lMean60StdDev6);
01628     lSQ_SINBKK_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);
01629
01630     // Add demand info (optional).
01631     lCabinClassPairList.clear();
01632     lCabinClassPairList.push_back(lCC_YM1);
01633     const MeanStdDevPair_T lMean20StdDev1 (20.0, 1.0);
01634     const Yield_T lYield500 = 500.0;
01635     const YieldDemandPair_T lYield500Mean20StdDev1 (lYield500, lMean20StdDev1);
01636     lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
StdDev1);
01637
01638     lCabinClassPairList.clear();
01639     lCabinClassPairList.push_back(lCC_YY1);
01640     const Yield_T lYield700 = 700.0;
01641     const YieldDemandPair_T lYield700Mean20StdDev1 (lYield700, lMean10StdDev1 );
01642     lSQ_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean20
StdDev1);
01643
01644     /*****
***
01645     // Create an O&D Date (SQ1200/08-FEB-2010/BKK-HKG) for SQ's Inventory
01646     lFullKeyList.clear();
01647     lFullKeyList.push_back (lMktSQBKKHKGFullKeyStr);
01648
01649     lOnDDateKey = OnDDateKey(lFullKeyList);
01650     OnDDate& lMktSQ_BKKHKG_OnDDate =
01651         FacBom<OnDDate>::instance().create (lOnDDateKey);
01652     // Link to the inventory

```

```

01653     FacBomManager::addToListAndMap (lSQInv, lMktSQ_BKKHKG_OnDDate);
01654     FacBomManager::linkWithParent (lSQInv, lMktSQ_BKKHKG_OnDDate);
01655
01656     // Add the segments
01657     FacBomManager::addToListAndMap (lMktSQ_BKKHKG_OnDDate, lMktBKKHKGSegment);
01658
01659     // Demand info is not added for purely marketed O&Ds
01660     // Add demand info
01661     // lCabinClassPairList.clear();
01662     // lCabinClassPairList.push_back(lCC_YM2);
01663     // lMktSQ_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
01664     .0, 1.0);
01665     *****/
01666
01667     // ///// CX /////
01668     // Step 0.2: Flight-date level
01669     // Create a FlightDate (CX12/08-FEB-2010) for CX's Inventory
01670     lFlightNumber = 12;
01671     //lDate = Date_T (2010, 2, 8);
01672     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01673
01674     FlightDate& lCX12_20100208_FD =
01675         FacBom<FlightDate>::instance().create (lFlightDateKey);
01676     FacBomManager::addToListAndMap (lCXInv, lCX12_20100208_FD);
01677     FacBomManager::linkWithParent (lCXInv, lCX12_20100208_FD);
01678
01679     // Create a (mkt) FlightDate (CX1100/08-FEB-2010) for CX's Inventory
01680     lFlightNumber = 1100;
01681     //lDate = Date_T (2010, 2, 8);
01682     lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01683
01684     FlightDate& lCX1100_20100208_FD =
01685         FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01686     FacBomManager::addToListAndMap (lCXInv, lCX1100_20100208_FD);
01687     FacBomManager::linkWithParent (lCXInv, lCX1100_20100208_FD);
01688
01689     // Display the flight-date
01690     // STDAIR_LOG_DEBUG ("FlightDate: " << lAF084_20110320_FD.toString());
01691
01692     // Step 0.3: Segment-date level
01693     // Create a SegmentDate BKK-HKG for CX's Inventory
01694
01695     lSegmentDateKey = SegmentDateKey (lBKK, lHKG);
01696
01697     SegmentDate& lBKKHKGSegment =
01698         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01699     FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKHKGSegment);
01700     FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKHKGSegment);
01701
01702     // Fill the SegmentDate content
01703     lBKKHKGSegment.setBoardingDate (lDate);
01704     lBKKHKGSegment.setOffDate (lDate);
01705     lBKKHKGSegment.setBoardingTime (11200);
01706     lBKKHKGSegment.setOffTime (11540);
01707     lBKKHKGSegment.setElapsedTime (10240);
01708
01709     // Create a second (mkt) SegmentDate (SIN-BKK) for CX's Inventory
01710     lMktSegmentDateKey = SegmentDateKey (lSIN, lBKK);
01711
01712     SegmentDate& lMktSINBKKSegment =

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01713     FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01714     FacBomManager::addToListAndMap (lCX1100_20100208_FD, lMktSINBKKSegment);
01715     FacBomManager::linkWithParent (lCX1100_20100208_FD, lMktSINBKKSegment);
01716
01717     // Fill the (mkt) SegmentDate content
01718     lMktSINBKKSegment.setBoardingDate (lDate);
01719     lMktSINBKKSegment.setOffDate (lDate);
01720     lMktSINBKKSegment.setBoardingTime (l0820);
01721     lMktSINBKKSegment.setOffTime (l1100);
01722     lMktSINBKKSegment.setElapsedTime (l0340);
01723
01724     // Step 0.4: Leg-date level
01725     // Create a LegDate (BKK) for CX's Inventory
01726     lLegDateKey = LegDateKey (lBKK);
01727
01728     LegDate& lBKKLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01729     FacBomManager::addToListAndMap (lCX12_20100208_FD, lBKKLeg);
01730     FacBomManager::linkWithParent (lCX12_20100208_FD, lBKKLeg);
01731
01732     // Fill the LegDate content
01733     lBKKLeg.setOffPoint (lHKG);
01734     lBKKLeg.setBoardingDate (lDate);
01735     lBKKLeg.setOffDate (lDate);
01736     lBKKLeg.setBoardingTime (l1200);
01737     lBKKLeg.setOffTime (l1540);
01738     lBKKLeg.setElapsedTime (l0240);
01739
01740     // Display the leg-date
01741     // STDAIR_LOG_DEBUG ("LegDate: " << lCDGLeg.toString());
01742
01743     // Link the segment-dates with the leg-dates
01744     FacBomManager::addToListAndMap (lBKKLeg, lBKKHKGSegment);
01745     FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKLeg);
01746
01747     // Step 0.5: segment-cabin level
01748     // Create a SegmentCabin (Y) for the Segment BKK-HKG of CX's Inventory
01749     SegmentCabin& lBKKHKGSegmentYCabin =
01750         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01751     FacBomManager::addToListAndMap (lBKKHKGSegment, lBKKHKGSegmentYCabin);
01752     FacBomManager::linkWithParent (lBKKHKGSegment, lBKKHKGSegmentYCabin);
01753
01754     // Create a SegmentCabin (Y) for the (mkt) Segment SIN-BKK of CX's Inventory
01755     SegmentCabin& lMktSINBKKSegmentYCabin =
01756         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01757     FacBomManager::addToListAndMap (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);
01758     FacBomManager::linkWithParent (lMktSINBKKSegment, lMktSINBKKSegmentYCabin);
01759
01760     // Step 0.6: leg-cabin level
01761     // Create a LegCabin (Y) for the Leg BKK-HKG on CX's Inventory
01762     LegCabin& lBKKLegYCabin =
01763         FacBom<LegCabin>::instance().create (lYLegCabinKey);
01764     FacBomManager::addToListAndMap (lBKKLeg, lBKKLegYCabin);
01765     FacBomManager::linkWithParent (lBKKLeg, lBKKLegYCabin);
01766
01767     lCapacity = CabinCapacity_T(100);
01768     lBKKLegYCabin.setCapacities (lCapacity);
01769     lBKKLegYCabin.setAvailabilityPool (lCapacity);
01770
01771     // Link the segment-dates with the leg-dates
01772     FacBomManager::addToListAndMap (lBKKLegYCabin, lBKKHKGSegmentYCabin,
01773                                     lBKKHKGSegmentYCabin.getFullerKey());
01774     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin, lBKKLegYCabin,

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01775                                     lBKKLegYCabin.getFullerKey());
01776
01777 // Step 0.7: fare family level
01778 // Create a fareFamily (1) for the Segment BKK-HKG, cabin Y on CX's Inv
01779 FareFamily& lBKKHKGSegmentYCabinlFamily =
01780     FacBom<FareFamily>::instance().create (1lFareFamilyKey);
01781 FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
01782     lBKKHKGSegmentYCabinlFamily);
01783 FacBomManager::linkWithParent (lBKKHKGSegmentYCabin,
01784     lBKKHKGSegmentYCabinlFamily);
01785
01786 // Create a FareFamily (1) for the (mkt) Segment SIN-BKK, cabin Y on CX's Inv
01787
01788 FareFamily& lMktSINBKKSegmentYCabinlFamily =
01789     FacBom<FareFamily>::instance().create (1lFareFamilyKey);
01790 FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
01791     lMktSINBKKSegmentYCabinlFamily);
01792 FacBomManager::linkWithParent (lMktSINBKKSegmentYCabin,
01793     lMktSINBKKSegmentYCabinlFamily);
01794
01795 // Step 0.8: booking class level
01796 // Create a BookingClass (Y) for the
01797 // Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
01798 BookingClass& lBKKHKGSegmentYCabinlFamilyYClass =
01799     FacBom<BookingClass>::instance().create (1YBookingClassKey);
01800 FacBomManager::addToListAndMap (lBKKHKGSegmentYCabinlFamily,
01801     lBKKHKGSegmentYCabinlFamilyYClass);
01802 FacBomManager::linkWithParent (lBKKHKGSegmentYCabinlFamily,
01803     lBKKHKGSegmentYCabinlFamilyYClass);
01804
01805 FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
01806     lBKKHKGSegmentYCabinlFamilyYClass);
01807 FacBomManager::addToListAndMap (lBKKHKGSegment,
01808     lBKKHKGSegmentYCabinlFamilyYClass);
01809
01810 lBKKHKGSegmentYCabinlFamilyYClass.setYield(700);
01811
01812 // Create a BookingClass (Y) for the (mkt) Segment SIN-BKK, cabin Y,
01813 // fare family 1 on CX's Inv
01814 BookingClass& lMktSINBKKSegmentYCabinlFamilyYClass =
01815     FacBom<BookingClass>::instance().create (1YBookingClassKey);
01816 FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabinlFamily,
01817     lMktSINBKKSegmentYCabinlFamilyYClass);
01818 FacBomManager::linkWithParent (lMktSINBKKSegmentYCabinlFamily,
01819     lMktSINBKKSegmentYCabinlFamilyYClass);
01820
01821 FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
01822     lMktSINBKKSegmentYCabinlFamilyYClass);
01823 FacBomManager::addToListAndMap (lMktSINBKKSegment,
01824     lMktSINBKKSegmentYCabinlFamilyYClass);
01825
01826 lMktSINBKKSegmentYCabinlFamilyYClass.setYield(700);
01827
01828 //Create a BookingClass (M) for the
01829 // Segment BKK-HKG, cabin Y, fare family 1 on CX's Inv
01830 BookingClass& lBKKHKGSegmentYCabinlFamilyMClass =
01831     FacBom<BookingClass>::instance().create (1MBookingClassKey);
01832 FacBomManager::addToListAndMap (lBKKHKGSegmentYCabinlFamily,
01833     lBKKHKGSegmentYCabinlFamilyMClass);
01834 FacBomManager::linkWithParent (lBKKHKGSegmentYCabinlFamily,
01835     lBKKHKGSegmentYCabinlFamilyMClass);

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01836
01837     FacBomManager::addToListAndMap (lBKKHKGSegmentYCabin,
01838                                     lBKKHKGSegmentYCabinlFamilyMClass);
01839     FacBomManager::addToListAndMap (lBKKHKGSegment,
01840                                     lBKKHKGSegmentYCabinlFamilyMClass);
01841
01842     lBKKHKGSegmentYCabinlFamilyMClass.setYield(500);
01843
01844     // Create a BookingClass (M) for the (mkt) Segment SIN-BKK, cabin Y,
01845     // fare family 1 on CX's Inv
01846     BookingClass& lMktSINBKKSegmentYCabinlFamilyMClass =
01847         FacBom<BookingClass>::instance().create (lMBookingClassKey);
01848     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabinlFamily,
01849                                     lMktSINBKKSegmentYCabinlFamilyMClass);
01850     FacBomManager::linkWithParent (lMktSINBKKSegmentYCabinlFamily,
01851                                     lMktSINBKKSegmentYCabinlFamilyMClass);
01852
01853     FacBomManager::addToListAndMap (lMktSINBKKSegmentYCabin,
01854                                     lMktSINBKKSegmentYCabinlFamilyMClass);
01855     FacBomManager::addToListAndMap (lMktSINBKKSegment,
01856                                     lMktSINBKKSegmentYCabinlFamilyMClass);
01857
01858     lMktSINBKKSegmentYCabinlFamilyMClass.setYield(500);
01859
01860     /* ===== */
01861     // Step 0.9: Partner Inventory
01862     // Create a partner Inventory SQ for CX
01863     const InventoryKey lPartnerSQKey ("SQ");
01864     Inventory& lPartnerSQInv = FacBom<Inventory>::instance().create (lPartnerSQKey
01865 y);
01866     FacBomManager::addToListAndMap (lCXInv, lPartnerSQInv);
01867     FacBomManager::linkWithParent (lCXInv, lPartnerSQInv);
01868
01869     // Step 0.9.2 : Flight-date level
01870     lFlightNumber = 11;
01871     lFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01872
01873     FlightDate& lPartnerSQ11_20100208_FD =
01874         FacBom<FlightDate>::instance().create (lFlightDateKey);
01875     FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ11_20100208_FD);
01876     FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ11_20100208_FD);
01877
01878     lFlightNumber = 1200;
01879     lMktFlightDateKey = FlightDateKey (lFlightNumber, lDate);
01880
01881     FlightDate& lPartnerSQ1200_20100208_FD =
01882         FacBom<FlightDate>::instance().create (lMktFlightDateKey);
01883     FacBomManager::addToListAndMap (lPartnerSQInv, lPartnerSQ1200_20100208_FD);
01884     FacBomManager::linkWithParent (lPartnerSQInv, lPartnerSQ1200_20100208_FD);
01885
01886     // Step 0.9.3: Segment-date level
01887     lSegmentDateKey = SegmentDateKey (lSIN, lBKK);
01888
01889     SegmentDate& lPartnerSINBKKSegment =
01890         FacBom<SegmentDate>::instance().create (lSegmentDateKey);
01891     FacBomManager::addToListAndMap (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegme
01892 nt);
01893     FacBomManager::linkWithParent (lPartnerSQ11_20100208_FD, lPartnerSINBKKSegmen
01894 t);
01895
01896     lPartnerSINBKKSegment.setBoardingDate (lDate);

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01894     lPartnerSINBKKSegment.setOffDate (lDate);
01895     lPartnerSINBKKSegment.setBoardingTime (l0820);
01896     lPartnerSINBKKSegment.setOffTime (l1100);
01897     lPartnerSINBKKSegment.setElapsedTime (l0340);
01898
01899     lMktSegmentDateKey = SegmentDateKey (lBKK, lHKG);
01900
01901     SegmentDate& lPartnerMktBKKHKGSegment =
01902         FacBom<SegmentDate>::instance().create (lMktSegmentDateKey);
01903     FacBomManager::addToListAndMap (lPartnerSQL200_20100208_FD, lPartnerMktBKKHKG
Segment);
01904     FacBomManager::linkWithParent (lPartnerSQL200_20100208_FD, lPartnerMktBKKHKG
segment);
01905
01906     lPartnerMktBKKHKGSegment.setBoardingDate (lDate);
01907     lPartnerMktBKKHKGSegment.setOffDate (lDate);
01908     lPartnerMktBKKHKGSegment.setBoardingTime (l1200);
01909     lPartnerMktBKKHKGSegment.setOffTime (l1540);
01910     lPartnerMktBKKHKGSegment.setElapsedTime (l0240);
01911
01912     // Step 0.9.4: Leg-date level
01913     lLegDateKey = LegDateKey (lSIN);
01914
01915     LegDate& lPartnerSINLeg = FacBom<LegDate>::instance().create (lLegDateKey);
01916     FacBomManager::addToListAndMap (lPartnerSQL1_20100208_FD, lPartnerSINLeg);
01917     FacBomManager::linkWithParent (lPartnerSQL1_20100208_FD, lPartnerSINLeg);
01918
01919     lPartnerSINLeg.setOffPoint (lBKK);
01920     lPartnerSINLeg.setBoardingDate (lDate);
01921     lPartnerSINLeg.setOffDate (lDate);
01922     lPartnerSINLeg.setBoardingTime (l0820);
01923     lPartnerSINLeg.setOffTime (l1100);
01924     lPartnerSINLeg.setElapsedTime (l0340);
01925
01926     FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINBKKSegment);
01927     FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINLeg);
01928
01929     // Step 9.0.5: segment-cabin level
01930
01931     SegmentCabin& lPartnerSINBKKSegmentYCabin =
01932         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01933     FacBomManager::addToListAndMap (lPartnerSINBKKSegment, lPartnerSINBKKSegmentY
Cabin);
01934     FacBomManager::linkWithParent (lPartnerSINBKKSegment, lPartnerSINBKKSegmentY
abin);
01935
01936     SegmentCabin& lPartnerMktBKKHKGSegmentYCabin =
01937         FacBom<SegmentCabin>::instance().create (lYSegmentCabinKey);
01938     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKGSe
gmentYCabin);
01939     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegment, lPartnerMktBKKHKGSeg
mentYCabin);
01940
01941     // Step 9.0.6: leg-cabin level
01942
01943     LegCabin& lPartnerSINLegYCabin =
01944         FacBom<LegCabin>::instance().create (lYLegCabinKey);
01945     FacBomManager::addToListAndMap (lPartnerSINLeg, lPartnerSINLegYCabin);
01946     FacBomManager::linkWithParent (lPartnerSINLeg, lPartnerSINLegYCabin);
01947
01948     lCapacity = CabinCapacity_T(999);
01949     lPartnerSINLegYCabin.setCapacities (lCapacity);

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01950     lPartnerSINLegYCabin.setAvailabilityPool (lCapacity);
01951
01952     FacBomManager::addToListAndMap (lPartnerSINLegYCabin, lPartnerSINBKKSegmentYC
abin,
01953                                     lPartnerSINBKKSegmentYCabin.getFullerKey());
01954     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin, lPartnerSINLegYC
abin,
01955                                     lPartnerSINLegYCabin.getFullerKey());
01956
01957     // Step 9.0.7: fare family level
01958
01959     FareFamily& lPartnerSINBKKSegmentYCabinlFamily =
01960         FacBom<FareFamily>::instance().create (lFareFamilyKey);
01961     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
01962                                     lPartnerSINBKKSegmentYCabinlFamily);
01963     FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabin,
01964                                     lPartnerSINBKKSegmentYCabinlFamily);
01965
01966     FareFamily& lPartnerMktBKKHKGSegmentYCabinlFamily =
01967         FacBom<FareFamily>::instance().create (lFareFamilyKey);
01968     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
01969                                     lPartnerMktBKKHKGSegmentYCabinlFamily);
01970     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabin,
01971                                     lPartnerMktBKKHKGSegmentYCabinlFamily);
01972
01973
01974     // Step 9.0.8: booking class level
01975
01976     BookingClass& lPartnerSINBKKSegmentYCabinlFamilyYClass =
01977         FacBom<BookingClass>::instance().create (lYBookingClassKey);
01978     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabinlFamily,
01979                                     lPartnerSINBKKSegmentYCabinlFamilyYClass);
01980     FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabinlFamily,
01981                                     lPartnerSINBKKSegmentYCabinlFamilyYClass);
01982
01983     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
01984                                     lPartnerSINBKKSegmentYCabinlFamilyYClass);
01985     FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
01986                                     lPartnerSINBKKSegmentYCabinlFamilyYClass);
01987
01988     BookingClass& lPartnerMktBKKHKGSegmentYCabinlFamilyYClass =
01989         FacBom<BookingClass>::instance().create (lYBookingClassKey);
01990     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabinlFamily,
01991                                     lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);
01992
01993     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabinlFamily,
01994                                     lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);
01995
01996     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
01997                                     lPartnerMktBKKHKGSegmentYCabinlFamilyYClass);
01998
01999
02000     BookingClass& lPartnerSINBKKSegmentYCabinlFamilyMClass =
02001         FacBom<BookingClass>::instance().create (lMBookingClassKey);
02002     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabinlFamily,
02003                                     lPartnerSINBKKSegmentYCabinlFamilyMClass);
02004     FacBomManager::linkWithParent (lPartnerSINBKKSegmentYCabinlFamily,
02005                                     lPartnerSINBKKSegmentYCabinlFamilyMClass);
02006

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02007     FacBomManager::addToListAndMap (lPartnerSINBKKSegmentYCabin,
02008                                     lPartnerSINBKKSegmentYCabinlFamilyMClass);
02009     FacBomManager::addToListAndMap (lPartnerSINBKKSegment,
02010                                     lPartnerSINBKKSegmentYCabinlFamilyMClass);
02011
02012     BookingClass& lPartnerMktBKKHKGSegmentYCabinlFamilyMClass =
02013         FacBom<BookingClass>::instance().create (lMBookingClassKey);
02014     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabinlFamily,
02015                                     lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);
02016
02017     FacBomManager::linkWithParent (lPartnerMktBKKHKGSegmentYCabinlFamily,
02018                                     lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);
02019     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegmentYCabin,
02020                                     lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);
02021
02022     FacBomManager::addToListAndMap (lPartnerMktBKKHKGSegment,
02023                                     lPartnerMktBKKHKGSegmentYCabinlFamilyMClass);
02024
02025     // Step 9.0.9: link CX inventory objects to Partner SQ inventory objects
02026     FacBomManager::addToList (lBKKHKGSegment, lPartnerMktBKKHKGSegment);
02027
02028     lMktSINBKKSegment.linkWithOperating (lPartnerSINBKKSegment);
02029
02030     /* ===== */
02031
02032     // Step 1.0: O&D level
02033     // Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK-CX12/08-FEB-2010/BKK-HKG) f
02034     or CX's Inventory
02035     OnDString_T lMktCXSinBKKOnDStr = "CX;1100,2010-Feb-08;SIN,BKK";
02036     OnDString_T lCXBKKHKGOnDStr = "CX;12,2010-Feb-08;BKK,HKG";
02037     lOnDStringList.clear();
02038     lOnDStringList.push_back (lMktCXSinBKKOnDStr);
02039     lOnDStringList.push_back (lCXBKKHKGOnDStr);
02040
02041     lOnDDateKey = OnDDateKey(lOnDStringList);
02042     OnDDate& lCX_SINHKG_OnDDate =
02043         FacBom<OnDDate>::instance().create (lOnDDateKey);
02044     // Link to the inventory
02045     FacBomManager::addToListAndMap (lCXInv, lCX_SINHKG_OnDDate);
02046     FacBomManager::linkWithParent (lCXInv, lCX_SINHKG_OnDDate);
02047
02048     // Add the segments
02049     FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lMktSINBKKSegment);
02050     FacBomManager::addToListAndMap (lCX_SINHKG_OnDDate, lBKKHKGSegment);
02051
02052     // Add total forecast info for cabin Y.
02053     lCX_SINHKG_OnDDate.setTotalForecast (lY, lWTP750Mean60StdDev6);
02054
02055     // Add demand info
02056     lCabinClassPairList.clear();
02057     lCabinClassPairList.push_back (lCC_YM1);
02058     lCabinClassPairList.push_back (lCC_YM2);
02059     lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield850Mean20
02060 StdDev2);
02061
02062     lCabinClassPairList.clear();
02063     lCabinClassPairList.push_back (lCC_YY1);
02064     lCabinClassPairList.push_back (lCC_YY2);
02065     lCX_SINHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield1200Mean1

```

```

0StdDev1);
02063
02064     /*****
02065     // Create an O&D Date (CX1100/08-FEB-2010/SIN-BKK) for CX's Inventory
02066     lFullKeyList.clear();
02067     lFullKeyList.push_back (lMktCX_SINBKKFullKeyStr);
02068
02069     lOnDDateKey = OnDDateKey(lFullKeyList);
02070     OnDDate& lMktCX_SINBKK_OnDDate =
02071         FacBom<OnDDate>::instance().create (lOnDDateKey);
02072     // Link to the inventory
02073     FacBomManager::addToListAndMap (lCXInv, lMktCX_SINBKK_OnDDate);
02074     FacBomManager::linkWithParent (lCXInv, lMktCX_SINBKK_OnDDate);
02075
02076     // Add the segments
02077     FacBomManager::addToListAndMap (lMktCX_SINBKK_OnDDate, lMktSINBKKSegment);
02078
02079     // Demand info is not added for purely marketed O&Ds
02080     // Add demand info
02081     lCabinClassPairList.clear();
02082     lCabinClassPairList.push_back(lCC_YM1);
02083     lMktCX_SINBKK_OnDDate.setDemandInformation (lCabinClassPairList, 500.0, 20
02084     .0, 1.0);
02085     *****/
02086     // Create an O&D Date (CX12/08-FEB-2010/BKK-HKG) for CX's Inventory
02087     lOnDStringList.clear();
02088     lOnDStringList.push_back (lCX_BKKHKG_OnDStr);
02089
02090     lOnDDateKey = OnDDateKey(lOnDStringList);
02091     OnDDate& lCX_BKKHKG_OnDDate =
02092         FacBom<OnDDate>::instance().create (lOnDDateKey);
02093     // Link to the inventory
02094     FacBomManager::addToListAndMap (lCXInv, lCX_BKKHKG_OnDDate);
02095     FacBomManager::linkWithParent (lCXInv, lCX_BKKHKG_OnDDate);
02096
02097     // Add the segments
02098     FacBomManager::addToListAndMap (lCX_BKKHKG_OnDDate, lBKKHKGSegment);
02099
02100     // Add total forecast info for cabin Y.
02101     lCX_BKKHKG_OnDDate.setTotalForecast (lY, lWTP400Mean60StdDev6);
02102
02103     // Add demand info
02104     lCabinClassPairList.clear();
02105     lCabinClassPairList.push_back(lCC_YM2);
02106     lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield500Mean20
02107     StdDev1);
02108     lCabinClassPairList.clear();
02109     lCabinClassPairList.push_back(lCC_YY2);
02110     const YieldDemandPair_T lYield700Mean10StdDev1 (lYield700, lMean10StdDev1 );
02111     lCX_BKKHKG_OnDDate.setDemandInformation (lCabinClassPairList, lYield700Mean10
02112     StdDev1);
02113     /*=====
02114     =====
02115     =====*/

```

```

02116     // Schedule:
02117     // SQ:
02118     // Step 1: flight period level
02119     // Create a flight period for SQ11:
02120     const DoWStruct lDoWSrtuct ("1111111");
02121     const Date_T lDateRangeStart (2010, boost::gregorian::Feb, 8);
02122     const Date_T lDateRangeEnd (2010, boost::gregorian::Feb, 9);
02123     const DatePeriod_T lDatePeriod (lDateRangeStart, lDateRangeEnd);
02124     const PeriodStruct lPeriodStruct (lDatePeriod, lDoWSrtuct);
02125
02126     lFlightNumber = FlightNumber_T (11);
02127
02128     FlightPeriodKey lFlightPeriodKey (lFlightNumber, lPeriodStruct);
02129
02130     FlightPeriod& lSQ11FlightPeriod =
02131         FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
02132     FacBomManager::addToListAndMap (lSQInv, lSQ11FlightPeriod);
02133     FacBomManager::linkWithParent (lSQInv, lSQ11FlightPeriod);
02134
02135     // Step 2: segment period level
02136     // Create a segment period for SIN-BKK:
02137
02138     SegmentPeriodKey lSegmentPeriodKey (lSIN, lBKK);
02139
02140     SegmentPeriod& lSINBKKSegmentPeriod =
02141         FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
02142     FacBomManager::addToListAndMap (lSQ11FlightPeriod, lSINBKKSegmentPeriod);
02143     FacBomManager::linkWithParent (lSQ11FlightPeriod, lSINBKKSegmentPeriod);
02144
02145     lSINBKKSegmentPeriod.setBoardingTime (10820);
02146     lSINBKKSegmentPeriod.setOffTime (11100);
02147     lSINBKKSegmentPeriod.setElapsedTime (10340);
02148     ClassList_String_T lYM ("YM");
02149     lSINBKKSegmentPeriod.addCabinBookingClassList (lY, lYM);
02150
02151     // CX:
02152     // Step 1: flight period level
02153     // Create a flight period for CX12:
02154     lFlightNumber = FlightNumber_T (12);
02155
02156     lFlightPeriodKey = FlightPeriodKey(lFlightNumber, lPeriodStruct);
02157
02158     FlightPeriod& lCX12FlightPeriod =
02159         FacBom<FlightPeriod>::instance().create (lFlightPeriodKey);
02160     FacBomManager::addToListAndMap (lCXInv, lCX12FlightPeriod);
02161     FacBomManager::linkWithParent (lCXInv, lCX12FlightPeriod);
02162
02163     // Step 2: segment period level
02164     // Create a segment period for BKK-HKG:
02165
02166     lSegmentPeriodKey = SegmentPeriodKey (lBKK, lHKG);
02167
02168     SegmentPeriod& lBKKHKGSegmentPeriod =
02169         FacBom<SegmentPeriod>::instance().create (lSegmentPeriodKey);
02170     FacBomManager::addToListAndMap (lCX12FlightPeriod, lBKKHKGSegmentPeriod);
02171     FacBomManager::linkWithParent (lCX12FlightPeriod, lBKKHKGSegmentPeriod);
02172
02173     lBKKHKGSegmentPeriod.setBoardingTime (11200);
02174     lBKKHKGSegmentPeriod.setOffTime (11540);
02175     lBKKHKGSegmentPeriod.setElapsedTime (10240);
02176     lBKKHKGSegmentPeriod.addCabinBookingClassList (lY, lYM);
02177

```

```

02178     }
02179
02180     // //////////////////////////////////////
02181     void CmdBomManager::buildPartnershipsSamplePricing (BomRoot& ioBomRoot) {
02182
02183
02184
02185         /*=====
=====*/
02186         // First airport pair SIN-BKK.
02187         // Set the airport-pair primary key.
02188         AirportPairKey lAirportPairKey ("SIN", "BKK");
02189
02190         // Create the AirportPairKey object and link it to the ioBomRoot object.
02191         AirportPair& lSINBKKAirportPair =
02192             FacBom<AirportPair>::instance().create (lAirportPairKey);
02193         FacBomManager::addToListAndMap (ioBomRoot, lSINBKKAirportPair);
02194         FacBomManager::linkWithParent (ioBomRoot, lSINBKKAirportPair);
02195
02196         // Set the fare date-period primary key.
02197         const Date_T lDateRangeStart (2010, boost::gregorian::Jan, 15);
02198         const Date_T lDateRangeEnd (2010, boost::gregorian::Dec, 31);
02199         const DatePeriod_T lDateRange (lDateRangeStart, lDateRangeEnd);
02200         const DatePeriodKey lDatePeriodKey (lDateRange);
02201
02202         // Create the DatePeriodKey object and link it to the PosChannel object.
02203         DatePeriod& lSINBKKDatePeriod =
02204             FacBom<DatePeriod>::instance().create (lDatePeriodKey);
02205         FacBomManager::addToListAndMap (lSINBKKAirportPair, lSINBKKDatePeriod);
02206         FacBomManager::linkWithParent (lSINBKKAirportPair, lSINBKKDatePeriod);
02207
02208         // Set the point-of-sale-channel primary key.
02209         PosChannelKey lPosChannelKey ("SIN", "IN");
02210
02211         // Create the PositionKey object and link it to the AirportPair object.
02212         PosChannel& lSINPosChannel =
02213             FacBom<PosChannel>::instance().create (lPosChannelKey);
02214         FacBomManager::addToListAndMap (lSINBKKDatePeriod, lSINPosChannel);
02215         FacBomManager::linkWithParent (lSINBKKDatePeriod, lSINPosChannel);
02216
02217         // Set the fare time-period primary key.
02218         const Time_T lTimeRangeStart (0, 0, 0);
02219         const Time_T lTimeRangeEnd (23, 0, 0);
02220         const TimePeriodKey lFareTimePeriodKey (lTimeRangeStart,
02221                                                 lTimeRangeEnd);
02222
02223         // Create the TimePeriodKey and link it to the DatePeriod object.
02224         TimePeriod& lSINBKKFareTimePeriod =
02225             FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
02226         FacBomManager::addToListAndMap (lSINPosChannel, lSINBKKFareTimePeriod);
02227         FacBomManager::linkWithParent (lSINPosChannel, lSINBKKFareTimePeriod);
02228
02229         // Generate the FareRule
02230         const FareFeaturesKey lFareFeaturesKey (TRIP_TYPE_ONE_WAY,
02231                                                 NO_ADVANCE_PURCHASE,
02232                                                 SATURDAY_STAY,
02233                                                 CHANGE_FEES,
02234                                                 NON_REFUNDABLE,
02235                                                 NO_STAY_DURATION);
02236
02237         // Create the FareFeaturesKey and link it to the TimePeriod object.
02238         FareFeatures& lSINBKKFareFeatures =

```

```

02239     FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
02240     FacBomManager::addToListAndMap (lSINBKKFareTimePeriod, lSINBKKFareFeatures);
02241     FacBomManager::linkWithParent (lSINBKKFareTimePeriod, lSINBKKFareFeatures);

02242
02243     // Generate Segment Features and link them to their FareRule.
02244     AirlineCodeList_T lSQAirlineCodeList;
02245     lSQAirlineCodeList.push_back ("SQ");
02246
02247     ClassList_StringList_T lYClassCodeList;
02248     lYClassCodeList.push_back ("Y");
02249     const AirlineClassListKey lSQAirlineYClassListKey (lSQAirlineCodeList,
02250                                                         lYClassCodeList);
02251
02252     ClassList_StringList_T lMClassCodeList;
02253     lMClassCodeList.push_back ("M");
02254     const AirlineClassListKey lSQAirlineMClassListKey (lSQAirlineCodeList,
02255                                                         lMClassCodeList);
02256
02257     // Create the AirlineClassListKey and link it to the FareFeatures object.
02258     AirlineClassList& lSQAirlineYClassList =
02259         FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
02260     lSQAirlineYClassList.setFare(700);
02261     FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineYClassList);
02262     FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineYClassList);
02263
02264     AirlineClassList& lSQAirlineMClassList =
02265         FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
02266     lSQAirlineMClassList.setFare(500);
02267     FacBomManager::addToListAndMap (lSINBKKFareFeatures, lSQAirlineMClassList);
02268     FacBomManager::linkWithParent (lSINBKKFareFeatures, lSQAirlineMClassList);
02269
02270     /*=====
02271     // Second airport pair BKK-HKG.
02272     // Set the airport-pair primary key.
02273     lAirportPairKey = AirportPairKey ("BKK", "HKG");
02274
02275     // Create the AirportPairKey object and link it to the ioBomRoot object.
02276     AirportPair& lBKKHKGAirportPair =
02277         FacBom<AirportPair>::instance().create (lAirportPairKey);
02278     FacBomManager::addToListAndMap (ioBomRoot, lBKKHKGAirportPair);
02279     FacBomManager::linkWithParent (ioBomRoot, lBKKHKGAirportPair);
02280
02281     // Set the fare date-period primary key.
02282     // Use the same as previously.
02283
02284     // Create the DatePeriodKey object and link it to the PosChannel object.
02285     DatePeriod& lBKKHKGDatePeriod =
02286         FacBom<DatePeriod>::instance().create (lDatePeriodKey);
02287     FacBomManager::addToListAndMap (lBKKHKGAirportPair, lBKKHKGDatePeriod);
02288     FacBomManager::linkWithParent (lBKKHKGAirportPair, lBKKHKGDatePeriod);
02289
02290     // Set the point-of-sale-channel primary key.
02291     lPosChannelKey = PosChannelKey("BKK","IN");
02292
02293     // Create the PositionKey object and link it to the AirportPair object.
02294     PosChannel& lBKKPosChannel =
02295         FacBom<PosChannel>::instance().create (lPosChannelKey);
02296     FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lBKKPosChannel);
02297     FacBomManager::linkWithParent (lBKKHKGDatePeriod, lBKKPosChannel);
02298

```

```

02299 // Set the fare time-period primary key.
02300 // Use the same as previously.
02301
02302 // Create the TimePeriodKey and link it to the DatePeriod object.
02303 TimePeriod& lBKKHKGFAreTimePeriod =
02304     FacBom<TimePeriod>::instance().create (lFareTimePeriodKey);
02305 FacBomManager::addToListAndMap (lBKKPosChannel, lBKKHKGFAreTimePeriod);
02306 FacBomManager::linkWithParent (lBKKPosChannel, lBKKHKGFAreTimePeriod);
02307
02308 // Generate the FareRule
02309 // Use the same key as previously.
02310
02311 // Create the FareFeaturesKey and link it to the TimePeriod object.
02312 FareFeatures& lBKKHKGFAreFeatures =
02313     FacBom<FareFeatures>::instance().create (lFareFeaturesKey);
02314 FacBomManager::addToListAndMap (lBKKHKGFAreTimePeriod, lBKKHKGFAreFeatures);
02315 FacBomManager::linkWithParent (lBKKHKGFAreTimePeriod, lBKKHKGFAreFeatures);
02316
02317 // Generate Segment Features and link them to their FareRule.
02318 AirlineCodeList_T lCXAirlineCodeList;
02319 lCXAirlineCodeList.push_back ("CX");
02320
02321 const AirlineClassListKey lCXAirlineYClassListKey (lCXAirlineCodeList,
02322                                                     lYClassCodeList);
02323
02324 const AirlineClassListKey lCXAirlineMClassListKey (lCXAirlineCodeList,
02325                                                     lMClassCodeList);
02326
02327 // Create the AirlineClassListKey and link it to the FareFeatures object.
02328 AirlineClassList& lCXAirlineYClassList =
02329     FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
02330 lCXAirlineYClassList.setFare(700);
02331 FacBomManager::addToListAndMap (lBKKHKGFAreFeatures, lCXAirlineYClassList);
02332 FacBomManager::linkWithParent (lBKKHKGFAreFeatures, lCXAirlineYClassList);
02333
02334 AirlineClassList& lCXAirlineMClassList =
02335     FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
02336 lCXAirlineMClassList.setFare(500);
02337 FacBomManager::addToListAndMap (lBKKHKGFAreFeatures, lCXAirlineMClassList);
02338 FacBomManager::linkWithParent (lBKKHKGFAreFeatures, lCXAirlineMClassList);
02339
02340 /*=====*/
02341 // Third airport pair SIN-HKG.
02342 // Set the airport-pair primary key.
02343 lAirportPairKey = AirportPairKey ("SIN", "HKG");
02344
02345 // Create the AirportPairKey object and link it to the ioBomRoot object.
02346 AirportPair& lSINHKGAirportPair =
02347     FacBom<AirportPair>::instance().create (lAirportPairKey);
02348 FacBomManager::addToListAndMap (ioBomRoot, lSINHKGAirportPair);
02349 FacBomManager::linkWithParent (ioBomRoot, lSINHKGAirportPair);
02350
02351 // Set the fare date-period primary key.
02352 // Use the same as previously.
02353
02354 // Create the DatePeriodKey object and link it to the PosChannel object.
02355 DatePeriod& lSINHKGDatePeriod =
02356     FacBom<DatePeriod>::instance().create (lDatePeriodKey);
02357 FacBomManager::addToListAndMap (lSINHKGAirportPair, lSINHKGDatePeriod);

```

```

02358     FacBomManager::linkWithParent (lSINHKGAirportPair, lSINHKGDatePeriod);
02359
02360     // Set the point-of-sale-channel primary key.
02361     lPosChannelKey = PosChannelKey("SIN","IN");
02362
02363     // Create the PositionKey object and link it to the AirportPair object.
02364     PosChannel& lOnDSINPosChannel =
02365         FacBom<PosChannel>::instance().create (lPosChannelKey);
02366     FacBomManager::addToListAndMap (lSINHKGDatePeriod, lOnDSINPosChannel);
02367     FacBomManager::linkWithParent (lSINHKGDatePeriod, lOnDSINPosChannel);
02368
02369     // Set the fare time-period primary key.
02370     // Use the same as previously.
02371
02372     // Create the TimePeriodKey and link it to the DatePeriod object.
02373     TimePeriod& lSINHKGFAreTimePeriod =
02374         FacBom<TimePeriod>::instance().create (lFAreTimePeriodKey);
02375     FacBomManager::addToListAndMap (lOnDSINPosChannel, lSINHKGFAreTimePeriod);
02376     FacBomManager::linkWithParent (lOnDSINPosChannel, lSINHKGFAreTimePeriod);
02377
02378     // Generate the FareRule
02379     // Use the same key as previously.
02380
02381     // Create the FareFeaturesKey and link it to the TimePeriod object.
02382     FareFeatures& lSINHKGFAreFeatures =
02383         FacBom<FareFeatures>::instance().create (lFAreFeaturesKey);
02384     FacBomManager::addToListAndMap (lSINHKGFAreTimePeriod, lSINHKGFAreFeatures);
02385     FacBomManager::linkWithParent (lSINHKGFAreTimePeriod, lSINHKGFAreFeatures);
02386
02387     // Generate Segment Features and link them to their FareRule.
02388     AirlineCodeList_T lSQ_CXAirlineCodeList;
02389     lSQ_CXAirlineCodeList.push_back ("SQ");
02390     lSQ_CXAirlineCodeList.push_back ("CX");
02391
02392     ClassList_StringList_T lY_YClassCodeList;
02393     lY_YClassCodeList.push_back ("Y");
02394     lY_YClassCodeList.push_back ("Y");
02395     const AirlineClassListKey lSQ_CXAirlineYClassListKey (lSQ_CXAirlineCodeList,
02396                                                         lY_YClassCodeList);
02397
02398     ClassList_StringList_T lM_MClassCodeList;
02399     lM_MClassCodeList.push_back ("M");
02400     lM_MClassCodeList.push_back ("M");
02401     const AirlineClassListKey lSQ_CXAirlineMClassListKey (lSQ_CXAirlineCodeList,
02402                                                         lM_MClassCodeList);
02403
02404     // Create the AirlineClassListKey and link it to the FareFeatures object.
02405     AirlineClassList& lSQ_CXAirlineYClassList =
02406         FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
02407     lSQ_CXAirlineYClassList.setFare(1200);
02408     FacBomManager::addToListAndMap (lSINHKGFAreFeatures, lSQ_CXAirlineYClassList)
02409 ;
02409     FacBomManager::linkWithParent (lSINHKGFAreFeatures, lSQ_CXAirlineYClassList);
02410
02411     AirlineClassList& lSQ_CXAirlineMClassList =
02412         FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
02413     lSQ_CXAirlineMClassList.setFare(850);
02414     FacBomManager::addToListAndMap (lSINHKGFAreFeatures, lSQ_CXAirlineMClassList)
02415 ;

```



```

02415     FacBomManager::linkWithParent (lSINHKGFAreFeatures, lSQ_CXAirlineMClassList);

02416
02417
02418
02419
02420     /*=====
=====*/
02421
02422     // Use the same airport pair, and date period for adding SQ SIN-BKK yields.
02423
02424     // Set the point-of-sale-channel primary key.
02425     lPosChannelKey = PosChannelKey(DEFAULT_POS, DEFAULT_CHANNEL);
02426
02427     // Create the PositionKey object and link it to the AirportPair object.
02428     PosChannel& lRAC_SINBKKPosChannel =
02429         FacBom<PosChannel>::instance().create (lPosChannelKey);
02430     FacBomManager::addToListAndMap (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);
02431     FacBomManager::linkWithParent (lSINBKKDatePeriod, lRAC_SINBKKPosChannel);
02432
02433     // Set the yield time-period primary key.
02434     const TimePeriodKey lYieldTimePeriodKey (lTimeRangeStart,
02435                                               lTimeRangeEnd);
02436
02437     // Create the TimePeriodKey and link it to the DatePeriod object.
02438     TimePeriod& lSINBKKYieldTimePeriod =
02439         FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
02440     FacBomManager::addToListAndMap (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod
);
02441     FacBomManager::linkWithParent (lRAC_SINBKKPosChannel, lSINBKKYieldTimePeriod
);
02442
02443     // Generate the YieldRule
02444     const YieldFeaturesKey lYieldFeaturesKey (TRIP_TYPE_ONE_WAY,
02445                                               CABIN_Y);
02446
02447     // Create the YieldFeaturesKey and link it to the TimePeriod object.
02448     YieldFeatures& lSINBKKYieldFeatures =
02449         FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
02450     FacBomManager::addToListAndMap (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures
);
02451     FacBomManager::linkWithParent (lSINBKKYieldTimePeriod, lSINBKKYieldFeatures);

02452
02453     // Generate Segment Features and link them to their YieldRule.
02454     // Use the same key as previously.
02455
02456     // Create the AirlineClassListKey and link it to the YieldFeatures object.
02457     AirlineClassList& lRAC_SQAirlineYClassList =
02458         FacBom<AirlineClassList>::instance().create (lSQAirlineYClassListKey);
02459     lRAC_SQAirlineYClassList.setYield(700);
02460     FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineYClassList
t);
02461     FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineYClassList
);
02462
02463     AirlineClassList& lRAC_SQAirlineMClassList =
02464         FacBom<AirlineClassList>::instance().create (lSQAirlineMClassListKey);
02465     lRAC_SQAirlineMClassList.setYield(500);
02466     FacBomManager::addToListAndMap (lSINBKKYieldFeatures, lRAC_SQAirlineMClassList
t);
02467     FacBomManager::linkWithParent (lSINBKKYieldFeatures, lRAC_SQAirlineMClassList
);

```

```

02468
02469      /*=====
=====*/
02470
02471      // Use the same airport pair, and date period for adding CX BKK-HKG yields.
02472
02473      // Set the point-of-sale-channel primary key.
02474      // Use the same as previously.
02475
02476      // Create the PositionKey object and link it to the AirportPair object.
02477      PosChannel& lRAC_BKKHKGPosChannel =
02478          FacBom<PosChannel>::instance().create (lPosChannelKey);
02479      FacBomManager::addToListAndMap (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);
02480      FacBomManager::linkWithParent (lBKKHKGDatePeriod, lRAC_BKKHKGPosChannel);
02481
02482      // Set the yield time-period primary key.
02483      // Use the same as previously.
02484
02485      // Create the TimePeriodKey and link it to the DatePeriod object.
02486      TimePeriod& lBKKHKGYieldTimePeriod =
02487          FacBom<TimePeriod>::instance().create (lYieldTimePeriodKey);
02488      FacBomManager::addToListAndMap (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod
);
02489      FacBomManager::linkWithParent (lRAC_BKKHKGPosChannel, lBKKHKGYieldTimePeriod
);
02490
02491      // Generate the YieldRule
02492      // Use the same key as previously.
02493
02494      // Create the YieldFeaturesKey and link it to the TimePeriod object.
02495      YieldFeatures& lBKKHKGYieldFeatures =
02496          FacBom<YieldFeatures>::instance().create (lYieldFeaturesKey);
02497      FacBomManager::addToListAndMap (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures)
;
02498      FacBomManager::linkWithParent (lBKKHKGYieldTimePeriod, lBKKHKGYieldFeatures);
02499
02500      // Generate Segment Features and link them to their YieldRule.
02501      // Use the same key as previously.
02502
02503      // Create the AirlineClassListKey and link it to the YieldFeatures object.
02504      AirlineClassList& lRAC_CXAirlineYClassList =
02505          FacBom<AirlineClassList>::instance().create (lCXAirlineYClassListKey);
02506      lRAC_CXAirlineYClassList.setYield(700);
02507      FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassList
t);
02508      FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineYClassList
);
02509
02510      AirlineClassList& lRAC_CXAirlineMClassList =
02511          FacBom<AirlineClassList>::instance().create (lCXAirlineMClassListKey);
02512      lRAC_CXAirlineMClassList.setYield(500);
02513      FacBomManager::addToListAndMap (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassList
t);
02514      FacBomManager::linkWithParent (lBKKHKGYieldFeatures, lRAC_CXAirlineMClassList
);
02515
02516      /*=====
=====*/
02517
02518      // Use the same airport pair, and date period for SQ-CX SIN-HKG
02519

```

```

02520     // Set the point-of-sale-channel primary key.
02521     // Use the same as previously.
02522
02523     // Create the PositionKey object and link it to the AirportPair object.
02524     PosChannel& lRAC_SINHKGChannel =
02525         FacBom<PosChannel>::instance().create (lPosChannelKey);
02526     FacBomManager::addToListAndMap (lSINHKGDatePeriod, lRAC_SINHKGChannel);
02527     FacBomManager::linkWithParent (lSINHKGDatePeriod, lRAC_SINHKGChannel);
02528
02529     // Set the yield time-period primary key.
02530     // Use the same as previously.
02531
02532     // Create the TimePeriodKey and link it to the DatePeriod object.
02533     TimePeriod& lSINHKGYieldTimePeriod =
02534         FacBom<TimePeriod>::instance().create (lyieldTimePeriodKey);
02535     FacBomManager::addToListAndMap (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);
02536     FacBomManager::linkWithParent (lRAC_SINHKGChannel, lSINHKGYieldTimePeriod);
02537
02538     // Generate the YieldRule
02539     // Use the same key as previously.
02540
02541     // Create the YieldFeaturesKey and link it to the TimePeriod object.
02542     YieldFeatures& lSINHKGYieldFeatures =
02543         FacBom<YieldFeatures>::instance().create (lyieldFeaturesKey);
02544     FacBomManager::addToListAndMap (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures)
02545     ;
02546     FacBomManager::linkWithParent (lSINHKGYieldTimePeriod, lSINHKGYieldFeatures);
02547
02548     // Generate Segment Features and link them to their YieldRule.
02549     // Use the same key as previously
02550
02551     // Create the AirlineClassListKey and link it to the YieldFeatures object.
02552     AirlineClassList& lRAC_SQ_CXAirlineYClassList =
02553         FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineYClassListKey);
02554     lRAC_SQ_CXAirlineYClassList.setYield(1200);
02555     FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClass
02556     List);
02557     FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineYClassL
02558     ist);
02559
02560     AirlineClassList& lRAC_SQ_CXAirlineMClassList =
02561         FacBom<AirlineClassList>::instance().create (lSQ_CXAirlineMClassListKey);
02562     lRAC_SQ_CXAirlineMClassList.setYield(850);
02563     FacBomManager::addToListAndMap (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClass
02564     List);
02565     FacBomManager::linkWithParent (lSINHKGYieldFeatures, lRAC_SQ_CXAirlineMClassL
02566     ist);
02567 }
02568 }
02569 }
02570 }

```

### 35.469 stdair/command/CmdBomManager.hpp File Reference

```

#include <iosfwd>

#include <stdair/stdair_inventory_types.hpp>

```

```
#include <stdair/basic/SampleType.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/command/CmdAbstract.hpp>
```

#### Classes

- class [stdair::CmdBomManager](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.470 CmdBomManager.hpp

```
00001 #ifndef __STDAIR_CMD_CMDBOMMANAGER_HPP
00002 #define __STDAIR_CMD_CMDBOMMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/basic/SampleType.hpp>
00012 #include <stdair/bom/TravelSolutionTypes.hpp>
00013 #include <stdair/command/CmdAbstract.hpp>
00014
00015 namespace stdair {
00016
00017     class BomRoot;
00018     struct BookingRequestStruct;
00019
00020     class CmdBomManager : public CmdAbstract {
00021     //
00022     friend class STDAIR_Service;
00023     private:
00024
00025         // ////////////////////////////////// BOM initialisation support methods //////////////////////////////////
00026         static void buildSampleBom (BomRoot&);
00027
00028         static void buildSampleInventorySchedule (BomRoot&);
00029
00030         static void buildCompleteDummyInventory (BomRoot&);
00031
00032         static void buildDummyInventory (BomRoot&, const CabinCapacity_T&);
00033
00034         static void buildSamplePricing (BomRoot&);
00035
00036         static void buildSampleTravelSolutionForPricing (TravelSolutionList_T&);
00037
00038         static void buildSampleTravelSolutions (TravelSolutionList_T&);
00039
00040     };
00041 }
```

```
00152     static BookingRequestStruct buildSampleBookingRequest ();
00153
00170     static BookingRequestStruct buildSampleBookingRequestForCRS ();
00171
00182     static void buildPartnershipsSampleInventoryAndRM (BomRoot&);
00183
00191     static void buildPartnershipsSamplePricing (BomRoot&);
00192
00193 };
00194 }
00195 #endif // __STDAIR_CMD_CMDBOMMANAGER_HPP
```

### 35.471 stdair/command/CmdBomSerialiser.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <boost/archive/text_iarchive.hpp>
#include <boost/archive/text_oarchive.hpp>
#include <boost/serialization/list.hpp>
#include <boost/serialization/map.hpp>
#include <boost/serialization/access.hpp>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/basic/BasConst_Inventory.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/Inventory.hpp>
#include <stdair/bom/FlightDate.hpp>
#include <stdair/bom/SegmentDate.hpp>
#include <stdair/bom/SegmentCabin.hpp>
#include <stdair/bom/FareFamily.hpp>
#include <stdair/bom/LegDate.hpp>
#include <stdair/bom/LegCabin.hpp>
#include <stdair/bom/Bucket.hpp>
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/factory/FacBom.hpp>
#include <stdair/command/CmdBomSerialiser.hpp>
#include <stdair/service/Logger.hpp>
```

#### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## Functions

- template<class Archive , class BOM\_OBJECT1 , class BOM\_OBJECT2 >  
void `stdair::serialiseHelper` (BOM\_OBJECT1 &ioObject1, Archive &ioArchive, const unsigned int iFileVersion)
- template void `stdair::BomRoot::serialize`< `ba::text_oarchive` > (`ba::text_oarchive` &, unsigned int)
- template void `stdair::BomRoot::serialize`< `ba::text_iarchive` > (`ba::text_iarchive` &, unsigned int)
- template void `stdair::Inventory::serialize`< `ba::text_oarchive` > (`ba::text_oarchive` &, unsigned int)
- template void `stdair::Inventory::serialize`< `ba::text_iarchive` > (`ba::text_iarchive` &, unsigned int)
- template void `stdair::FlightDate::serialize`< `ba::text_oarchive` > (`ba::text_oarchive` &, unsigned int)
- template void `stdair::FlightDate::serialize`< `ba::text_iarchive` > (`ba::text_iarchive` &, unsigned int)
- template void `stdair::SegmentDate::serialize`< `ba::text_oarchive` > (`ba::text_oarchive` &, unsigned int)
- template void `stdair::SegmentDate::serialize`< `ba::text_iarchive` > (`ba::text_iarchive` &, unsigned int)
- template void `stdair::SegmentCabin::serialize`< `ba::text_oarchive` > (`ba::text_oarchive` &, unsigned int)
- template void `stdair::SegmentCabin::serialize`< `ba::text_iarchive` > (`ba::text_iarchive` &, unsigned int)

## 35.472 CmdBomSerialiser.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 // Boost.Serialization
00008 #include <boost/archive/text_iarchive.hpp>
00009 #include <boost/archive/text_oarchive.hpp>
00010 #include <boost/serialization/list.hpp>
00011 #include <boost/serialization/map.hpp>
00012 #include <boost/serialization/access.hpp>
00013 // StdAir
00014 #include <stdair/basic/BasConst_General.hpp>
00015 #include <stdair/basic/BasConst_Inventory.hpp>
00016 #include <stdair/bom/BomRoot.hpp>
00017 #include <stdair/bom/Inventory.hpp>
00018 #include <stdair/bom/FlightDate.hpp>
00019 #include <stdair/bom/SegmentDate.hpp>
00020 #include <stdair/bom/SegmentCabin.hpp>
00021 #include <stdair/bom/FareFamily.hpp>
00022 #include <stdair/bom/LegDate.hpp>

```

```

00023 #include <stdair/bom/LegCabin.hpp>
00024 #include <stdair/bom/Bucket.hpp>
00025 #include <stdair/factory/FacBomManager.hpp>
00026 #include <stdair/factory/FacBom.hpp>
00027 #include <stdair/command/CmdBomSerialiser.hpp>
00028 #include <stdair/service/Logger.hpp>
00029
00030 namespace stdair {
00031
00032 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00033 template <class Archive, class BOM_OBJECT1, class BOM_OBJECT2>
00034 void serialiseHelper (BOM_OBJECT1& ioObject1, Archive& ioArchive,
00035                     const unsigned int iFileVersion) {
00036
00050     BomHolder<BOM_OBJECT2>* lBomHolder_ptr =
00051         FacBomManager::getBomHolderPtr<BOM_OBJECT2> (ioObject1);
00052
00053     if (lBomHolder_ptr == NULL) {
00054         lBomHolder_ptr = &FacBomManager::addBomHolder<BOM_OBJECT2> (ioObject1);
00055     }
00056     assert (lBomHolder_ptr != NULL);
00057
00061     //ioArchive.register_type (static_cast<Inventory*> (NULL));
00062     ioArchive & lBomHolder_ptr->_bomList;
00063     ioArchive & lBomHolder_ptr->_bomMap;
00064
00071     typedef typename BomHolder<BOM_OBJECT2>::BomList_T BomList_T;
00072     const BomList_T& lBomList = lBomHolder_ptr->_bomList;
00073     for (typename BomList_T::const_iterator itObject = lBomList.begin();
00074          itObject != lBomList.end(); ++itObject) {
00075         BOM_OBJECT2* lObject2_ptr = *itObject;
00076         assert (lObject2_ptr != NULL);
00077
00078         if (lObject2_ptr->getParent() == NULL) {
00084             FacBomManager::linkWithParent (ioObject1, *lObject2_ptr);
00085         }
00086     }
00087
00096     typedef typename BomHolder<BOM_OBJECT2>::BomMap_T BomMap_T;
00097     const BomMap_T& lBomMap = lBomHolder_ptr->_bomMap;
00098     if (lBomList.empty() == true && lBomMap.empty() == false) {
00099
00100         for (typename BomMap_T::const_iterator itObject = lBomMap.begin();
00101              itObject != lBomMap.end(); ++itObject) {
00102             BOM_OBJECT2* lObject2_ptr = itObject->second;
00103             assert (lObject2_ptr != NULL);
00104
00105             if (lObject2_ptr->getParent() == NULL) {
00111                 FacBomManager::linkWithParent (ioObject1, *lObject2_ptr);
00112             }
00113         }
00114     }
00115 }
00116
00117 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00118 void BomRoot::serialisationImplementationExport() const {
00119     std::ostringstream oStr;
00120     boost::archive::text_oarchive oa (oStr);
00121     oa << *this;
00122 }
00123
00124 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////

```

```

00125 void BomRoot::serialisationImplementationImport() {
00126     std::istream iStr;
00127     boost::archive::text_iarchive ia (iStr);
00128     ia >> *this;
00129 }
00130
00131 // //////////////////////////////////////
00132 template<class Archive>
00133 void BomRoot::serialize (Archive& ioArchive,
00134                          const unsigned int iFileVersion) {
00135     // Serialise the key (by default, equal to " -- ROOT -- ")
00136     ioArchive & _key;
00137
00138     // Serialise the children of the BomRoot object, i.e., the
00139     // Inventory children
00140     stdair::serialiseHelper<Archive, BomRoot, Inventory> (*this, ioArchive,
00141                                                         iFileVersion);
00142 }
00143
00144 // //////////////////////////////////////
00145 void Inventory::serialisationImplementationExport() const {
00146     std::ostream oStr;
00147     boost::archive::text_oarchive oa (oStr);
00148     oa << *this;
00149 }
00150
00151 // //////////////////////////////////////
00152 void Inventory::serialisationImplementationImport() {
00153     std::istream iStr;
00154     boost::archive::text_iarchive ia (iStr);
00155     ia >> *this;
00156 }
00157
00158 // //////////////////////////////////////
00159 template<class Archive>
00160 void Inventory::serialize (Archive& ioArchive,
00161                           const unsigned int iFileVersion) {
00162     // Serialise the key (airline code)
00163     ioArchive & _key;
00164
00165     // Serialise the children of the Inventory object, i.e., the
00166     // FlightDate children
00167     stdair::serialiseHelper<Archive, Inventory, FlightDate> (*this, ioArchive,
00168                                                             iFileVersion);
00169 }
00170
00171 // //////////////////////////////////////
00172 void FlightDate::serialisationImplementationExport() const {
00173     std::ostream oStr;
00174     boost::archive::text_oarchive oa (oStr);
00175     oa << *this;
00176 }
00177
00178 // //////////////////////////////////////
00179 void FlightDate::serialisationImplementationImport() {
00180     std::istream iStr;
00181     boost::archive::text_iarchive ia (iStr);
00182     ia >> *this;
00183 }
00184
00185 // //////////////////////////////////////
00186 template<class Archive>

```



```

00187 void FlightDate::serialize (Archive& ioArchive,
00188                             const unsigned int iFileVersion) {
00189     ioArchive & _key;
00190 }
00191
00192 // //////////////////////////////////////
00193 void SegmentDate::serialisationImplementationExport() const {
00194     std::ostringstream oStr;
00195     boost::archive::text_oarchive oa (oStr);
00196     oa << *this;
00197 }
00198
00199 // //////////////////////////////////////
00200 void SegmentDate::serialisationImplementationImport() {
00201     std::istringstream iStr;
00202     boost::archive::text_iarchive ia (iStr);
00203     ia >> *this;
00204 }
00205
00206 // //////////////////////////////////////
00207 template<class Archive>
00208 void SegmentDate::serialize (Archive& ioArchive,
00209                             const unsigned int iFileVersion) {
00210     ioArchive & _key;
00211 }
00212
00213 // //////////////////////////////////////
00214 void SegmentCabin::serialisationImplementationExport() const {
00215     std::ostringstream oStr;
00216     boost::archive::text_oarchive oa (oStr);
00217     oa << *this;
00218 }
00219
00220 // //////////////////////////////////////
00221 void SegmentCabin::serialisationImplementationImport() {
00222     std::istringstream iStr;
00223     boost::archive::text_iarchive ia (iStr);
00224     ia >> *this;
00225 }
00226
00227 // //////////////////////////////////////
00228 template<class Archive>
00229 void SegmentCabin::serialize (Archive& ioArchive,
00230                             const unsigned int iFileVersion) {
00231     ioArchive & _key;
00232 }
00233
00234 // //////////////////////////////////////
00235 // Explicit template instantiations
00236 namespace ba = boost::archive;
00237 template void BomRoot::serialize<ba::text_oarchive> (ba::text_oarchive&,
00238                                                     unsigned int);
00239 template void BomRoot::serialize<ba::text_iarchive> (ba::text_iarchive&,
00240                                                     unsigned int);
00241 template void Inventory::serialize<ba::text_oarchive> (ba::text_oarchive&,
00242                                                       unsigned int);
00243 template void Inventory::serialize<ba::text_iarchive> (ba::text_iarchive&,
00244                                                       unsigned int);
00245 template void FlightDate::serialize<ba::text_oarchive> (ba::text_oarchive&,
00246                                                         unsigned int);
00247 template void FlightDate::serialize<ba::text_iarchive> (ba::text_iarchive&,
00248                                                         unsigned int);

```

```

00249     template void SegmentDate::serialize<ba::text_oarchive> (ba::text_oarchive&,
00250                                                              unsigned int);
00251     template void SegmentDate::serialize<ba::text_iarchive> (ba::text_iarchive&,
00252                                                              unsigned int);
00253     template void SegmentCabin::serialize<ba::text_oarchive> (ba::text_oarchive&,
00254                                                              unsigned int);
00255     template void SegmentCabin::serialize<ba::text_iarchive> (ba::text_iarchive&,
00256                                                              unsigned int);
00257     // //////////////////////////////////////
00258
00259 }
```

### 35.473 stdair/command/CmdBomSerialiser.hpp File Reference

```

#include <iosfwd>

#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <stdair/command/CmdAbstract.hpp>
```

#### Classes

- class [stdair::CmdBomSerialiser](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.474 CmdBomSerialiser.hpp

```

00001 #ifndef __STDAIR_CMD_CMDBOMSERIALISER_HPP
00002 #define __STDAIR_CMD_CMDBOMSERIALISER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 // StdAir
00010 #include <stdair/stdair_inventory_types.hpp>
00011 #include <stdair/bom/TravelSolutionTypes.hpp>
00012 #include <stdair/command/CmdAbstract.hpp>
00013
00014 namespace stdair {
00015
00017     class BomRoot;
00018     struct BookingRequestStruct;
00019
00020
00025     class CmdBomSerialiser : public CmdAbstract {
00026     public:
```

```

00027
00028     // ////////////////////////////////// BOM serialisation support methods //////////////////////////////////
00029     //
00030 };
00031 }
00032 #endif // __STDAIR_CMD_CMDBOMSERIALISER_HPP

```

### 35.475 stdair/command/DBManagerForAirlines.cpp File Reference

```

#include <cassert>
#include <soci.h>
#include <mysql/soci-mysql.h>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/bom/AirlineStruct.hpp>
#include <stdair/dbadaptor/DbAirline.hpp>
#include <stdair/command/DBManagerForAirlines.hpp>
#include <stdair/service/Logger.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

### 35.476 DBManagerForAirlines.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // SOCI
00007 #if defined(SOCI_HEADERS_BURIED)
00008 #include <soci/core/soci.h>
00009 #include <soci/backends/mysql/soci-mysql.h>
00010 #else // SOCI_HEADERS_BURIED
00011 #include <soci.h>
00012 #include <mysql/soci-mysql.h>
00013 #endif // SOCI_HEADERS_BURIED
00014 // StdAir
00015 #include <stdair/stdair_basic_types.hpp>
00016 #include <stdair/stdair_exceptions.hpp>
00017 #include <stdair/bom/AirlineStruct.hpp>
00018 #include <stdair/dbadaptor/DbAirline.hpp>
00019 #include <stdair/command/DBManagerForAirlines.hpp>
00020 #include <stdair/service/Logger.hpp>
00021
00022 namespace stdair {
00023

```

```

00024 // //////////////////////////////////////
00025 void DBManagerForAirlines::
00026 prepareSelectStatement (DBSession_T& ioSociSession,
00027                         DBRequestStatement_T& ioSelectStatement,
00028                         AirlineStruct& ioAirline) {
00029
00030     try {
00031
00032         // Instantiate a SQL statement (no request is performed at that stage)
00033         ioSelectStatement = (ioSociSession.prepare
00034                             << "select iata_code, name "
00040                             << "from airlines ", soci::into (ioAirline));
00041
00042         // Execute the SQL query
00043         ioSelectStatement.execute();
00044
00045     } catch (std::exception const& lException) {
00046         throw SQLDatabaseException (lException.what());
00047     }
00048 }
00049
00050 // //////////////////////////////////////
00051 void DBManagerForAirlines::
00052 prepareSelectOnAirlineCodeStatement (DBSession_T& ioSociSession,
00053                                     DBRequestStatement_T& ioSelectStatement,
00054                                     const AirlineCode_T& iAirlineCode,
00055                                     AirlineStruct& ioAirline) {
00056
00057     try {
00058
00059         // Instantiate a SQL statement (no request is performed at that stage)
00060         ioSelectStatement = (ioSociSession.prepare
00061                             << "select iata_code, name "
00062                             << "from airlines "
00063                             << "where iata_code = :airline_code ",
00064                             soci::into (ioAirline), soci::use (iAirlineCode));
00065
00066         // Execute the SQL query
00067         ioSelectStatement.execute();
00068
00069     } catch (std::exception const& lException) {
00070         throw SQLDatabaseException (lException.what());
00071     }
00072 }
00073
00074 // //////////////////////////////////////
00075 bool DBManagerForAirlines::
00076 iterateOnStatement (DBRequestStatement_T& ioStatement,
00077                    AirlineStruct& ioAirline) {
00078     bool hasStillData = false;
00079
00080     try {
00081
00082         // Retrieve the next row of Airline object
00083         hasStillData = ioStatement.fetch();
00084
00085     } catch (std::exception const& lException) {
00086         throw SQLDatabaseException (lException.what());
00087     }
00088
00089     return hasStillData;
00090 }

```

```

00097
00098 // //////////////////////////////////////
00099 void DBManagerForAirlines::updateAirlineInDB (DBSession_T& ioSociSession,
00100                                             const AirlineStruct& iAirline) {
00101     try {
00102         // Begin a transaction on the database
00103         ioSociSession.begin();
00104
00105         // Retrieve the airline code
00106         const std::string& lAirlineCode = iAirline.getAirlineCode();
00107
00108         // Retrieve the airline name
00109         const std::string& lAirlineName = iAirline.getAirlineName();
00110
00111         // Instanciate a SQL statement (no request is performed at that stage)
00112         DBRequestStatement_T lUpdateStatement =
00113             (ioSociSession.prepare
00114              << "update airlines "
00115              << "set name = :name "
00116              << "where iata_code = :iata_code",
00117              soci::use (lAirlineName), soci::use (lAirlineCode));
00118
00119         // Execute the SQL query
00120         lUpdateStatement.execute (true);
00121
00122         // Commit the transaction on the database
00123         ioSociSession.commit();
00124
00125         // Debug
00126         // STDAIR_LOG_DEBUG ("[" << lAirlineCode << "]" " << iAirline);
00127
00128     } catch (std::exception const& lException) {
00129         throw SQLDatabaseException (lException.what());
00130     }
00131 }
00132
00133 // //////////////////////////////////////
00134 bool DBManagerForAirlines::retrieveAirline (DBSession_T& ioSociSession,
00135                                             const AirlineCode_T& iAirlineCode,
00136                                             AirlineStruct& ioAirline) {
00137     bool oHasRetrievedAirline = false;
00138
00139     try {
00140         // Prepare the SQL request corresponding to the select statement
00141         DBRequestStatement_T lSelectStatement (ioSociSession);
00142         prepareSelectOnAirlineCodeStatement (ioSociSession, lSelectStatement,
00143                                             iAirlineCode, ioAirline);
00144
00145         // const bool shouldDoReset = true;
00146         bool hasStillData = iterateOnStatement (lSelectStatement, ioAirline);
00147         if (hasStillData == true) {
00148             oHasRetrievedAirline = true;
00149         }
00150
00151         // Sanity check
00152         // const bool shouldNotDoReset = false;
00153         hasStillData = iterateOnStatement (lSelectStatement, ioAirline);
00154
00155         // Debug
00156         // STDAIR_LOG_DEBUG ("[" << iDocID << "]" " << ioAirline);
00157
00158     } catch (std::exception const& lException) {

```

```

00159         throw SQLDatabaseException (lException.what());
00160     }
00161
00162     return oHasRetrievedAirline;
00163 }
00164
00165 }
```

## 35.477 stdair/command/DBManagerForAirlines.hpp File Reference

```
#include <stdair/stdair_db.hpp>
```

```
#include <stdair/command/CmdAbstract.hpp>
```

### Classes

- class [stdair::DBManagerForAirlines](#)

### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.478 DBManagerForAirlines.hpp

```

00001 #ifndef __DSIM_CMD_DBMANAGERFORAIRLINES_HPP
00002 #define __DSIM_CMD_DBMANAGERFORAIRLINES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_db.hpp>
00009 #include <stdair/command/CmdAbstract.hpp>
00010
00011 namespace stdair {
00012
00013     // Forward declarations
00014     struct AirlineStruct;
00015
00016     class DBManagerForAirlines : public CmdAbstract {
00017     public:
00024         static void updateAirlineInDB (DBSession_T&, const AirlineStruct&);
00025
00032         static bool retrieveAirline (DBSession_T&, const AirlineCode_T&,
00033                                     AirlineStruct&);
00034
00035
00036     public:
00041         static void prepareSelectStatement (DBSession_T&, DBRequestStatement_T&,
00042                                             AirlineStruct&);
00043
00048         static bool iterateOnStatement (DBRequestStatement_T&, AirlineStruct&);
00049 }
```

```

00050
00051     private:
00052         static void prepareSelectOnAirlineCodeStatement (DBSession_T&,
00053                                                         DBRequestStatement_T&,
00054                                                         const AirlineCode_T&,
00055                                                         AirlineStruct&);
00056
00057     private:
00058         // ////////////////////////////////// Constructors and Destructors //////////////////////////////////
00059         DBManagerForAirlines () {}
00060         DBManagerForAirlines (const DBManagerForAirlines&) {}
00061         ~DBManagerForAirlines () {}
00062     };
00063 }
00064 #endif // __DSIM_CMD_DBMANAGERFORAIRLINES_HPP

```

## 35.479 stdair/config/stdair-paths.hpp File Reference

### Defines

- #define [PACKAGE](#) "stdair"
- #define [PACKAGE\\_NAME](#) "STDAIR"
- #define [PACKAGE\\_VERSION](#) "0.45.0"
- #define [PREFIXDIR](#) "/usr"
- #define [EXEC\\_PREFIX](#) "/usr"
- #define [BINDIR](#) "/usr/bin"
- #define [LIBDIR](#) "/usr/lib64"
- #define [LIBEXECDIR](#) "/usr/libexec"
- #define [SBINDIR](#) "/usr/sbin"
- #define [SYSCONFDIR](#) "/usr/etc"
- #define [INCLUDEDIR](#) "/usr/include"
- #define [DATAROOTDIR](#) "/usr/share"
- #define [DATADIR](#) "/usr/share"
- #define [DOCDIR](#) "/usr/share/doc/stdair-0.45.0"
- #define [MANDIR](#) "/usr/share/man"
- #define [INFODIR](#) "/usr/share/info"
- #define [HTMLDIR](#) "/usr/share/doc/stdair-0.45.0/html"
- #define [PDFDIR](#) "/usr/share/doc/stdair-0.45.0/html"
- #define [STDAIR\\_SAMPLE\\_DIR](#) "/usr/share/stdair/samples"

### 35.479.1 Define Documentation

#### 35.479.1.1 #define [PACKAGE](#) "stdair"

Definition at line 4 of file [stdair-paths.hpp](#).

#### 35.479.1.2 #define [PACKAGE\\_NAME](#) "STDAIR"

Definition at line 5 of file [stdair-paths.hpp](#).

35.479.1.3 `#define PACKAGE_VERSION "0.45.0"`

Definition at line 6 of file [stdair-paths.hpp](#).

35.479.1.4 `#define PREFIXDIR "/usr"`

Definition at line 7 of file [stdair-paths.hpp](#).

35.479.1.5 `#define EXEC_PREFIX "/usr"`

Definition at line 8 of file [stdair-paths.hpp](#).

35.479.1.6 `#define BINDIR "/usr/bin"`

Definition at line 9 of file [stdair-paths.hpp](#).

35.479.1.7 `#define LIBDIR "/usr/lib64"`

Definition at line 10 of file [stdair-paths.hpp](#).

35.479.1.8 `#define LIBEXECDIR "/usr/libexec"`

Definition at line 11 of file [stdair-paths.hpp](#).

35.479.1.9 `#define SBINDIR "/usr/sbin"`

Definition at line 12 of file [stdair-paths.hpp](#).

35.479.1.10 `#define SYSCONFDIR "/usr/etc"`

Definition at line 13 of file [stdair-paths.hpp](#).

35.479.1.11 `#define INCLUDEDIR "/usr/include"`

Definition at line 14 of file [stdair-paths.hpp](#).

35.479.1.12 `#define DATAROOTDIR "/usr/share"`

Definition at line 15 of file [stdair-paths.hpp](#).

35.479.1.13 `#define DATADIR "/usr/share"`

Definition at line 16 of file [stdair-paths.hpp](#).

35.479.1.14 `#define DOCDIR "/usr/share/doc/stdair-0.45.0"`

Definition at line 17 of file [stdair-paths.hpp](#).

35.479.1.15 `#define MANDIR "/usr/share/man"`

Definition at line 18 of file [stdair-paths.hpp](#).



35.479.1.16 `#define INFODIR "/usr/share/info"`

Definition at line 19 of file [stdair-paths.hpp](#).

35.479.1.17 `#define HTMLDIR "/usr/share/doc/stdair-0.45.0/html"`

Definition at line 20 of file [stdair-paths.hpp](#).

35.479.1.18 `#define PDFDIR "/usr/share/doc/stdair-0.45.0/html"`

Definition at line 21 of file [stdair-paths.hpp](#).

35.479.1.19 `#define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"`

Definition at line 22 of file [stdair-paths.hpp](#).

## 35.480 stdair-paths.hpp

```
00001 #ifndef __STDAIR_PATHS_HPP__
00002 #define __STDAIR_PATHS_HPP__
00003
00004 #define PACKAGE "stdair"
00005 #define PACKAGE_NAME "STDAIR"
00006 #define PACKAGE_VERSION "0.45.0"
00007 #define PREFIXDIR "/usr"
00008 #define EXEC_PREFIX "/usr"
00009 #define BINDIR "/usr/bin"
00010 #define LIBDIR "/usr/lib64"
00011 #define LIBEXEC_DIR "/usr/libexec"
00012 #define SBINDIR "/usr/sbin"
00013 #define SYSCONFDIR "/usr/etc"
00014 #define INCLUDEDIR "/usr/include"
00015 #define DATAROOTDIR "/usr/share"
00016 #define DATADIR "/usr/share"
00017 #define DOCDIR "/usr/share/doc/stdair-0.45.0"
00018 #define MANDIR "/usr/share/man"
00019 #define INFODIR "/usr/share/info"
00020 #define HTMLDIR "/usr/share/doc/stdair-0.45.0/html"
00021 #define PDFDIR "/usr/share/doc/stdair-0.45.0/html"
00022 #define STDAIR_SAMPLE_DIR "/usr/share/stdair/samples"
00023
00024 #endif // __STDAIR_PATHS_HPP__
```

## 35.481 stdair/dbadaptor/DbAbstract.cpp File Reference

```
#include <stdair/dbadaptor/DbAbstract.hpp>
```

### Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## 35.482 DbAbstract.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/dbadaptor/DbAbstract.hpp>
00006
00007 namespace stdair {
00008
00009 }

```

## 35.483 stdair/dbadaptor/DbAbstract.hpp File Reference

```
#include <iosfwd>
```

## Classes

- class [stdair::DbAbstract](#)

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## Functions

- template<class charT , class traits >  
std::basic\_ostream< charT, traits > & [operator<<](#) (std::basic\_ostream< charT, traits > &ioOut, const [stdair::DbAbstract](#) &iDb)
- template<class charT , class traits >  
std::basic\_istream< charT, traits > & [operator>>](#) (std::basic\_istream< charT, traits > &ioln, [stdair::DbAbstract](#) &ioln)

## 35.483.1 Function Documentation

35.483.1.1 template<class charT , class traits > std::basic\_ostream<charT, traits>&  
operator<< ( std::basic\_ostream< charT, traits > & ioOut, const  
stdair::DbAbstract & iDb ) [inline]

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 41 of file [DbAbstract.hpp](#).

References [stdair::DbAbstract::toStream\(\)](#).

35.483.1.2 `template<class charT , class traits > std::basic_istream<charT, traits>&  
operator>> ( std::basic_istream< charT, traits > & ioIn, stdair::DbAbstrct &  
ioDbA ) [inline]`

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 69 of file [DbAbstrct.hpp](#).

References [stdair::DbAbstrct::fromStream\(\)](#).

### 35.484 DbAbstrct.hpp

```
00001 #ifndef __STDAIR_DBA_DBAABSTRACT_HPP
00002 #define __STDAIR_DBA_DBAABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009
00010 namespace stdair {
00011
00012     class DbAbstrct {
00013     public:
00014
00015         virtual ~DbAbstrct() {}
00016
00017         virtual void toStream (std::ostream& ioOut) const {}
00018
00019         virtual void fromStream (std::istream& ioIn) {}
00020
00021     protected:
00022         DbAbstrct() {}
00023     };
00024
00025 }
00026
00027 template <class charT, class traits>
00028 inline
00029 std::basic_ostream<charT, traits>&
00030 operator<< (std::basic_ostream<charT, traits>& ioOut,
00031             const stdair::DbAbstrct& iDbA) {
00032     std::basic_ostringstream<charT, traits> ostr;
00033     ostr.copyfmt (ioOut);
00034     ostr.width (0);
00035
00036     // Fill string stream
00037     iDbA.toStream (ostr);
00038
00039     // Print string stream
00040     ioOut << ostr.str();
00041
00042     return ioOut;
00043 }
00044
00045 template <class charT, class traits>
00046 inline
```

```

00068 std::basic_istream<charT, traits>&
00069 operator>> (std::basic_istream<charT, traits>& ioIn,
00070             stdair::DbairAbstract& ioDbair) {
00071     // Fill Dbair object with input stream
00072     ioDbair.fromStream (ioIn);
00073     return ioIn;
00074 }
00075
00076 #endif // __STDAIR_DBAIR_ABSTRACT_HPP

```

### 35.485 stdair/dbadaptor/Dbairline.cpp File Reference

```

#include <exception>
#include <string>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/bom/AirlineStruct.hpp>
#include <stdair/dbadaptor/Dbairline.hpp>
#include <stdair/service/Logger.hpp>

```

#### Namespaces

- namespace [soci](#)
- namespace [stdair](#)

*Handle on the StdAir library context.*

### 35.486 Dbairline.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <exception>
00006 #include <string>
00007 // Stdair
00008 #include <stdair/stdair_inventory_types.hpp>
00009 #include <stdair/bom/AirlineStruct.hpp>
00010 #include <stdair/dbadaptor/Dbairline.hpp>
00011 #include <stdair/service/Logger.hpp>
00012
00013 namespace soci {
00014
00015 // //////////////////////////////////////
00016 void type_conversion<stdair::AirlineStruct>::
00017 from_base (values const& iAirlineValues, indicator /* ind */,
00018           stdair::AirlineStruct& ioAirline) {
00019     /*
00020     iata_code, name
00021     */
00022     ioAirline.setAirlineCode (iAirlineValues.get<std::string> ("iata_code"));
00023     // The city code will be set to the default value (empty string)
00024     // when the column is null

```

```

00025     ioAirline.setAirlineName (iAirlineValues.get<std::string> ("name", ""));
00026 }
00027
00028 // //////////////////////////////////////
00029 void type_conversion<stdair::AirlineStruct>::
00030 to_base (const stdair::AirlineStruct& iAirline, values& ioAirlineValues,
00031         indicator& ioIndicator) {
00032     const indicator lNameIndicator =
00033         iAirline.getAirlineName().empty() ? i_null : i_ok;
00034     ioAirlineValues.set ("iata_code", iAirline.getAirlineCode());
00035     ioAirlineValues.set ("name", iAirline.getAirlineName(), lNameIndicator);
00036     ioIndicator = i_ok;
00037 }
00038
00039 }
00040
00041 namespace stdair {
00042
00043 }

```

### 35.487 stdair/dbadaptor/Dbairline.hpp File Reference

```
#include <soci/soci.h>
```

#### Classes

- struct [soci::type\\_conversion< stdair::AirlineStruct >](#)

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.
- namespace [soci](#)

### 35.488 Dbairline.hpp

```

00001 #ifndef __STDAIR_DBA_DBAAIRLINE_HPP
00002 #define __STDAIR_DBA_DBAAIRLINE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // SOCI
00008 #if defined(SOCI_HEADERS_BURIED)
00009 #include <soci/core/soci.h>
00010 #else // SOCI_HEADERS_BURIED
00011 #include <soci/soci.h>
00012 #endif // SOCI_HEADERS_BURIED
00013
00014 // Forward declarations
00015 namespace stdair {
00016     struct AirlineStruct;
00017 }
00018

```

```

00019 namespace soci {
00020
00024     template <>
00025     struct type_conversion<stdair::AirlineStruct> {
00026
00027         typedef values base_type;
00028
00030         static void from_base (values const& iAirlineValues,
00031                               indicator /* ind */,
00032                               stdair::AirlineStruct& ioAirline);
00033
00034
00036         static void to_base (const stdair::AirlineStruct& iAirline,
00037                              values& ioAirlineValues,
00038                              indicator& ioIndicator);
00039     };
00040 }
00041 #endif // __STDAIR_DBA_DBAAIRLINE_HPP

```

### 35.489 stdair/factory/FacAbstract.cpp File Reference

```

#include <cassert>
#include <stdair/bom/BomAbstract.hpp>
#include <stdair/factory/FacAbstract.hpp>

```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.490 FacAbstract.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // STDAIR
00007 #include <stdair/bom/BomAbstract.hpp>
00008 #include <stdair/factory/FacAbstract.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013 FacAbstract::~FacAbstract() {
00014 }
00015
00016 }

```

### 35.491 stdair/factory/FacAbstract.hpp File Reference

## Classes

- class [stdair::FacAbstract](#)

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.492 FacAbstract.hpp

```

00001 #ifndef __STDAIR_FAC_FACABSTRACT_HPP
00002 #define __STDAIR_FAC_FACABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007
00008 namespace stdair {
00010     class FacAbstract {
00011     public:
00013         virtual ~FacAbstract();
00014
00015     protected:
00018         FacAbstract() {}
00019     };
00020 }
00021 #endif // __STDAIR_FAC_FACABSTRACT_HPP

```

## 35.493 stdair/factory/FacBom.hpp File Reference

```

#include <cassert>
#include <string>
#include <list>
#include <stdair/factory/FacAbstract.hpp>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/Logger.hpp>

```

## Classes

- class [stdair::FacBom< BOM >](#)  
*Base class for Factory layer.*

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.494 FacBom.hpp

```

00001 #ifndef __STDAIR_FAC_FACBOM_HPP
00002 #define __STDAIR_FAC_FACBOM_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <cassert>
00009 #include <string>
00010 #include <list>
00011 // StdAir
00012 #include <stdair/factory/FacAbstract.hpp>
00013 #include <stdair/service/FacSupervisor.hpp>
00014 #include <stdair/service/Logger.hpp>
00015
00016 namespace stdair {
00017
00021     template <typename BOM>
00022     class FacBom : public FacAbstract {
00023
00025         typedef std::list<BOM*> BomPool_T;
00026         typedef typename BOM::Key_T Key_T;
00027
00028     public:
00029         // ////////////////////////////////// Business methods //////////////////////////////////
00030         static FacBom& instance();
00031
00032         BOM& create ();
00033         BOM& create (const Key_T&);
00034
00035     protected:
00036         FacBom() {}
00037
00038     public:
00039         ~FacBom() {
00040             clean();
00041         }
00042
00043         void clean();
00044
00045     private:
00046         // ////////////////////////////////// Attributes //////////////////////////////////
00047         static FacBom* _instance;
00048
00049         BomPool_T _pool;
00050     };
00051
00052 // //////////////////////////////////
00053 template <typename BOM> FacBom<BOM*> FacBom<BOM*>::_instance = NULL;
00054
00055 // //////////////////////////////////
00056 template <typename BOM> FacBom<BOM*>& FacBom<BOM*>::instance () {
00057     if (_instance == NULL) {
00058         _instance = new FacBom ();
00059         assert (_instance != NULL);
00060
00061         FacSupervisor::instance().registerBomFactory (_instance);
00062     }
00063 }

```



```

00089     }
00090     return *_instance;
00091 }
00092
00093 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00094 template <typename BOM> void FacBom<BOM>::clean () {
00095     // Destroy all the objects
00096     for (typename BomPool_T::iterator itBom = _pool.begin();
00097          itBom != _pool.end(); ++itBom) {
00098         BOM* currentBom_ptr = *itBom;
00099         assert (currentBom_ptr != NULL);
00100         delete currentBom_ptr; currentBom_ptr = NULL;
00101     }
00102
00103     // Empty the pool.
00104     _pool.clear();
00105
00106     // Reset the static instance.
00107     _instance = NULL;
00108 }
00109
00110 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00111 template <typename BOM> BOM& FacBom<BOM>::create () {
00112     Key_T lKey;
00113     return instance().create (lKey);
00114 }
00115
00116 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00117 template <typename BOM> BOM& FacBom<BOM>::create (const Key_T& iKey) {
00118     BOM* oBom_ptr = new BOM (iKey);
00119     assert (oBom_ptr != NULL);
00120     _pool.push_back (oBom_ptr);
00121     return *oBom_ptr;
00122 }
00123
00124 }
00125 #endif // __STDAIR_FAC_FACBOM_HPP

```

### 35.495 stdair/factory/FacBomManager.hpp File Reference

```

#include <iosfwd>

#include <list>

#include <map>

#include <boost/static_assert.hpp>

#include <boost/type_traits/is_same.hpp>

#include <stdair/bom/BomHolder.hpp>

#include <stdair/bom/BomManager.hpp>

#include <stdair/factory/FacAbstract.hpp>

#include <stdair/factory/FacBom.hpp>

#include <stdair/bom/SegmentDate.hpp>

```

## Classes

- class [stdair::FacBomManager](#)  
*Utility class for linking StdAir-based objects.*

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.496 FacBomManager.hpp

```

00001 #ifndef __STDAIR_FAC_FACBOMMANAGER_HPP
00002 #define __STDAIR_FAC_FACBOMMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <list>
00010 #include <map>
00011 // Boost
00012 #include <boost/static_assert.hpp>
00013 #include <boost/type_traits/is_same.hpp>
00014 // StdAir
00015 #include <stdair/bom/BomHolder.hpp>
00016 #include <stdair/bom/BomManager.hpp>
00017 #include <stdair/factory/FacAbstract.hpp>
00018 #include <stdair/factory/FacBom.hpp>
00019 // Stdair BOM Objects
00020 #include <stdair/bom/SegmentDate.hpp>
00021
00022
00023 namespace stdair {
00024
00028     class FacBomManager : public FacAbstract {
00029     public:
00030         // ////////////////////////////////// Business methods. //////////////////////////////////
00031         template <typename OBJECT2, typename OBJECT1>
00032         static BomHolder<OBJECT2>* getBomHolderPtr (OBJECT1&);
00041
00051         template <typename OBJECT2, typename OBJECT1>
00052         static BomHolder<OBJECT2>& addBomHolder (OBJECT1&);
00053
00065         template <typename OBJECT1, typename OBJECT2>
00066         static void addToList (OBJECT1&, OBJECT2&);
00067
00080         template <typename OBJECT1, typename OBJECT2>
00081         static void addToMap (OBJECT1&, OBJECT2&, const MapKey_T&);
00082
00094         template <typename OBJECT1, typename OBJECT2>
00095         static void addToMap (OBJECT1&, OBJECT2&);
00096
00108         template <typename OBJECT1, typename OBJECT2>
00109         static void addToListAndMap (OBJECT1&, OBJECT2&);
00110

```

```

00123     template <typename OBJECT1, typename OBJECT2>
00124     static void addToListAndMap (OBJECT1&, OBJECT2&, const MapKey_T&);
00125
00132     template <typename PARENT, typename CHILD>
00133     static void linkWithParent (PARENT&, CHILD&);
00134
00145     template <typename OBJECT2, typename OBJECT1>
00146     static void cloneHolder (OBJECT1&, const OBJECT1&);
00147
00148
00149 private:
00162     template <typename OBJECT1, typename OBJECT2>
00163     static void addToList (BomHolder<OBJECT2>&, OBJECT1&, OBJECT2&);
00164
00178     template <typename OBJECT1, typename OBJECT2>
00179     static void addToMap (BomHolder<OBJECT2>&, OBJECT1&, OBJECT2&,
00180                          const MapKey_T&);
00181
00190     template <typename OBJECT2, typename OBJECT1>
00191     static BomHolder<OBJECT2>& getBomHolder (OBJECT1&);
00192
00193
00194 protected:
00200     FacBomManager() { }
00201
00202 public:
00206     ~FacBomManager() { }
00207 };
00208
00209 // //////////////////////////////////////
00210 // Public business method.
00211 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00212 template <typename OBJECT2, typename OBJECT1>
00213 BomHolder<OBJECT2>& FacBomManager::addBomHolder (OBJECT1& ioObject1) {
00214
00215     //
00216     // Compile time assertion: this function must never be called with the
00217     // following list of couple types:
00218     // <SegmentDate, SegmentDate>
00219     //
00220     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00221                          || boost::is_same<OBJECT2, SegmentDate>::value == false
00222 ));
00223     BomHolder<OBJECT2>* lBomHolder_ptr =
00224         &FacBom<BomHolder<OBJECT2>> >::instance().create();
00225
00226     const bool hasInsertBeenSuccessful =
00227         ioObject1._holderMap.insert (typename HolderMap_T::
00228                                     value_type (&typeid (OBJECT2),
00229                                                  lBomHolder_ptr)).second;
00230     assert (hasInsertBeenSuccessful == true);
00231
00232     return *lBomHolder_ptr;
00233 }
00234
00235 // //////////////////////////////////////
00236 // Public business method.
00237 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00238 template <typename OBJECT2, typename OBJECT1>
00239 BomHolder<OBJECT2>* FacBomManager::getBomHolderPtr (OBJECT1& ioObject1) {
00240

```

```

00241     //
00242     // Compile time assertion: this function must never be called with the
00243     // following list of couple types:
00244     // <SegmentDate, SegmentDate>
00245     //
00246     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00247         || boost::is_same<OBJECT2, SegmentDate>::value == false
00248     ));
00249     BomHolder<OBJECT2>* lBomHolder_ptr = NULL;
00250
00251     // Find the corresponding BomHolder within the object1, if existing.
00252     HolderMap_T::const_iterator itHolder =
00253         ioObject1._holderMap.find (&typeid (OBJECT2));
00254
00255     if (itHolder != ioObject1._holderMap.end()) {
00256         lBomHolder_ptr = static_cast<BomHolder<OBJECT2>*> (itHolder->second);
00257     }
00258
00259     return lBomHolder_ptr;
00260 }
00261
00262 // //////////////////////////////////////
00263 // Private method.
00264 template <typename OBJECT2, typename OBJECT1>
00265 BomHolder<OBJECT2>& FacBomManager::getBomHolder (OBJECT1& ioObject1) {
00266     BomHolder<OBJECT2>* lBomHolder_ptr = NULL;
00267
00268     // Find the corresponding BomHolder within the object1. If it does
00269     // not exist, then create one.
00270     HolderMap_T::const_iterator itHolder =
00271         ioObject1._holderMap.find (&typeid (OBJECT2));
00272
00273     if (itHolder == ioObject1._holderMap.end()) {
00274         lBomHolder_ptr = &addBomHolder<OBJECT2, OBJECT1> (ioObject1);
00275     } else {
00276         lBomHolder_ptr = static_cast<BomHolder<OBJECT2>*> (itHolder->second);
00277     }
00278
00279     assert (lBomHolder_ptr != NULL);
00280
00281     return *lBomHolder_ptr;
00282 }
00283
00284 // //////////////////////////////////////
00285 // Private method.
00286 template <typename OBJECT1, typename OBJECT2>
00287 void FacBomManager::addToList (BomHolder<OBJECT2>& ioBomHolder,
00288     OBJECT1& ioObject1, OBJECT2& ioObject2) {
00289     ioBomHolder._bomList.push_back (&ioObject2);
00290 }
00291
00292 // //////////////////////////////////////
00293 // Public business method.
00294 // This method is specialized for the following couple types:
00295 // <SegmentDate, SegmentDate>
00296 template <typename OBJECT1, typename OBJECT2>
00297 void FacBomManager::addToList (OBJECT1& ioObject1, OBJECT2& ioObject2) {
00298     BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (ioObject1);

```

```

00302
00303     addToList<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2);
00304 }
00305
00306 // //////////////////////////////////////
00307 // Private method.
00308 template <typename OBJECT1, typename OBJECT2>
00309 void FacBomManager::addToMap (BomHolder<OBJECT2>& ioBomHolder,
00310                             OBJECT1& ioObject1, OBJECT2& ioObject2,
00311                             const MapKey_T& iKey) {
00312
00313     const bool insertionSucceeded =
00314         ioBomHolder._bomMap.insert (typename std::map<const MapKey_T, OBJECT2*>::
00315                                     value_type (iKey, &ioObject2)).second;
00316
00317     if (insertionSucceeded == false) {
00318         // Build a nice message, so that the error be fully explicit
00319         std::ostringstream oStr;
00320         oStr << "The given object ('" << iKey
00321             << "') can not be added to the map of '" << ioObject1.describeKey()
00322             << "' object. That map already contains: '">
00323
00324         unsigned int idx = 0;
00325         for (typename std::map<const MapKey_T, OBJECT2*>::const_iterator iter =
00326             ioBomHolder._bomMap.begin();
00327             iter != ioBomHolder._bomMap.end(); ++iter, ++idx) {
00328             const OBJECT2* lCurrentObject_ptr = iter->second;
00329             assert (lCurrentObject_ptr != NULL);
00330
00331             if (idx != 0) {
00332                 oStr << "; ";
00333             }
00334             oStr << lCurrentObject_ptr->describeKey();
00335         }
00336         oStr << "'";
00337
00338         STDAIR_LOG_ERROR (oStr.str());
00339         throw ObjectLinkingException (oStr.str());
00340     }
00341 }
00342
00343 // //////////////////////////////////////
00344 // Public business method.
00345 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00346 template <typename OBJECT1, typename OBJECT2> void FacBomManager::
00347 addToMap (OBJECT1& ioObject1, OBJECT2& ioObject2, const MapKey_T& iKey) {
00348
00349     //
00350     // Compile time assertion: this function must never be called with the
00351     // following list of couple types:
00352     // <SegmentDate, SegmentDate>
00353     //
00354     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00355                          || boost::is_same<OBJECT2, SegmentDate>::value == false
00356 ));
00357
00358     BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (ioObject1);
00359
00360     addToMap<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2, iKey);
00361 }
00362 // Public business method.

```

```

00363 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00364 // ///////////////////////////////////////////////////////////////////
00365 template <typename OBJECT1, typename OBJECT2>
00366 void FacBomManager::addToMap (OBJECT1& ioObject1, OBJECT2& ioObject2) {
00367
00368     //
00369     // Compile time assertion: this function must never be called with the
00370     // following list of couple types:
00371     // <SegmentDate, SegmentDate>
00372     //
00373     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00374         || boost::is_same<OBJECT2, SegmentDate>::value == false
00375 ));
00376     const MapKey_T& lKey = ioObject2.describeKey();
00377     addToMap (ioObject1, ioObject2, lKey);
00378 }
00379
00380 // ///////////////////////////////////////////////////////////////////
00381 // Public business method.
00382 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00383 template <typename OBJECT1, typename OBJECT2>
00384 void FacBomManager::addToListAndMap (OBJECT1& ioObject1, OBJECT2& ioObject2,
00385     const MapKey_T& iKey) {
00386     //
00387     // Compile time assertion: this function must never be called with the
00388     // following list of couple types:
00389     // <SegmentDate, SegmentDate>
00390     //
00391     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00392         || boost::is_same<OBJECT2, SegmentDate>::value == false
00393 ));
00394     BomHolder<OBJECT2>& lBomHolder = getBomHolder<OBJECT2> (ioObject1);
00395
00396     addToList<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2);
00397     addToMap<OBJECT1, OBJECT2> (lBomHolder, ioObject1, ioObject2, iKey);
00398 }
00399
00400 // ///////////////////////////////////////////////////////////////////
00401 // Public business method.
00402 // Compile time assertion to check OBJECT1 and OBJECT2 types.
00403 template <typename OBJECT1, typename OBJECT2> void FacBomManager::
00404 addToListAndMap (OBJECT1& ioObject1, OBJECT2& ioObject2) {
00405
00406     //
00407     // Compile time assertion: this function must never be called with the
00408     // following list of couple types:
00409     // <SegmentDate, SegmentDate>
00410     //
00411     BOOST_STATIC_ASSERT ((boost::is_same<OBJECT1, SegmentDate>::value == false
00412         || boost::is_same<OBJECT2, SegmentDate>::value == false
00413 ));
00414     const MapKey_T& lKey = ioObject2.describeKey();
00415     addToListAndMap<OBJECT1, OBJECT2> (ioObject1, ioObject2, lKey);
00416 }
00417
00418 // Public business method valid for all PARENT and CHILD types.
00419 // (No compile time assertion to check PARENT and CHILD types.)
00420 // ///////////////////////////////////////////////////////////////////
00421 template <typename PARENT, typename CHILD> void FacBomManager::

```

```

00422   linkWithParent (PARENT& ioParent,   CHILD& ioChild) {
00423       ioChild._parent = &ioParent;
00424   }
00425
00426   // //////////////////////////////////////
00427   // Public business method valid for all PARENT and CHILD types.
00428   // (No compile time assertion to check PARENT and CHILD types.)
00429   template <typename OBJECT2, typename OBJECT1> void FacBomManager::
00430   cloneHolder (OBJECT1& ioDest, const OBJECT1& iOri) {
00431
00432       const BomHolder<OBJECT2>& lOriginHolder =
00433           BomManager::getBomHolder<OBJECT2> (iOri);
00434
00435       BomHolder<OBJECT2>& lDestHolder = getBomHolder<OBJECT2> (ioDest);
00436       lDestHolder._bomList = lOriginHolder._bomList;
00437       lDestHolder._bomMap = lOriginHolder._bomMap;
00438   }
00439
00440   // //////////////////////////////////////
00441   //
00442   // Specialization of the template method addToList above for the types
00443   // <SegmentDate, SegmentDate>.
00444   // Add an element to the marketing segment date list of a segment date.
00445   //
00446   // //////////////////////////////////////
00447
00448   template<>
00449   inline void FacBomManager::addToList <SegmentDate,SegmentDate>
00450   (SegmentDate& ioSegmentDate,
00451    SegmentDate& ioMarketingSegmentDate) {
00452
00453       ioSegmentDate._marketingSegmentDateList.push_back (&ioMarketingSegmentDate);
00454   }
00455
00456   // //////////////////////////////////////
00457   //
00458   // TODO:
00459   // This specialization is needed for all the objects in the current
00460   // BOM tree.
00461   // (An inventory is the parent of flight dates, a flight date is the
00462   // parent of segment dates and leg dates, ...)
00463   //
00464   // //////////////////////////////////////
00465
00466
00467 }
00468
00469 // //////////////////////////////////////
00470
00471 #endif // __STDAIR_FAC_FACBOMMANAGER_HPP

```

### 35.497 stdair/service/DBSessionManager.cpp File Reference

```

#include <cassert>

#include <string>

#include <sstream>

#include <soci.h>

```

```
#include <mysql/soci-mysql.h>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/service/DBSessionManager.hpp>
#include <stdair/service/Logger.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.498 DBSessionManager.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <string>
00007 #include <sstream>
00008 // SOCI
00009 #if defined(SOCI_HEADERS_BURIED)
00010 #include <soci/core/soci.h>
00011 #include <soci/backends/mysql/soci-mysql.h>
00012 #else // SOCI_HEADERS_BURIED
00013 #include <soci.h>
00014 #include <mysql/soci-mysql.h>
00015 #endif // SOCI_HEADERS_BURIED
00016 // StdAir
00017 #include <stdair/stdair_exceptions.hpp>
00018 #include <stdair/basic/BasDBParams.hpp>
00019 #include <stdair/service/DBSessionManager.hpp>
00020 #include <stdair/service/Logger.hpp>
00021
00022 namespace stdair {
00023
00024 // //////////////////////////////////////
00025 DBSessionManager::DBSessionManager () : _dbSession (NULL) {
00026 }
00027
00028 // //////////////////////////////////////
00029 DBSessionManager::DBSessionManager (const DBSessionManager&)
00030 : _dbSession (NULL) {
00031     assert (false);
00032 }
00033
00034 // //////////////////////////////////////
00035 DBSessionManager::~DBSessionManager () {
00036     // std::cout << "In DBSessionManager destructor" << std::endl;
00037     dbFinalise();
00038 }
00039
00040 // //////////////////////////////////////
00041 void DBSessionManager::dbInit (const BasDBParams& iDBParams) {
00042
```



```

00043     // Database parameters
00044     std::ostringstream oStr;
00045     oStr << "db=" << iDBParams.getDBName() << " user=" << iDBParams.getUser()
00046         << " password=" << iDBParams.getPassword()
00047         << " port=" << iDBParams.getPort() << " host=" << iDBParams.getHost();
00048     const std::string lDBSessionConnectionString (oStr.str());
00049
00050     // Instanciate the database session: nothing else is performed at that stage
00051     _dbSession = new DBSession_T;
00052
00053     try {
00054         // Open the connection to the database
00055         _dbSession->open (soci::mysql, lDBSessionConnectionString);
00056
00057     } catch (std::exception const& lException) {
00058         std::ostringstream oMessage;
00059         oMessage <<"Error while opening a connection to database: "
00060             << lException.what() << std::endl
00061             << "Database parameters used:"
00062             << " db=" << iDBParams.getDBName()
00063             << " user=" << iDBParams.getUser()
00064             << " port=" << iDBParams.getPort()
00065             << " host=" << iDBParams.getHost();
00066         throw SQLDatabaseConnectionImpossibleException (oMessage.str());
00067     }
00068 }
00069
00070 // //////////////////////////////////////
00071 void DBSessionManager::dbFinalise () {
00072     delete _dbSession; _dbSession = NULL;
00073 }
00074
00075 // //////////////////////////////////////
00076 void DBSessionManager::init (const BasDBParams& iDBParams) {
00077     DBSessionManager& lInstance = instance();
00078     lInstance.dbInit (iDBParams);
00079 }
00080
00081 // //////////////////////////////////////
00082 DBSessionManager& DBSessionManager::instance() {
00083     static DBSessionManager _instance;
00084     return _instance;
00085 }
00086
00087 // //////////////////////////////////////
00088 void DBSessionManager::clean() {
00089 }
00090
00091 // //////////////////////////////////////
00092 DBSession_T& DBSessionManager::getDBSession() const {
00093     if (_dbSession == NULL) {
00094         throw NonInitialisedDBSessionManagerException ("");
00095     }
00096     assert (_dbSession != NULL);
00097     return *_dbSession;
00098 }
00099
00100 }

```

**35.499 stdair/service/DBSessionManager.hpp File Reference**

```
#include <stdair/stdair_db.hpp>
```

**Classes**

- class [stdair::DBSessionManager](#)

**Namespaces**

- namespace [stdair](#)  
Handle on the StdAir library context.

**35.500 DBSessionManager.hpp**

```
00001 #ifndef __STDAIR_SVC_DBSESSIONMANAGER_HPP
00002 #define __STDAIR_SVC_DBSESSIONMANAGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_db.hpp>
00009
00010 namespace stdair {
00011
00012     // Forward declarations
00013     struct BasDBParams;
00014
00017     class DBSessionManager {
00018         // Friend classes
00019         friend class FacSupervisor;
00020         friend class STDAIR_Service;
00021
00022     public:
00024         static DBSessionManager& instance();
00025
00028         DBSession_T& getDBSession() const;
00029
00030     private:
00031         DBSessionManager ();
00036         DBSessionManager (const DBSessionManager&);
00038         ~DBSessionManager ();
00039
00042         void dbInit (const BasDBParams&);
00043
00046         void dbFinalise ();
00047
00048     private:
00052         static void init (const BasDBParams&);
00053
00055         static void clean();
00056
00057
```

```

00058     private:
00060         DBSession_T* _dbSession;
00061     };
00062
00063 }
00064 #endif // __STDAIR_SVC_DBSSESSIONMANAGER_HPP

```

### 35.501 stdair/service/FacServiceAbstract.cpp File Reference

```

#include <cassert>

#include <stdair/service/ServiceAbstract.hpp>
#include <stdair/service/FacServiceAbstract.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

### 35.502 FacServiceAbstract.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/ServiceAbstract.hpp>
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009
00010 namespace stdair {
00011
00012     // //////////////////////////////////////
00013     FacServiceAbstract::~FacServiceAbstract() {
00014         clean();
00015     }
00016
00017     // //////////////////////////////////////
00018     void FacServiceAbstract::clean() {
00019         for (ServicePool_T::iterator itService = _pool.begin();
00020             itService != _pool.end(); itService++) {
00021             ServiceAbstract* currentService_ptr = *itService;
00022             assert (currentService_ptr != NULL);
00023
00024             delete (currentService_ptr); currentService_ptr = NULL;
00025         }
00026
00027         // Empty the pool of Service Factories
00028         _pool.clear();
00029     }
00030
00031 }

```

## 35.503 stdair/service/FacServiceAbstract.hpp File Reference

```
#include <vector>
```

## Classes

- class [stdair::FacServiceAbstract](#)

## Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.504 FacServiceAbstract.hpp

```
00001 #ifndef __STDAIR_SVC_FACSERVICEABSTRACT_HPP
00002 #define __STDAIR_SVC_FACSERVICEABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <vector>
00009
00010 namespace stdair {
00011
00012     // Forward declarations
00013     class ServiceAbstract;
00014
00015     class FacServiceAbstract {
00016     public:
00017
00018         typedef std::vector<ServiceAbstract*> ServicePool_T;
00019
00020         virtual ~FacServiceAbstract();
00021
00022         void clean();
00023
00024     protected:
00025         FacServiceAbstract() {}
00026
00027         ServicePool_T _pool;
00028     };
00029
00030 }
00031 #endif // __STDAIR_SVC_FACSERVICEABSTRACT_HPP
```

## 35.505 stdair/service/FacSTDAIRServiceContext.cpp File Reference

```
#include <cassert>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/FacSTDAIRServiceContext.hpp>
```

```
#include <stdair/service/STDAIR_ServiceContext.hpp>
```

#### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

#### 35.506 FacSTDAIRServiceContext.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/service/FacSupervisor.hpp>
00008 #include <stdair/service/FacSTDAIRServiceContext.hpp>
00009 #include <stdair/service/STDAIR_ServiceContext.hpp>
00010
00011 namespace stdair {
00012
00013     FacSTDAIRServiceContext* FacSTDAIRServiceContext::_instance = NULL;
00014
00015     // //////////////////////////////////////
00016     FacSTDAIRServiceContext::~FacSTDAIRServiceContext () {
00017         _instance = NULL;
00018     }
00019
00020     // //////////////////////////////////////
00021     FacSTDAIRServiceContext& FacSTDAIRServiceContext::instance () {
00022
00023         if (_instance == NULL) {
00024             _instance = new FacSTDAIRServiceContext();
00025             assert (_instance != NULL);
00026
00027             FacSupervisor::instance().registerServiceFactory (_instance);
00028         }
00029         return *_instance;
00030     }
00031
00032     // //////////////////////////////////////
00033     STDAIR_ServiceContext& FacSTDAIRServiceContext::create () {
00034         STDAIR_ServiceContext* aServiceContext_ptr = NULL;
00035
00036         aServiceContext_ptr = new STDAIR_ServiceContext ();
00037         assert (aServiceContext_ptr != NULL);
00038
00039         // The new object is added to the Bom pool
00040         _pool.push_back (aServiceContext_ptr);
00041
00042         return *aServiceContext_ptr;
00043     }
00044
00045 }
```

## 35.507 stdair/service/FacSTDAIRServiceContext.hpp File Reference

```
#include <stdair/service/FacServiceAbstract.hpp>
```

## Classes

- class [stdair::FacSTDAIRServiceContext](#)  
Factory for [Bucket](#).

## Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.508 FacSTDAIRServiceContext.hpp

```
00001 #ifndef __STDAIR_SVC_FACSTDAIRSERVICECONTEXT_HPP
00002 #define __STDAIR_SVC_FACSTDAIRSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009
00010 namespace stdair {
00011
00012     class STDAIR_ServiceContext;
00013
00014     class FacSTDAIRServiceContext : public FacServiceAbstract {
00015     public:
00016
00017         static FacSTDAIRServiceContext& instance();
00018
00019         ~FacSTDAIRServiceContext();
00020
00021         STDAIR_ServiceContext& create();
00022
00023     protected:
00024         FacSTDAIRServiceContext() {}
00025
00026     private:
00027         static FacSTDAIRServiceContext* _instance;
00028     };
00029 }
00030 #endif // __STDAIR_SVC_FACSTDAIRSERVICECONTEXT_HPP
```

## 35.509 stdair/service/FacSupervisor.cpp File Reference

```
#include <cassert>
```

```
#include <stdair/factory/FacAbstract.hpp>
#include <stdair/service/FacServiceAbstract.hpp>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/service/DBSessionManager.hpp>
```

### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

### 35.510 FacSupervisor.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 // StdAir
00007 #include <stdair/factory/FacAbstract.hpp>
00008 #include <stdair/service/FacServiceAbstract.hpp>
00009 #include <stdair/service/FacSupervisor.hpp>
00010 #include <stdair/service/Logger.hpp>
00011 #include <stdair/service/DBSessionManager.hpp>
00012
00013 namespace stdair {
00014
00015     FacSupervisor* FacSupervisor::_instance = NULL;
00016
00017     // //////////////////////////////////////
00018     FacSupervisor& FacSupervisor::instance() {
00019         if (_instance == NULL) {
00020             _instance = new FacSupervisor();
00021         }
00022         return *_instance;
00023     }
00024
00025     // //////////////////////////////////////
00026     FacSupervisor::~FacSupervisor() {
00027         cleanBomLayer();
00028         cleanServiceLayer();
00029     }
00030
00031     // //////////////////////////////////////
00032     void FacSupervisor::registerBomFactory (FacAbstract* ioFac_ptr) {
00033         _bomPool.push_back (ioFac_ptr);
00034     }
00035
00036     // //////////////////////////////////////
00037     void FacSupervisor::registerServiceFactory (FacServiceAbstract* ioFac_ptr) {
00038         _svcPool.push_back (ioFac_ptr);
00039     }
00040
00041     // //////////////////////////////////////
00042 }
```

```

00043 void FacSupervisor::cleanBomLayer() {
00044     for (BomFactoryPool_T::const_iterator itFactory = _bomPool.begin();
00045          itFactory != _bomPool.end(); itFactory++) {
00046         const FacAbstract* currentFactory_ptr = *itFactory;
00047         assert (currentFactory_ptr != NULL);
00048
00049         delete (currentFactory_ptr); currentFactory_ptr = NULL;
00050     }
00051
00052     // Empty the pool of BOM factories
00053     _bomPool.clear();
00054 }
00055
00056 // //////////////////////////////////////
00057 void FacSupervisor::cleanServiceLayer() {
00058     for (ServiceFactoryPool_T::const_iterator itFactory = _svcPool.begin();
00059          itFactory != _svcPool.end(); itFactory++) {
00060         const FacServiceAbstract* currentFactory_ptr = *itFactory;
00061         assert (currentFactory_ptr != NULL);
00062
00063         delete (currentFactory_ptr); currentFactory_ptr = NULL;
00064     }
00065
00066     // Empty the pool of Service Factories
00067     _svcPool.clear();
00068 }
00069
00070 // //////////////////////////////////////
00071 void FacSupervisor::cleanLoggerService() {
00072     // Clean the static instance of the log service
00073     Logger::clean();
00074 }
00075
00076 // //////////////////////////////////////
00077 void FacSupervisor::cleanDBSessionManager() {
00078     // Clean the static instance of the database service
00079     DBSessionManager::clean();
00080 }
00081
00082 // //////////////////////////////////////
00083 void FacSupervisor::cleanAll() {
00084
00085     // Clean the static instance of the database session manager
00086     cleanDBSessionManager();
00087
00088     // Clean the static instance of the log service
00089     cleanLoggerService();
00090
00091     // Clean the static instance of the FacSupervisor.
00092     // This in turn will invoke the destructor (~FacSupervisor() method)
00093     // of the static instance, thus cleaning both the BOM and service layers.
00094     delete _instance; _instance = NULL;
00095 }
00096
00097 }

```

### 35.511 stdair/service/FacSupervisor.hpp File Reference

```
#include <iosfwd>
```



```
#include <list>
```

#### Classes

- class `stdair::FacSupervisor`

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.512 FacSupervisor.hpp

```
00001 #ifndef __STDAIR_SVC_FACSUPERVISOR_HPP
00002 #define __STDAIR_SVC_FACSUPERVISOR_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009 #include <list>
00010
00011 namespace stdair {
00012
00014     class FacAbstract;
00015     class FacServiceAbstract;
00016
00020     class FacSupervisor {
00021     public:
00025         typedef std::list<FacAbstract*> BomFactoryPool_T;
00026         typedef std::list<FacServiceAbstract*> ServiceFactoryPool_T;
00027
00034         static FacSupervisor& instance();
00035
00043         void registerBomFactory (FacAbstract*);
00044
00052         void registerServiceFactory (FacServiceAbstract*);
00053
00060         void cleanBomLayer();
00061
00068         void cleanServiceLayer();
00069
00073         static void cleanLoggerService();
00074
00078         static void cleanDBSessionManager();
00079
00085         static void cleanAll();
00086
00093         ~FacSupervisor();
00094
00095     protected:
00102         FacSupervisor() {}
00103         FacSupervisor (const FacSupervisor&) {}
00104
```

```

00105     private:
00109         static FacSupervisor* _instance;
00110
00114         BomFactoryPool_T _bomPool;
00115
00119         ServiceFactoryPool_T _svcPool;
00120     };
00121 }
00122 #endif // __STDAIR_SVC_FACSUPERVISOR_HPP

```

### 35.513 stdair/service/Logger.cpp File Reference

```

#include <iostream>

#include <stdair/stdair_exceptions.hpp>

#include <stdair/service/Logger.hpp>

```

#### Namespaces

- namespace `stdair`  
*Handle on the StdAir library context.*

### 35.514 Logger.cpp

```

00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <iostream>
00006 // StdAir Logger
00007 #include <stdair/stdair_exceptions.hpp>
00008 #include <stdair/service/Logger.hpp>
00009
00010 namespace stdair {
00011
00012 // //////////////////////////////////////
00013     Logger::Logger()
00014         : _level (LOG::DEBUG), _logStream (&std::cout),
00015           _hasBeenInitialised (false) {
00016     }
00017
00018 // //////////////////////////////////////
00019     Logger::Logger (const Logger&)
00020         : _level (LOG::DEBUG), _logStream (&std::cout),
00021           _hasBeenInitialised (false) {
00022         assert (false);
00023     }
00024
00025 // //////////////////////////////////////
00026     Logger::~Logger() {
00027         // std::cout << "In Logger destructor" << std::endl;
00028     }
00029
00030 // //////////////////////////////////////
00031     void Logger::init (const BasLogParams& iLogParams) {

```

```

00032
00033     //
00034     Logger& lInstance = instance();
00035     const bool hasBeenInitialised = lInstance.getStatus();
00036     if (hasBeenInitialised == true
00037         && iLogParams.getForcedInitialisationFlag() == false) {
00038         STDAIR_LOG_ERROR ("Error: the log stream has already been initialised");
00039         assert (false);
00040     }
00041
00042     lInstance.setLevel (iLogParams._logLevel);
00043     lInstance.setStream (iLogParams._logStream);
00044     lInstance.setStatus (true);
00045 }
00046
00047 // //////////////////////////////////////
00048 Logger& Logger::instance() {
00049     static Logger _instance;
00050     return _instance;
00051 }
00052
00053 // //////////////////////////////////////
00054 BasLogParams Logger::getLogParams() {
00055     std::ostream* oStream_ptr = instance()._logStream;
00056     assert (oStream_ptr != NULL);
00057     return BasLogParams (instance()._level, *oStream_ptr);
00058 }
00059
00060 // //////////////////////////////////////
00061 void Logger::clean() {
00062     Logger& lInstance = instance();
00063     lInstance.setStatus (false);
00064 }
00065
00066 }

```

### 35.515 stdair/service/Logger.hpp File Reference

```

#include <cassert>

#include <sstream>

#include <string>

#include <stdair/stdair_log.hpp>

#include <stdair/basic/BasLogParams.hpp>

```

#### Classes

- class [stdair::Logger](#)

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## Defines

- #define [STDAIR\\_LOG\\_CORE](#)(iLevel, iToBeLogged)
- #define [STDAIR\\_LOG\\_CRITICAL](#)(iToBeLogged) STDAIR\_LOG\_CORE (stdair::LOG::CRITICAL, iToBeLogged)
- #define [STDAIR\\_LOG\\_ERROR](#)(iToBeLogged) STDAIR\_LOG\_CORE (stdair::LOG::ERROR, iToBeLogged)
- #define [STDAIR\\_LOG\\_NOTIFICATION](#)(iToBeLogged) STDAIR\_LOG\_CORE (stdair::LOG::NOTIFICATION, iToBeLogged)
- #define [STDAIR\\_LOG\\_WARNING](#)(iToBeLogged) STDAIR\_LOG\_CORE (stdair::LOG::WARNING, iToBeLogged)
- #define [STDAIR\\_LOG\\_DEBUG](#)(iToBeLogged) STDAIR\_LOG\_CORE (stdair::LOG::DEBUG, iToBeLogged)
- #define [STDAIR\\_LOG\\_VERBOSE](#)(iToBeLogged) STDAIR\_LOG\_CORE (stdair::LOG::VERBOSE, iToBeLogged)

## 35.515.1 Define Documentation

35.515.1.1 #define STDAIR\_LOG\_CORE( *iLevel*, *iToBeLogged* )

## Value:

```
{ std::ostringstream ostr; ostr << iToBeLogged; \
    stdair::Logger::instance().log (iLevel, __LINE__, __FILE__, ostr.str()); }
```

Definition at line 16 of file [Logger.hpp](#).

35.515.1.2 #define STDAIR\_LOG\_CRITICAL( *iToBeLogged* ) STDAIR\_LOG\_CORE (stdair::LOG::CRITICAL, iToBeLogged)

Definition at line 20 of file [Logger.hpp](#).

35.515.1.3 #define STDAIR\_LOG\_ERROR( *iToBeLogged* ) STDAIR\_LOG\_CORE (stdair::LOG::ERROR, iToBeLogged)

Definition at line 23 of file [Logger.hpp](#).

Referenced by [stdair::EventQueue::calculateProgress\(\)](#), [stdair::EventQueue::getActualTotalNbOfEvents\(\)](#), [stdair::ParsedKey::getBoardingTime\(\)](#), [stdair::EventQueue::getCurrentNbOfEvents\(\)](#), [stdair::EventQueue::getExpected](#), [stdair::ParsedKey::getFlightDateKey\(\)](#), [stdair::ParsedKey::getInventoryKey\(\)](#), [stdair::BomManager::getObject\(\)](#), [stdair::ParsedKey::getSegmentKey\(\)](#), and [stdair::EventQueue::updateStatus\(\)](#).

35.515.1.4 #define STDAIR\_LOG\_NOTIFICATION( *iToBeLogged* ) STDAIR\_LOG\_CORE (stdair::LOG::NOTIFICATION, iToBeLogged)

Definition at line 26 of file [Logger.hpp](#).

35.515.1.5 #define STDAIR\_LOG\_WARNING( *iToBeLogged* ) STDAIR\_LOG\_CORE (stdair::LOG::WARNING, iToBeLogged)

Definition at line 29 of file [Logger.hpp](#).

35.515.1.6 `#define STDAIR_LOG_DEBUG( iToBeLogged ) STDAIR_LOG_CORE`  
`(stdair::LOG::DEBUG, iToBeLogged)`

Definition at line 32 of file [Logger.hpp](#).

Referenced by [stdair::ParsedKey::getBoardingTime\(\)](#), [stdair::ParsedKey::getFlightDateKey\(\)](#), [stdair::ParsedKey::getInventoryKey\(\)](#), [stdair::ParsedKey::getSegmentKey\(\)](#), [stdair::TimePeriod::isDepartureTimeValid\(\)](#), and [stdair::BomRetriever::retrieveSegmentDateFromLongKey\(\)](#).

35.515.1.7 `#define STDAIR_LOG_VERBOSE( iToBeLogged ) STDAIR_LOG_CORE`  
`(stdair::LOG::VERBOSE, iToBeLogged)`

Definition at line 35 of file [Logger.hpp](#).

## 35.516 Logger.hpp

```
00001 #ifndef __STDAIR_SVC_LOGGER_HPP
00002 #define __STDAIR_SVC_LOGGER_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <cassert>
00009 #include <sstream>
00010 #include <string>
00011 // StdAir
00012 #include <stdair/stdair_log.hpp>
00013 #include <stdair/basic/BasLogParams.hpp>
00014
00015 // ////////////////////////////////// LOG MACROS //////////////////////////////////
00016 #define STDAIR_LOG_CORE(iLevel, iToBeLogged) \
00017     { std::ostringstream ostr; ostr << iToBeLogged; \
00018       stdair::Logger::instance().log (iLevel, __LINE__, __FILE__, ostr.str()); }
00019
00020 #define STDAIR_LOG_CRITICAL(iToBeLogged) \
00021     STDAIR_LOG_CORE (stdair::LOG::CRITICAL, iToBeLogged)
00022
00023 #define STDAIR_LOG_ERROR(iToBeLogged) \
00024     STDAIR_LOG_CORE (stdair::LOG::ERROR, iToBeLogged)
00025
00026 #define STDAIR_LOG_NOTIFICATION(iToBeLogged) \
00027     STDAIR_LOG_CORE (stdair::LOG::NOTIFICATION, iToBeLogged)
00028
00029 #define STDAIR_LOG_WARNING(iToBeLogged) \
00030     STDAIR_LOG_CORE (stdair::LOG::WARNING, iToBeLogged)
00031
00032 #define STDAIR_LOG_DEBUG(iToBeLogged) \
00033     STDAIR_LOG_CORE (stdair::LOG::DEBUG, iToBeLogged)
00034
00035 #define STDAIR_LOG_VERBOSE(iToBeLogged) \
00036     STDAIR_LOG_CORE (stdair::LOG::VERBOSE, iToBeLogged)
00037 // ////////////////////////////////// (END OF) LOG MACROS //////////////////////////////////
00038
00039
00040 namespace stdair {
00041
00042     class Logger {
```

```

00050     friend class FacSupervisor;
00051     friend class STDAIR_Service;
00052
00053 public:
00054
00055     template <typename T>
00059     void log (const LOG::EN_LogLevel iLevel, const int iLineNumber,
00060              const std::string& iFileName, const T& iToBeLogged) {
00061         assert (_logStream != NULL);
00062         if (iLevel <= _level) {
00063             *_logStream << "[" << LOG::_logLevels[iLevel] << "]" << iFileName << ":"
00064                 << iLineNumber << ": " << iToBeLogged << std::endl;
00065         }
00066     }
00067
00071     static Logger& instance();
00072
00073 private:
00074     // /////////////////////////////////// Initialisation and finalisation ///////////////////////////////////
00075     bool getStatus() const {
00079         return _hasBeenInitialised;
00080     }
00081
00082     void setLevel (const LOG::EN_LogLevel& iLevel) {
00086         _level = iLevel;
00087     }
00088
00089     void setStream (std::ostream& ioStream) {
00093         _logStream = &ioStream;
00094     }
00095
00096     void setStatus (const bool iStatus) {
00100         _hasBeenInitialised = iStatus;
00101     }
00102
00103     Logger();
00108     Logger (const Logger&);
00112     ~Logger();
00116
00117     static void init (const BasLogParams&);
00123
00124     static BasLogParams getLogParams();
00128
00129     static void clean();
00133
00134 private:
00135     // /////////////////////////////////// Attributes ///////////////////////////////////
00136     LOG::EN_LogLevel _level;
00141
00142     std::ostream* _logStream;
00146
00147     bool _hasBeenInitialised;
00151 };
00152
00153
00154 }
00155 #endif // __STDAIR_SVC_LOGGER_HPP
00156

```

**35.517 stdair/service/ServiceAbstract.cpp File Reference**

```
#include <stdair/service/ServiceAbstract.hpp>
```

**Namespaces**

- namespace [stdair](#)  
*Handle on the StdAir library context.*

**35.518 ServiceAbstract.cpp**

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // StdAir
00005 #include <stdair/service/ServiceAbstract.hpp>
00006
00007 namespace stdair {
00008
00009 }
```

**35.519 stdair/service/ServiceAbstract.hpp File Reference**

```
#include <iosfwd>
```

**Classes**

- class [stdair::ServiceAbstract](#)

**Namespaces**

- namespace [stdair](#)  
*Handle on the StdAir library context.*

**Functions**

- template<class charT, class traits >  
std::basic\_ostream< charT, traits > & [operator<<](#) (std::basic\_ostream< charT, traits > &ioOut, const [stdair::ServiceAbstract](#) &iService)
- template<class charT, class traits >  
std::basic\_istream< charT, traits > & [operator>>](#) (std::basic\_istream< charT, traits > &ioIn, [stdair::ServiceAbstract](#) &ioService)

## 35.519.1 Function Documentation

35.519.1.1 `template<class charT , class traits > std::basic_ostream<charT, traits>&  
operator<< ( std::basic_ostream< charT, traits > & ioOut, const  
stdair::ServiceAbstract & iService ) [inline]`

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (p653) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 58 of file [ServiceAbstract.hpp](#).

References [stdair::ServiceAbstract::toStream\(\)](#).

35.519.1.2 `template<class charT , class traits > std::basic_istream<charT,  
traits>& operator>> ( std::basic_istream< charT, traits > & ioIn,  
stdair::ServiceAbstract & ioService ) [inline]`

Piece of code given by Nicolai M. Josuttis, Section 13.12.1 "Implementing Output Operators" (pp655-657) of his book "The C++ Standard Library: A Tutorial and Reference", published by Addison-Wesley.

Definition at line 86 of file [ServiceAbstract.hpp](#).

References [stdair::ServiceAbstract::fromStream\(\)](#).

## 35.520 ServiceAbstract.hpp

```
00001 #ifndef __STDAIR_SVC_SERVICEABSTRACT_HPP
00002 #define __STDAIR_SVC_SERVICEABSTRACT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <iosfwd>
00009
00010 namespace stdair {
00011
00012     class ServiceAbstract {
00013     public:
00014
00021         virtual ~ServiceAbstract() {}
00022
00028         virtual void toStream (std::ostream& ioOut) const {}
00029
00035         virtual void fromStream (std::istream& ioIn) {}
00036
00040         // virtual const std::string describe() const = 0;
00041
00042     protected:
00046         ServiceAbstract() {}
00047     };
00048 }
00049
00055 template <class charT, class traits>
00056 inline
```



```
00057 std::basic_ostream<charT, traits>&
00058 operator<< (std::basic_ostream<charT, traits>& ioOut,
00059             const stdair::ServiceAbstract& iService) {
00065     std::basic_ostringstream<charT,traits> ostr;
00066     ostr.copyfmt (ioOut);
00067     ostr.width (0);
00068
00069     // Fill string stream
00070     iService.toStream (ostr);
00071
00072     // Print string stream
00073     ioOut << ostr.str();
00074
00075     return ioOut;
00076 }
00077
00083 template <class charT, class traits>
00084 inline
00085 std::basic_istream<charT, traits>&
00086 operator>> (std::basic_istream<charT, traits>& ioIn,
00087             stdair::ServiceAbstract& ioService) {
00088     // Fill Service object with input stream
00089     ioService.fromStream (ioIn);
00090     return ioIn;
00091 }
00092
00093 #endif // __STDAIR_SVC_SERVICEABSTRACT_HPP
```

### 35.521 stdair/service/STDAIR\_Service.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/stdair_types.hpp>
#include <stdair/basic/BasChronometer.hpp>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRetriever.hpp>
#include <stdair/bom/BomJSONExport.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/EventQueue.hpp>
#include <stdair/bom/EventStruct.hpp>
#include <stdair/bom/BookingRequestStruct.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/command/CmdBomManager.hpp>
#include <stdair/service/FacSupervisor.hpp>
#include <stdair/service/FacSTDAIRServiceContext.hpp>
```

```
#include <stdair/service/STDAIR_ServiceContext.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/service/DBSessionManager.hpp>
#include <stdair/STDAIR_Service.hpp>
```

#### Namespaces

- namespace `bpt`
- namespace `stdair`

*Handle on the StdAir library context.*

#### 35.522 STDAIR\_Service.cpp

```
00001 // //////////////////////////////////////
00002 // Import section
00003 // //////////////////////////////////////
00004 // STL
00005 #include <cassert>
00006 #include <sstream>
00007 #if BOOST_VERSION >= 104100
00008 // Boost Property Tree
00009 #include <boost/property_tree/ptree.hpp>
00010 #include <boost/property_tree/json_parser.hpp>
00011 #endif // BOOST_VERSION >= 104100
00012 // StdAir
00013 #include <stdair/stdair_types.hpp>
00014 #include <stdair/basic/BasChronometer.hpp>
00015 #include <stdair/bom/BomManager.hpp>
00016 #include <stdair/bom/BomRetriever.hpp>
00017 #include <stdair/bom/BomJSONExport.hpp>
00018 #include <stdair/bom/BomDisplay.hpp>
00019 #include <stdair/bom/BomRoot.hpp>
00020 #include <stdair/bom/EventQueue.hpp>
00021 #include <stdair/bom/EventStruct.hpp>
00022 #include <stdair/bom/BookingRequestStruct.hpp>
00023 #include <stdair/bom/DatePeriod.hpp>
00024 #include <stdair/command/CmdBomManager.hpp>
00025 #include <stdair/service/FacSupervisor.hpp>
00026 #include <stdair/service/FacSTDAIRServiceContext.hpp>
00027 #include <stdair/service/STDAIR_ServiceContext.hpp>
00028 #include <stdair/service/Logger.hpp>
00029 #include <stdair/service/DBSessionManager.hpp>
00030 #include <stdair/STDAIR_Service.hpp>
00031
00032 #if BOOST_VERSION >= 104100
00033 namespace bpt = boost::property_tree;
00034 #else // BOOST_VERSION >= 104100
00035 namespace bpt {
00036     typedef char ptree;
00037 }
00038 #endif // BOOST_VERSION >= 104100
00039
00040 namespace stdair {
00041
00042 // //////////////////////////////////////
```

```
00043 STDAIR_Service::STDAIR_Service() : _stdairServiceContext (NULL) {
00044
00045     // Initialise the service context
00046     initServiceContext();
00047
00048     // Initialise the (remaining of the) context
00049     init();
00050 }
00051
00052 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00053 STDAIR_Service::STDAIR_Service (const STDAIR_Service& iService)
00054 : _stdairServiceContext (NULL) {
00055     assert (false);
00056 }
00057
00058 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00059 STDAIR_Service::STDAIR_Service (const BasLogParams& iLogParams)
00060 : _stdairServiceContext (NULL) {
00061
00062     // Initialise the service context
00063     initServiceContext();
00064
00065     // Set the log file
00066     logInit (iLogParams);
00067
00068     // Initialise the (remaining of the) context
00069     init();
00070 }
00071
00072 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00073 STDAIR_Service::STDAIR_Service (const BasLogParams& iLogParams,
00074                                const BasDBParams& iDBParams)
00075 : _stdairServiceContext (NULL) {
00076
00077     // Initialise the service context
00078     initServiceContext();
00079
00080     // Set the log file
00081     logInit (iLogParams);
00082
00083     // Create a database session
00084     dbInit (iDBParams);
00085
00086     // Initialise the (remaining of the) context
00087     init();
00088 }
00089
00090 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00091 STDAIR_Service::~STDAIR_Service() {
00092     // Delete/Clean all the objects from memory
00093     finalise();
00094 }
00095
00096 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00097 void STDAIR_Service::initServiceContext() {
00098     // Initialise the service context
00099     STDAIR_ServiceContext& lSTDAIR_ServiceContext =
00100         FacSTDAIRServiceContext::instance().create();
00101
00102     // Store the stdair service context
00103     _stdairServiceContext = &lSTDAIR_ServiceContext;
00104 }
```

```
00105
00106 // //////////////////////////////////////
00107 void STDAIR_Service::logInit (const BasLogParams& iLogParams) {
00108     Logger::init (iLogParams);
00109 }
00110
00111 // //////////////////////////////////////
00112 void STDAIR_Service::dbInit (const BasDBParams& iDBParams) {
00113     DBSessionManager::init (iDBParams);
00114
00115     // Store the database parameters into the StdAir service context
00116     assert (_stdairServiceContext != NULL);
00117     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00118     lSTDAIR_ServiceContext.setDBParams (iDBParams);
00119 }
00120
00121 // //////////////////////////////////////
00122 void STDAIR_Service::init() {
00123 }
00124
00125 // //////////////////////////////////////
00126 BomRoot& STDAIR_Service::getBomRoot() const {
00127     // Retrieve the StdAir service context
00128     assert (_stdairServiceContext != NULL);
00129     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00130
00131     return lSTDAIR_ServiceContext.getBomRoot();
00132 }
00133
00134 // //////////////////////////////////////
00135 EventQueue& STDAIR_Service::getEventQueue() const {
00136     // Retrieve the StdAir service context
00137     assert (_stdairServiceContext != NULL);
00138     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00139
00140     return lSTDAIR_ServiceContext.getEventQueue();
00141 }
00142
00143 // //////////////////////////////////////
00144 BasLogParams STDAIR_Service::getLogParams() const {
00145     return Logger::getLogParams();
00146 }
00147
00148 // //////////////////////////////////////
00149 const BasDBParams& STDAIR_Service::getDBParams() const {
00150     // Retrieve the StdAir service context
00151     assert (_stdairServiceContext != NULL);
00152     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00153
00154     return lSTDAIR_ServiceContext.getDBParams();
00155 }
00156
00157 // //////////////////////////////////////
00158 const ServiceInitialisationType& STDAIR_Service::
00159 getServiceInitialisationType() const {
00160     // Retrieve the StdAir service context
00161     assert (_stdairServiceContext != NULL);
00162     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00163
00164     return lSTDAIR_ServiceContext.getServiceInitialisationType();
00165 }
00166 }
```

```

00163 ///////////////////////////////////////////////////////////////////
00164 void STDAIR_Service::buildSampleBom() {
00165     // Retrieve the StdAir service context
00166     assert (_stdairServiceContext != NULL);
00167     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00168
00169     // Retrieve the BOM tree root
00170     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00171
00172     // Delegate the building process to the dedicated command
00173     CmdBomManager::buildSampleBom (lBomRoot);
00174 }
00175
00176 ///////////////////////////////////////////////////////////////////
00177 void STDAIR_Service::
00178 buildDummyInventory (const CabinCapacity_T& iCabinCapacity) {
00179     // Retrieve the StdAir service context
00180     assert (_stdairServiceContext != NULL);
00181     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00182
00183     // Retrieve the BOM tree root
00184     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00185
00186     // Delegate the building process to the dedicated command
00187     CmdBomManager::buildDummyInventory (lBomRoot, iCabinCapacity);
00188 }
00189
00190 ///////////////////////////////////////////////////////////////////
00191 void STDAIR_Service::
00192 buildSampleTravelSolutionForPricing (TravelSolutionList_T& ioTravelSolutionList
) {
00193     // Build a sample list of travel solution structures
00194     CmdBomManager::buildSampleTravelSolutionForPricing (ioTravelSolutionList);
00195 }
00196
00197 ///////////////////////////////////////////////////////////////////
00198 void STDAIR_Service::
00199 buildSampleTravelSolutions (TravelSolutionList_T& ioTravelSolutionList) {
00200     // Build a sample list of travel solution structures
00201     CmdBomManager::buildSampleTravelSolutions (ioTravelSolutionList);
00202 }
00203
00204 ///////////////////////////////////////////////////////////////////
00205 BookingRequestStruct STDAIR_Service::
00206 buildSampleBookingRequest (const bool isForCRS) {
00207
00208     // Build a sample booking request structure
00209     if (isForCRS == true) {
00210         return CmdBomManager::buildSampleBookingRequestForCRS();
00211     }

00212     return CmdBomManager::buildSampleBookingRequest();
00213 }
00214
00215 ///////////////////////////////////////////////////////////////////
00216 std::string STDAIR_Service::
00217 jsonExport (const stdair::AirlineCode_T& iAirlineCode,
00218             const stdair::FlightNumber_T& iFlightNumber,
00219             const stdair::Date_T& iDepartureDate) const {
00220     std::ostringstream oStr;

```

```

00222
00223 // Retrieve the StdAir service context
00224 assert (_stdairServiceContext != NULL);
00225 const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00226
00227 // Retrieve the BOM tree root
00228 BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00229
00230 // Retrieve the flight-date object corresponding to the key
00231 FlightDate* lFlightDate_ptr =
00232     BomRetriever::retrieveFlightDateFromKeySet (lBomRoot, iAirlineCode,
00233                                                 iFlightNumber, iDepartureDate);

00234
00235 // Dump the content of the whole BOM tree into the string
00236 if (lFlightDate_ptr != NULL) {
00237     BomJSONExport::jsonExport (oStr, *lFlightDate_ptr);
00238 }
00239 } else {
00240 #if BOOST_VERSION >= 104100
00241     //
00242     bpt::ptree lPropertyTree;
00243
00244     // Build the appropriate message, so that the client may know that
00245     // no flight-date can be found for that given key.
00246     std::ostringstream oNoFlightDateStream;
00247     oNoFlightDateStream << "No flight-date found for the given key: '"
00248                         << iAirlineCode << iFlightNumber
00249                         << " - " << iDepartureDate << "'";
00250     const std::string oNoFlightDateString (oNoFlightDateStream.str());
00251
00252     // Put in the property tree the fact that no flight-date has been found.
00253     // \note That is not (necessary) an error.
00254     lPropertyTree.put ("error", oNoFlightDateString.c_str());
00255
00256     // Write the property tree into the JSON stream.
00257     write_json (oStr, lPropertyTree);
00258 #endif // BOOST_VERSION >= 104100
00259 }
00260
00261 return oStr.str();
00262 }

00263
00264 // //////////////////////////////////////
00265 std::string STDAIR_Service::list (const AirlineCode_T& iAirlineCode,
00266                                 const FlightNumber_T& iFlightNumber) const {
00267     std::ostringstream oStr;
00268
00269     // Retrieve the StdAir service context
00270     assert (_stdairServiceContext != NULL);
00271     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;

00272
00273     // Retrieve the BOM tree root
00274     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00275
00276     // Dump the content of the whole BOM tree into the string
00277     BomDisplay::list (oStr, lBomRoot, iAirlineCode, iFlightNumber);
00278
00279     return oStr.str();
00280 }

```

```

00281
00282 // //////////////////////////////////////
00283 std::string STDAIR_Service::listAirportPairDateRange () const {
00284     std::ostringstream oStr;
00285
00286     // Retrieve the StdAir service context
00287     assert (_stdairServiceContext != NULL);
00288     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00289
00290     // Retrieve the BOM tree root
00291     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00292
00293     // Dump the content of the whole BOM tree into the string
00294     BomDisplay::listAirportPairDateRange (oStr, lBomRoot);
00295
00296     return oStr.str();
00297 }
00298
00299 // //////////////////////////////////////
00300 bool STDAIR_Service::check (const AirlineCode_T& iAirlineCode,
00301                             const FlightNumber_T& iFlightNumber,
00302                             const stdair::Date_T& iDepartureDate) const {
00303     std::ostringstream oStr;
00304
00305     // Retrieve the StdAir service context
00306     assert (_stdairServiceContext != NULL);
00307     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00308
00309     // Retrieve the BOM tree root
00310     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00311
00312     // Dump the content of the whole BOM tree into the string
00313     const FlightDate* lFlightDate_ptr =
00314         BomRetriever::retrieveFlightDateFromKeySet (lBomRoot, iAirlineCode,
00315                                                     iFlightNumber,
00316                                                     iDepartureDate);
00317
00318     return (lFlightDate_ptr != NULL);
00319 }
00320
00321 // //////////////////////////////////////
00322 bool STDAIR_Service::check (const stdair::AirportCode_T& ioOrigin,
00323                             const stdair::AirportCode_T& ioDestination,
00324                             const stdair::Date_T& ioDepartureDate) const {
00325     std::ostringstream oStr;
00326
00327     // Retrieve the StdAir service context
00328     assert (_stdairServiceContext != NULL);
00329     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00330
00331     // Retrieve the BOM tree root
00332     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00333
00334     // Dump the content of the whole BOM tree into the string
00335     stdair::DatePeriodList_T lDatePeriodList;
00336     BomRetriever::retrieveDatePeriodListFromKeySet (lBomRoot, ioOrigin,
00337                                                     ioDestination,
00338                                                     ioDepartureDate,
00339                                                     lDatePeriodList);

```

```

00340
00341     return (lDatePeriodList.size() != 0);
00342 }
00343
00344 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00345 std::string STDAIR_Service::csvDisplay() const {
00346     std::ostringstream oStr;
00347
00348     // Retrieve the StdAir service context
00349     assert (_stdairServiceContext != NULL);
00350     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00351
00352     // Retrieve the BOM tree root
00353     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00354
00355     // Dump the content of the whole BOM tree into the string
00356     BomDisplay::csvDisplay (oStr, lBomRoot);
00357
00358     return oStr.str();
00359 }
00360
00361 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00362 std::string STDAIR_Service::
00363 csvDisplay (const stdair::AirlineCode_T& iAirlineCode,
00364             const stdair::FlightNumber_T& iFlightNumber,
00365             const stdair::Date_T& iDepartureDate) const {
00366     std::ostringstream oStr;
00367
00368     // Retrieve the StdAir service context
00369     assert (_stdairServiceContext != NULL);
00370     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00371
00372     // Retrieve the BOM tree root
00373     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00374
00375     // Retrieve the flight-date object corresponding to the key
00376     FlightDate* lFlightDate_ptr =
00377         BomRetriever::retrieveFlightDateFromKeySet (lBomRoot, iAirlineCode,
00378                                                    iFlightNumber, iDepartureDate);
00379
00380     // Dump the content of the whole BOM tree into the string
00381     if (lFlightDate_ptr != NULL) {
00382         BomDisplay::csvDisplay (oStr, *lFlightDate_ptr);
00383     } else {
00384         oStr << "    No flight-date found for the given key: '"
00385             << iAirlineCode << iFlightNumber << " - " << iDepartureDate << "'";
00386     }
00387
00388     return oStr.str();
00389 }
00390
00391 //////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00392 std::string STDAIR_Service::
00393 csvDisplay (const TravelSolutionList_T& iTravelSolutionList) const {
00394
00395     // Dump the content of the whole list of travel solutions into the string
00396     std::ostringstream oStr;
00397     BomDisplay::csvDisplay (oStr, iTravelSolutionList);
00398 }

```



```

00399
00400     return ostr.str();
00401 }
00402
00403 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00404 std::string STDAIR_Service::
00405 csvDisplay (const stdair::AirportCode_T& iOrigin,
00406             const stdair::AirportCode_T& iDestination,
00407             const stdair::Date_T& iDepartureDate) const {
00408     std::ostringstream ostr;
00409
00410     // Retrieve the StdAir service context
00411     assert (_stdairServiceContext != NULL);
00412     const STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00413
00414     // Retrieve the BOM tree root
00415     BomRoot& lBomRoot = lSTDAIR_ServiceContext.getBomRoot();
00416
00417     // Retrieve the flight-date object corresponding to the key
00418     DatePeriodList_T lDatePeriodList;
00419     BomRetriever::retrieveDatePeriodListFromKeySet (lBomRoot, iOrigin,
00420                                                     iDestination, iDepartureDate,
00421                                                     lDatePeriodList);
00422
00423     // Dump the content of the whole BOM tree into the string
00424     if (lDatePeriodList.empty()) {
00425         ostr << "    No fare-rule found for the given key: '"
00426             << iOrigin << "-" << iDestination << " - " << iDepartureDate << "'";
00427     } else {
00428         BomDisplay::csvDisplay (ostr, lDatePeriodList);
00429     }
00430
00431     return ostr.str();
00432 }
00433
00434 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00435 void STDAIR_Service::finalise() {
00436     // Clean all the objects
00437     FacSupervisor::cleanAll();
00438 }
00439
00440 ///////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
00441 const Count_T& STDAIR_Service::
00442 getExpectedTotalNumberOfEventsToBeGenerated() const {
00443
00444     // Retrieve the StdAir service context
00445     assert (_stdairServiceContext != NULL);
00446     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00447
00448     // Retrieve the event queue object instance
00449     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00450
00451     // Delegate the call to the dedicated command
00452     const Count_T& oExpectedTotalNumberOfEventsToBeGenerated =
00453         lQueue.getExpectedTotalNbOfEvents();
00454
00455     //
00456     return oExpectedTotalNumberOfEventsToBeGenerated;
00457 }
00458

```

```

00459 ///////////////////////////////////////////////////////////////////
00460 const Count_T& STDAIR_Service::
00461 getExpectedTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType& iTy
pe) const {
00462     // Retrieve the StdAir service context
00463     assert (_stdairServiceContext != NULL);
00464     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00465
00466     // Retrieve the event queue object instance
00467     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00468
00469     // Delegate the call to the dedicated command
00470     const Count_T& oExpectedTotalNumberOfEventsToBeGenerated =
00471         lQueue.getExpectedTotalNbOfEvents (iType);
00472
00473     //
00474     return oExpectedTotalNumberOfEventsToBeGenerated;
00475 }
00476
00477 ///////////////////////////////////////////////////////////////////
00478 const Count_T& STDAIR_Service::
00479 getActualTotalNumberOfEventsToBeGenerated() const {
00480     // Retrieve the StdAir service context
00481     assert (_stdairServiceContext != NULL);
00482     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00483
00484     // Retrieve the event queue object instance
00485     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00486
00487     // Delegate the call to the dedicated command
00488     const Count_T& oActualTotalNumberOfEventsToBeGenerated =
00489         lQueue.getActualTotalNbOfEvents ();
00490
00491     //
00492     return oActualTotalNumberOfEventsToBeGenerated;
00493 }
00494
00495 ///////////////////////////////////////////////////////////////////
00496 const Count_T& STDAIR_Service::
00497 getActualTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType& iType
) const {
00498     // Retrieve the StdAir service context
00499     assert (_stdairServiceContext != NULL);
00500     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00501
00502     // Retrieve the event queue object instance
00503     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00504
00505     // Delegate the call to the dedicated command
00506     const Count_T& oActualTotalNumberOfEventsToBeGenerated =
00507         lQueue.getActualTotalNbOfEvents (iType);
00508
00509     //
00510     return oActualTotalNumberOfEventsToBeGenerated;
00511 }
00512
00513 ///////////////////////////////////////////////////////////////////
00514 ProgressStatusSet STDAIR_Service::popEvent (EventStruct& ioEventStruct) const {

```

```

00518
00519     // Retrieve the StdAir service context
00520     assert (_stdairServiceContext != NULL);
00521     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00522
00523     // Retrieve the event queue object instance
00524     EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00525
00526     // Extract the next event from the queue
00527     return lQueue.popEvent (ioEventStruct);
00528 }
00529
00530 // //////////////////////////////////////
00531 bool STDAIR_Service::isQueueDone() const {
00532
00533     // Retrieve the StdAir service context
00534     assert (_stdairServiceContext != NULL);
00535     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00536
00537     // Retrieve the event queue object instance
00538     const EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00539
00540     // Calculates whether the event queue has been fully emptied
00541     const bool isQueueDone = lQueue.isQueueDone();
00542
00543     //
00544     return isQueueDone;
00545 }
00546
00547 // //////////////////////////////////////
00548 void STDAIR_Service::reset() const {
00549
00550     // Retrieve the StdAir service context
00551     assert (_stdairServiceContext != NULL);
00552     STDAIR_ServiceContext& lSTDAIR_ServiceContext = *_stdairServiceContext;
00553
00554     // Retrieve the event queue object instance
00555     EventQueue& lQueue = lSTDAIR_ServiceContext.getEventQueue();
00556
00557     // Delegate the call to the event queue object
00558     lQueue.reset();
00559 }
00560
00561 }

```

### 35.523 stdair/service/STDAIR\_ServiceContext.cpp File Reference

#### 35.524 STDAIR\_ServiceContext.cpp

```

00001
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 #include <sstream>
00011 // StdAir
00012 #include <stdair/basic/BasConst_General.hpp>
00013 #include <stdair/bom/BomRoot.hpp>
00014 #include <stdair/bom/EventQueue.hpp>

```

```

00015 #include <stdair/factory/FacBom.hpp>
00016 #include <stdair/service/STDAIR_ServiceContext.hpp>
00017
00018 namespace stdair {
00019
00020 // //////////////////////////////////////
00021 STDAIR_ServiceContext::STDAIR_ServiceContext()
00022     : _bomRoot (NULL), _eventQueue (NULL),
00023       _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
00024     // Build the BomRoot object
00025     init();
00026 }
00027
00028 // //////////////////////////////////////
00029 STDAIR_ServiceContext::
00030 STDAIR_ServiceContext (const STDAIR_ServiceContext& iServiceContext)
00031     : _bomRoot (iServiceContext._bomRoot),
00032       _eventQueue (iServiceContext._eventQueue),
00033       _initType (ServiceInitialisationType::NOT_YET_INITIALISED) {
00034     assert (false);
00035 }
00036
00037 // //////////////////////////////////////
00038 STDAIR_ServiceContext::~STDAIR_ServiceContext () {
00039 }
00040
00041 // //////////////////////////////////////
00042 void STDAIR_ServiceContext::init () {
00043     //
00044     initBomRoot();
00045
00046     //
00047     initEventQueue();
00048 }
00049
00050 // //////////////////////////////////////
00051 void STDAIR_ServiceContext::initBomRoot () {
00052     _bomRoot = &FacBom<BomRoot>::instance().create();
00053 }
00054
00055 // //////////////////////////////////////
00056 void STDAIR_ServiceContext::initEventQueue () {
00057
00058     // The event queue key is just a string. For now, it is not used.
00059     const EventQueueKey lKey ("EQ01");
00060
00061     // Create an EventQueue object instance
00062     EventQueue& lEventQueue = FacBom<EventQueue>::instance().create (lKey);
00063
00064     // Store the event queue object
00065     _eventQueue = &lEventQueue;
00066 }
00067
00068 // //////////////////////////////////////
00069 const std::string STDAIR_ServiceContext::shortDisplay () const {
00070     std::ostringstream oStr;
00071     oStr << "STDAIR_ServiceContext -- " << _initType
00072         << " -- DB: " << _dbParams;
00073     if (_eventQueue != NULL) {
00074         oStr << " -- Queue: " << _eventQueue->toString();
00075     }
00076     return oStr.str();

```

```

00077     }
00078
00079     // //////////////////////////////////////
00080     const std::string STDAIR_ServiceContext::display() const {
00081         std::ostringstream oStr;
00082         oStr << shortDisplay();
00083         return oStr.str();
00084     }
00085
00086     // //////////////////////////////////////
00087     const std::string STDAIR_ServiceContext::describe() const {
00088         return shortDisplay();
00089     }
00090
00091     // //////////////////////////////////////
00092     BomRoot& STDAIR_ServiceContext::getBomRoot() const {
00093         assert (_bomRoot != NULL);
00094         return *_bomRoot;
00095     }
00096
00097     // //////////////////////////////////////
00098     EventQueue& STDAIR_ServiceContext::getEventQueue() const {
00099         assert (_eventQueue != NULL);
00100         return *_eventQueue;
00101     }
00102
00103 }
00104

```

### 35.525 stdair/service/STDAIR\_ServiceContext.hpp File Reference

```

#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/ServiceInitialisationType.hpp>
#include <stdair/service/ServiceAbstract.hpp>

```

#### Classes

- class [stdair::STDAIR\\_ServiceContext](#)  
Class holding the context of the Stdair services.

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

## 35.526 STDAIR\_ServiceContext.hpp

```

00001 #ifndef __STDAIR_SVC_STDAIRSERVICECONTEXT_HPP
00002 #define __STDAIR_SVC_STDAIRSERVICECONTEXT_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // StdAir
00010 #include <stdair/stdair_basic_types.hpp>
00011 #include <stdair/basic/BasLogParams.hpp>
00012 #include <stdair/basic/BasDBParams.hpp>
00013 #include <stdair/basic/ServiceInitialisationType.hpp>
00014 #include <stdair/service/ServiceAbstract.hpp>
00015
00016 namespace stdair {
00017
00019     class BomRoot;
00020     class EventQueue;
00021
00025     class STDAIR_ServiceContext : public ServiceAbstract {
00029         friend class STDAIR_Service;
00030         friend class FacSTDAIRServiceContext;
00031
00032     private:
00033         // ////////// Getters //////////
00037         BomRoot& getBomRoot() const;
00038
00042         EventQueue& getEventQueue() const;
00043
00047         const BasDBParams& getDBParams() const {
00048             return _dbParams;
00049         }
00050
00054         const ServiceInitialisationType& getServiceInitialisationType() const {
00055             return _initType;
00056         }
00057
00058
00059     private:
00060         // ////////// Setters //////////
00064         void setDBParams (const BasDBParams& iDBParams) {
00065             _dbParams = iDBParams;
00066         }
00067
00071         void setServiceInitialisationType (const ServiceInitialisationType& iSIT) {
00072             _initType = iSIT;
00073         }
00074
00075
00076     private:
00077         // ////////// Display Methods //////////
00081         const std::string shortDisplay() const;
00082
00086         const std::string display() const;
00087
00091         const std::string describe() const;
00092
00093
00094     private:

```

```

00095      // ////////// Construction / initialisation //////////
00099      STDAIR_ServiceContext();
00100
00107      STDAIR_ServiceContext (const STDAIR_ServiceContext&);
00108
00112      ~STDAIR_ServiceContext();
00113
00121      void init();
00122
00129      void initBomRoot();
00130
00137      void initEventQueue();
00138
00139
00140  private:
00141      // ////////// Children //////////
00145      BomRoot* _bomRoot;
00146
00150      EventQueue* _eventQueue;
00151
00155      BasDBParams _dbParams;
00156
00170      ServiceInitialisationType _initType;
00171  };
00172
00173 }
00174 #endif // __STDAIR_SVC_STDAIRSERVICECONTEXT_HPP

```

## 35.527 stdair/stdair\_basic\_types.hpp File Reference

```

#include <string>

#include <list>

```

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### Typedefs

- typedef std::string [stdair::LocationCode\\_T](#)
- typedef unsigned long int [stdair::Distance\\_T](#)
- typedef LocationCode\_T [stdair::AirportCode\\_T](#)
- typedef LocationCode\_T [stdair::CityCode\\_T](#)
- typedef std::string [stdair::KeyDescription\\_T](#)
- typedef std::string [stdair::AirlineCode\\_T](#)
- typedef unsigned short [stdair::FlightNumber\\_T](#)
- typedef unsigned short [stdair::GuillotineNumber\\_T](#)
- typedef std::string [stdair::CabinCode\\_T](#)
- typedef std::string [stdair::FamilyCode\\_T](#)
- typedef std::string [stdair::ClassCode\\_T](#)

- typedef unsigned long [stdair::Identity\\_T](#)
- typedef std::string [stdair::TripType\\_T](#)
- typedef double [stdair::MonetaryValue\\_T](#)
- typedef double [stdair::RealNumber\\_T](#)
- typedef double [stdair::Percentage\\_T](#)
- typedef double [stdair::PriceValue\\_T](#)
- typedef double [stdair::YieldValue\\_T](#)
- typedef std::string [stdair::PriceCurrency\\_T](#)
- typedef double [stdair::Revenue\\_T](#)
- typedef double [stdair::Multiplier\\_T](#)
- typedef double [stdair::NbOfSeats\\_T](#)
- typedef unsigned int [stdair::Count\\_T](#)
- typedef short [stdair::PartySize\\_T](#)
- typedef double [stdair::NbOfRequests\\_T](#)
- typedef NbOfRequests\_T [stdair::NbOfBookings\\_T](#)
- typedef NbOfRequests\_T [stdair::NbOfCancellations\\_T](#)
- typedef unsigned short [stdair::NbOfTravelSolutions\\_T](#)
- typedef std::string [stdair::ClassList\\_String\\_T](#)
- typedef unsigned short [stdair::NbOfSegments\\_T](#)
- typedef unsigned short [stdair::NbOfAirlines\\_T](#)
- typedef double [stdair::Availability\\_T](#)
- typedef double [stdair::Fare\\_T](#)
- typedef bool [stdair::Flag\\_T](#)
- typedef unsigned int [stdair::UnsignedIndex\\_T](#)
- typedef std::string [stdair::Filename\\_T](#)
- typedef std::string [stdair::FileAddress\\_T](#)
- typedef float [stdair::ProgressPercentage\\_T](#)

### 35.528 stdair\_basic\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_BASIC_TYPES_HPP
00002 #define __STDAIR_STDAIR_BASIC_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <list>
00010
00011 namespace stdair {
00012
00013 // //////////////////////////////////////
00014 // Basic types
00016 typedef std::string LocationCode_T;
00017
00019 typedef unsigned long int Distance_T;
00020
00022 typedef LocationCode_T AirportCode_T;
00023
00025 typedef LocationCode_T CityCode_T;

```



```
00026
00028     typedef std::string KeyDescription_T;
00029
00031     typedef std::string AirlineCode_T;
00032
00034     typedef unsigned short FlightNumber_T;
00035
00037     typedef unsigned short GuillotineNumber_T;
00038
00041     typedef std::string CabinCode_T;
00042
00044     typedef std::string FamilyCode_T;
00045
00048     typedef std::string ClassCode_T;
00049
00051     typedef unsigned long Identity_T;
00052
00055     typedef std::string TripType_T;
00056
00058     typedef double MonetaryValue_T;
00059
00061     typedef double RealNumber_T;
00062
00064     typedef double Percentage_T;
00065
00067     typedef double PriceValue_T;
00068
00070     typedef double YieldValue_T;
00071
00073     typedef std::string PriceCurrency_T;
00074
00076     typedef double Revenue_T;
00077
00079     typedef double Multiplier_T;
00080
00083     typedef double NbOfSeats_T;
00084
00086     typedef unsigned int Count_T;
00087
00089     typedef short PartySize_T;
00090
00092     typedef double NbOfRequests_T;
00093
00095     typedef NbOfRequests_T NbOfBookings_T;
00096
00098     typedef NbOfRequests_T NbOfCancellations_T;
00099
00102     typedef unsigned short NbOfTravelSolutions_T;
00103
00105     typedef std::string ClassList_String_T;
00106
00108     typedef unsigned short NbOfSegments_T;
00109
00111     typedef unsigned short NbOfAirlines_T;
00112
00114     typedef double Availability_T;
00115
00117     typedef double Fare_T;
00118
00120     typedef bool Flag_T;
00121
00123     typedef unsigned int UnsignedIndex_T;
```

```

00124
00125 // ////////////////// Technical //////////////////
00129 typedef std::string Filename_T;
00130
00133 typedef std::string FileAddress_T;
00134
00137 typedef float ProgressPercentage_T;
00138
00139 }
00140 #endif // __STDAIR_STDAIR_BASIC_TYPES_HPP

```

### 35.529 stdair/stdair\_date\_time\_types.hpp File Reference

```

#include <string>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/date_time/posix_time/posix_time.hpp>

```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef boost::posix\_time::time\_duration `stdair::Duration_T`
- typedef boost::gregorian::date `stdair::Date_T`
- typedef boost::posix\_time::time\_duration `stdair::Time_T`
- typedef boost::posix\_time::ptime `stdair::DateTime_T`
- typedef boost::gregorian::date\_period `stdair::DatePeriod_T`
- typedef std::string `stdair::DOW_String_T`
- typedef boost::gregorian::date\_duration `stdair::DateOffset_T`
- typedef unsigned int `stdair::DayDuration_T`
- typedef bool `stdair::SaturdayStay_T`
- typedef long int `stdair::IntDuration_T`
- typedef unsigned long long int `stdair::LongDuration_T`
- typedef float `stdair::FloatDuration_T`

### 35.530 stdair\_date\_time\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_DATE_TIME_TYPES_HPP
00002 #define __STDAIR_STDAIR_DATE_TIME_TYPES_HPP
00003
00004 // //////////////////
00005 // Import section
00006 // //////////////////
00007 // STL
00008 #include <string>
00009 // Boost (Extended STL)

```

```

00010 #include <boost/date_time/gregorian/gregorian.hpp>
00011 #include <boost/date_time/posix_time/posix_time.hpp>
00012
00013 namespace stdair {
00014
00015     // ////////// Type definitions //////////
00017     typedef boost::posix_time::time_duration Duration_T;
00018
00020     typedef boost::gregorian::date Date_T;
00021
00023     typedef boost::posix_time::time_duration Time_T;
00024
00026     typedef boost::posix_time::ptime DateTime_T;
00027
00029     typedef boost::gregorian::date_period DatePeriod_T;
00030
00032     typedef std::string DOW_String_T;
00033
00035     typedef boost::gregorian::date_duration DateOffset_T;
00036
00038     typedef unsigned int DayDuration_T;
00039
00041     typedef bool SaturdayStay_T;
00042
00044     typedef long int IntDuration_T;
00045
00047     typedef unsigned long long int LongDuration_T;
00048
00050     typedef float FloatDuration_T;
00051
00052 }
00053 #endif // __STDAIR_STDAIR_DATE_TIME_TYPES_HPP

```

### 35.531 stdair/stdair\_db.hpp File Reference

```
#include <string>
```

#### Namespaces

- namespace [soci](#)
- namespace [stdair](#)

*Handle on the StdAir library context.*

#### Typedefs

- typedef [soci::session](#) [stdair::DBSession\\_T](#)
- typedef [soci::statement](#) [stdair::DBRequestStatement\\_T](#)
- typedef [std::string](#) [stdair::DBConnectionName\\_T](#)

### 35.532 stdair\_db.hpp

```

00001 #ifndef __STDAIR_STDAIR_DB_HPP
00002 #define __STDAIR_STDAIR_DB_HPP

```

```

00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 // Forward declarations
00011 namespace soci {
00012     class session;
00013     class statement;
00014 }
00015
00016 namespace stdair {
00017
00018     // ////////// Type definitions //////////
00020     typedef soci::session DBSession_T;
00021
00023     typedef soci::statement DBRequestStatement_T;
00024
00026     typedef std::string DBConnectionName_T;
00027
00028 }
00029 #endif // __STDAIR_STDAIR_DB_HPP

```

### 35.533 stdair/stdair\_demand\_types.hpp File Reference

```

#include <string>
#include <vector>
#include <map>
#include <boost/random/linear_congruential.hpp>
#include <boost/random/uniform_real.hpp>
#include <boost/random/variante_generator.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/tuple/tuple.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_inventory_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## Typedefs

- typedef bool [stdair::ChangeFees\\_T](#)
- typedef bool [stdair::NonRefundable\\_T](#)
- typedef unsigned int [stdair::SaturdayStayRatio\\_T](#)
- typedef unsigned int [stdair::ChangeFeesRatio\\_T](#)
- typedef unsigned int [stdair::NonRefundableRatio\\_T](#)
- typedef std::string [stdair::PassengerType\\_T](#)
- typedef std::string [stdair::DistributionPatternId\\_T](#)
- typedef std::string [stdair::CancellationRateCurveId\\_T](#)
- typedef std::string [stdair::AirlinePreferenceId\\_T](#)
- typedef std::pair< Percentage\_T, Percentage\_T > [stdair::CancellationNoShowRatePair\\_T](#)
- typedef std::string [stdair::CharacteristicsPatternId\\_T](#)
- typedef std::string [stdair::CharacteristicsIndex\\_T](#)
- typedef double [stdair::WTP\\_T](#)
- typedef boost::tuples::tuple< double, WTP\_T > [stdair::CharacteristicsWTP\\_tuple\\_T](#)
- typedef std::pair< WTP\_T, MeanStdDevPair\_T > [stdair::WTPDemandPair\\_T](#)
- typedef NbOfRequests\_T [stdair::NbOfNoShows\\_T](#)
- typedef double [stdair::MatchingIndicator\\_T](#)
- typedef std::string [stdair::DemandStreamKeyStr\\_T](#)
- typedef std::string [stdair::ChannelLabel\\_T](#)
- typedef std::string [stdair::FrequentFlyer\\_T](#)
- typedef std::string [stdair::RequestStatus\\_T](#)
- typedef std::map< Identity\_T, Identity\_T > [stdair::BookingTSIDMap\\_T](#)
- typedef std::pair< CabinCode\_T, ClassCode\_T > [stdair::CabinClassPair\\_T](#)
- typedef std::list< CabinClassPair\_T > [stdair::CabinClassPairList\\_T](#)
- typedef double [stdair::ProportionFactor\\_T](#)
- typedef std::list< ProportionFactor\_T > [stdair::ProportionFactorList\\_T](#)
- typedef std::string [stdair::OnDString\\_T](#)
- typedef std::list< OnDString\_T > [stdair::OnDStringList\\_T](#)

## 35.534 stdair\_demand\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_DEMAND_TYPES_HPP
00002 #define __STDAIR_STDAIR_DEMAND_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 #include <map>
00011 // Boost Random
00012 #include <boost/random/linear_congruential.hpp>
00013 #include <boost/random/uniform_real.hpp>
00014 #include <boost/random/variante_generator.hpp>
00015 // Boost (Extended STL)

```

```
00016 #include <boost/date_time/gregorian/gregorian.hpp>
00017 #include <boost/date_time/posix_time/posix_time.hpp>
00018 #include <boost/tuple/tuple.hpp>
00019 // StdAir
00020 #include <stdair/stdair_basic_types.hpp>
00021 #include <stdair/stdair_maths_types.hpp>
00022 #include <stdair/stdair_inventory_types.hpp>
00023
00024
00025 namespace stdair {
00026
00027     // ////////// Type definitions //////////
00029     typedef bool ChangeFees_T;
00030
00032     typedef bool NonRefundable_T;
00033
00035     typedef bool SaturdayStay_T;
00036
00039     typedef unsigned int SaturdayStayRatio_T;
00040
00043     typedef unsigned int ChangeFeesRatio_T;
00044
00047     typedef unsigned int NonRefundableRatio_T;
00048
00051     typedef std::string PassengerType_T;
00052
00054     typedef std::string DistributionPatternId_T;
00055
00057     typedef std::string CancellationRateCurveId_T;
00058
00060     typedef std::string AirlinePreferenceId_T;
00061
00063     typedef std::pair<Percentage_T, Percentage_T> CancellationNoShowRatePair_T;
00064
00067     typedef std::string CharacteristicsPatternId_T;
00068
00070     typedef std::string CharacteristicsIndex_T;
00071
00073     typedef double WTP_T;
00074
00076     typedef boost::tuples::tuple<double, WTP_T> CharacteristicsWTP_tuple_T;
00077
00079     typedef std::pair<WTP_T, MeanStdDevPair_T> WTPDemandPair_T;
00080
00082     typedef NbOfRequests_T NbOfCancellations_T;
00083
00085     typedef NbOfRequests_T NbOfNoShows_T;
00086
00088     typedef double MatchingIndicator_T;
00089
00091     typedef std::string DemandStreamKeyStr_T;
00092
00094     typedef std::string ChannelLabel_T;
00095
00097     typedef std::string FrequentFlyer_T;
00098
00101     typedef std::string RequestStatus_T;
00102
00104     typedef std::map<Identity_T, Identity_T> BookingTSIDMap_T;
00105
00107     typedef std::pair<CabinCode_T, ClassCode_T> CabinClassPair_T;
00108
```

```

00110     typedef std::list<CabinClassPair_T> CabinClassPairList_T;
00111
00113     typedef double ProportionFactor_T;
00114
00116     typedef std::list<ProportionFactor_T> ProportionFactorList_T;
00117
00119     typedef std::string OnDString_T;
00120
00122     typedef std::list<OnDString_T> OnDStringList_T;
00123
00124 }
00125 #endif // __STDAIR_STDAIR_DEMAND_TYPES_HPP

```

### 35.535 stdair/stdair\_event\_types.hpp File Reference

```
#include <string>
```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef std::string `stdair::EventName_T`
- typedef double `stdair::NbOfEvents_T`
- typedef std::string `stdair::EventQueueID_T`
- typedef std::string `stdair::EventGeneratorKey_T`

### 35.536 stdair\_event\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_EVENT_TYPES_HPP
00002 #define __STDAIR_STDAIR_EVENT_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
00012     // ////////// Type definitions //////////
00014     typedef std::string EventName_T;
00015
00017     typedef double NbOfEvents_T;
00018
00020     typedef std::string EventQueueID_T;
00021
00023     typedef std::string EventGeneratorKey_T;
00024
00025 }
00026 #endif // __STDAIR_STDAIR_EVENT_TYPES_HPP

```

## 35.537 stdair/stdair\_exceptions.hpp File Reference

```
#include <string>
```

## Classes

- class [stdair::RootException](#)  
*Root of the stdair exceptions.*
- class [stdair::FileNotFoundException](#)
- class [stdair::NonInitialisedLogServiceException](#)
- class [stdair::NonInitialisedServiceException](#)
- class [stdair::NonInitialisedContainerException](#)
- class [stdair::NonInitialisedRelationShipException](#)
- class [stdair::MemoryAllocationException](#)
- class [stdair::ObjectLinkingException](#)
- class [stdair::DocumentNotFoundException](#)
- class [stdair::ParserException](#)
- class [stdair::SerialisationException](#)
- class [stdair::KeyNotFoundException](#)
- class [stdair::CodeConversionException](#)
- class [stdair::CodeDuplicationException](#)
- class [stdair::ObjectCreationDuplicationException](#)
- class [stdair::ObjectNotFoundException](#)
- class [stdair::ParsingFileFailedException](#)
- class [stdair::SQLDatabaseException](#)
- class [stdair::NonInitialisedDBSessionManagerException](#)
- class [stdair::SQLDatabaseConnectionImpossibleException](#)
- class [stdair::EventException](#)
- class [stdair::EventQueueException](#)

## Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

## 35.538 stdair\_exceptions.hpp

```
00001 #ifndef __STDAIR_STDAIR_EXCEPTIONS_HPP
00002 #define __STDAIR_STDAIR_EXCEPTIONS_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
```



```
00019 class RootException : public std::exception {
00020 public:
00024     RootException (const std::string& iWhat) : _what (iWhat) {}
00028     RootException() : _what ("No further details") {}
00029
00033     virtual ~RootException() throw() {}
00034
00038     const char* what() const throw() {
00039         return _what.c_str();
00040     }
00041
00042 protected:
00046     std::string _what;
00047 };
00048
00050 class FileNotFoundException : public RootException {
00051 public:
00053     FileNotFoundException (const std::string& iWhat) : RootException (iWhat) {}
00054 };
00055
00057 class NonInitialisedLogServiceException : public RootException {
00058 public:
00060     NonInitialisedLogServiceException (const std::string& iWhat)
00061         : RootException (iWhat) {}
00062 };
00063
00065 class NonInitialisedServiceException : public RootException {
00066 public:
00068     NonInitialisedServiceException (const std::string& iWhat)
00069         : RootException (iWhat) {}
00070 };
00071
00073 class NonInitialisedContainerException : public RootException {
00074 public:
00076     NonInitialisedContainerException (const std::string& iWhat)
00077         : RootException (iWhat) {}
00078 };
00079
00081 class NonInitialisedRelationshipException : public RootException {
00082 public:
00084     NonInitialisedRelationshipException (const std::string& iWhat)
00085         : RootException (iWhat) {}
00086 };
00087
00089 class MemoryAllocationException : public RootException {
00090 public:
00092     MemoryAllocationException (const std::string& iWhat)
00093         : RootException (iWhat) {}
00094 };
00095
00097 class ObjectLinkingException : public RootException {
00098 public:
00100     ObjectLinkingException (const std::string& iWhat) : RootException (iWhat) {}
00101 };
00102
00104 class DocumentNotFoundException : public RootException {
00105 public:
00107     DocumentNotFoundException (const std::string& iWhat)
00108         : RootException (iWhat) {}
00109 };
00110
00112 class ParserException : public RootException {
```

```
00113     public:
00115         ParseException (const std::string& iWhat) : RootException (iWhat) {}
00116     };
00117
00119     class SerialisationException : public RootException {
00120     public:
00122         SerialisationException (const std::string& iWhat) : RootException (iWhat) {}
00123     };
00124
00126     class KeyNotFoundException : public RootException {
00127     public:
00129         KeyNotFoundException (const std::string& iWhat) : RootException (iWhat) {}
00130     };
00131
00133     class CodeConversionException : public ParseException {
00134     public:
00136         CodeConversionException (const std::string& iWhat)
00137             : ParseException (iWhat) {}
00138     };
00139
00141     class CodeDuplicationException : public ParseException {
00142     public:
00144         CodeDuplicationException (const std::string& iWhat)
00145             : ParseException (iWhat) {}
00146     };
00147
00149     class ObjectCreationDuplicationException : public ParseException {
00150     public:
00152         ObjectCreationDuplicationException (const std::string& iWhat)
00153             : ParseException (iWhat) {}
00154     };
00155
00157     class ObjectNotFoundException : public RootException {
00158     public:
00160         ObjectNotFoundException (const std::string& iWhat)
00161             : RootException (iWhat) {}
00162     };
00163
00165     class ParsingFileFailedException : public ParseException {
00166     public:
00168         ParsingFileFailedException (const std::string& iWhat)
00169             : ParseException (iWhat) {}
00170     };
00171
00173     class SQLDatabaseException : public RootException {
00174     public:
00176         SQLDatabaseException (const std::string& iWhat) : RootException (iWhat) {}
00177     };
00178
00180     class NonInitialisedDBSessionManagerException : public RootException {
00181     public:
00183         NonInitialisedDBSessionManagerException (const std::string& iWhat)
00184             : RootException (iWhat) {}
00185     };
00186
00188     class SQLDatabaseConnectionImpossibleException : public SQLDatabaseException {
00189     public:
00191         SQLDatabaseConnectionImpossibleException (const std::string& iWhat)
00192             : SQLDatabaseException (iWhat) {}
00193     };
00194
00196     class EventException : public RootException {
```

```

00197     public:
00199         EventException (const std::string& iWhat) : RootException (iWhat) {}
00200     };
00201
00203     class EventQueueException : public RootException {
00204     public:
00206         EventQueueException (const std::string& iWhat) : RootException (iWhat) {}
00207     };
00208
00209 }
00210 #endif // __STDAIR_STDAIR_EXCEPTIONS_HPP

```

### 35.539 stdair/stdair\_fare\_types.hpp File Reference

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef double [stdair::NbOfFareRules\\_T](#)

### 35.540 stdair\_fare\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_FARE_TYPES_HPP
00002 #define __STDAIR_STDAIR_FARE_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007
00008 namespace stdair {
00009
00010     // ////////// Type definitions //////////
00012     typedef double NbOfFareRules_T;
00013
00014 }
00015 #endif // __STDAIR_STDAIR_FARE_TYPES_HPP

```

### 35.541 stdair/stdair\_file.hpp File Reference

```

#include <string>
#include <boost/utility.hpp>
#include <stdair/stdair_basic_types.hpp>

```

#### Classes

- class [stdair::RootFilePath](#)

*Root of the input and output files.*

- class `stdair::InputFilePath`

#### Namespaces

- namespace `stdair`

*Handle on the StdAir library context.*

#### 35.542 stdair\_file.hpp

```

00001 #ifndef __STDAIR_STDAIR_FILE_HPP
00002 #define __STDAIR_STDAIR_FILE_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 // Boost
00010 #include <boost/utility.hpp>
00011 // StdAir
00012 #include <stdair/stdair_basic_types.hpp>
00013
00014 namespace stdair {
00015
00022     class RootFilePath {
00023     public:
00027         RootFilePath (const Filename_T& iFilename) :
00028             _filename (iFilename) {}
00032         RootFilePath () : _filename ("MyFilename") {}
00033
00037         virtual ~RootFilePath() {}
00038
00042         const char * name() const {
00043             return _filename.c_str();
00044         }
00045
00046     protected:
00050         const Filename_T _filename;
00051     };
00052
00054     class InputFilePath : public RootFilePath {
00055     public:
00057         InputFilePath (const Filename_T& iFilename) :
00058             RootFilePath (iFilename) {}
00059     };
00060
00061 }
00062 #endif // __STDAIR_STDAIR_FILE_HPP

```

#### 35.543 stdair/stdair\_inventory\_types.hpp File Reference

```

#include <string>
#include <vector>

```

```
#include <map>
#include <list>
#include <boost/multi_array.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
```

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### Typedefs

- typedef std::string [stdair::NetworkID\\_T](#)
- typedef std::vector< AirlineCode\_T > [stdair::AirlineCodeList\\_T](#)
- typedef std::vector< ClassList\_String\_T > [stdair::ClassList\\_StringList\\_T](#)
- typedef std::vector< ClassCode\_T > [stdair::ClassCodeList\\_T](#)
- typedef unsigned short [stdair::SubclassCode\\_T](#)
- typedef std::string [stdair::FlightPathCode\\_T](#)
- typedef std::map< CabinCode\_T, ClassList\_String\_T > [stdair::CabinBookingClassMap\\_T](#)
- typedef double [stdair::CabinCapacity\\_T](#)
- typedef double [stdair::NbOfFlightDates\\_T](#)
- typedef double [stdair::CommittedSpace\\_T](#)
- typedef double [stdair::UPR\\_T](#)
- typedef double [stdair::BookingLimit\\_T](#)
- typedef double [stdair::AuthorizationLevel\\_T](#)
- typedef double [stdair::CapacityAdjustment\\_T](#)
- typedef double [stdair::BlockSpace\\_T](#)
- typedef bool [stdair::AvailabilityStatus\\_T](#)
- typedef std::vector< Availability\_T > [stdair::BucketAvailabilities\\_T](#)
- typedef double [stdair::NbOfYields\\_T](#)
- typedef double [stdair::NbOfInventoryControlRules\\_T](#)
- typedef bool [stdair::CensorshipFlag\\_T](#)
- typedef short [stdair::DTD\\_T](#)
- typedef short [stdair::DCP\\_T](#)
- typedef std::list< DCP\_T > [stdair::DCPList\\_T](#)
- typedef std::map< DTD\_T, RealNumber\_T > [stdair::DTDFratMap\\_T](#)
- typedef std::map< FloatDuration\_T, float > [stdair::DTDProbMap\\_T](#)
- typedef std::vector< CensorshipFlag\_T > [stdair::CensorshipFlagList\\_T](#)
- typedef double [stdair::BookingRatio\\_T](#)
- typedef double [stdair::Yield\\_T](#)
- typedef unsigned int [stdair::YieldLevel\\_T](#)

- typedef std::map< YieldLevel\_T, MeanStdDevPair\_T > stdair::YieldLevelDemandMap\_T
- typedef std::pair< Yield\_T, MeanStdDevPair\_T > stdair::YieldDemandPair\_T
- typedef double stdair::BidPrice\_T
- typedef std::vector< BidPrice\_T > stdair::BidPriceVector\_T
- typedef unsigned int stdair::SeatIndex\_T
- typedef std::string stdair::ControlMode\_T
- typedef double stdair::OverbookingRate\_T
- typedef double stdair::ProtectionLevel\_T
- typedef std::vector< double > stdair::EmsrValueList\_T
- typedef std::vector< double > stdair::BookingLimitVector\_T
- typedef std::vector< double > stdair::ProtectionLevelVector\_T
- typedef boost::multi\_array< double, 2 > stdair::SnapshotBlock\_T
- typedef SnapshotBlock\_T::index\_range stdair::SnapshotBlockRange\_T
- typedef SnapshotBlock\_T::array\_view< 1 >::type stdair::SegmentCabinDTDSnapshotView\_T
- typedef SnapshotBlock\_T::array\_view< 2 >::type stdair::SegmentCabinDTRangeSnapshotView\_T
- typedef SnapshotBlock\_T::const\_array\_view< 1 >::type stdair::ConstSegmentCabinDTDSnapshotView\_T
- typedef SnapshotBlock\_T::const\_array\_view< 2 >::type stdair::ConstSegmentCabinDTRangeSnapshotView\_T
- typedef unsigned short stdair::BlockNumber\_T
- typedef unsigned short stdair::BlockIndex\_T

### 35.544 stdair\_inventory\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_INVENTORY_TYPES_HPP
00002 #define __STDAIR_STDAIR_INVENTORY_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 #include <map>
00011 #include <list>
00012 // BOOST
00013 #include <boost/multi_array.hpp>
00014 // StdAir
00015 #include <stdair/stdair_basic_types.hpp>
00016 #include <stdair/stdair_maths_types.hpp>
00017 #include <stdair/stdair_date_time_types.hpp>
00018
00019 namespace stdair {
00020
00021     // ////////// Type definitions //////////
00023     typedef std::string NetworkID_T;
00024
00026     typedef std::vector<AirlineCode_T> AirlineCodeList_T;
00027
00029     typedef std::vector<ClassList_String_T> ClassList_StringList_T;

```

```
00030
00032     typedef std::vector<ClassCode_T> ClassCodeList_T;
00033
00037     typedef unsigned short SubclassCode_T;
00038
00040     typedef std::string FlightPathCode_T;
00041
00044     typedef std::map<CabinCode_T, ClassList_String_T> CabinBookingClassMap_T;
00045
00048     typedef double CabinCapacity_T;
00049
00051     typedef double NbOfFlightDates_T;
00052
00054     typedef double CommittedSpace_T;
00055
00057     typedef double UPR_T;
00058
00060     typedef double BookingLimit_T;
00061
00063     typedef double AuthorizationLevel_T;
00064
00066     typedef double CapacityAdjustment_T;
00067
00069     typedef double BlockSpace_T;
00070
00072     typedef bool AvailabilityStatus_T;
00073
00075     typedef std::vector<Availability_T> BucketAvailabilities_T;
00076
00078     typedef double NbOfYields_T;
00079
00081     typedef double NbOfInventoryControlRules_T;
00082
00084     typedef bool CensorshipFlag_T;
00085
00087     typedef short DTD_T;
00088
00090     typedef short DCP_T;
00091
00093     typedef std::list<DCP_T> DCPList_T;
00094
00096     typedef std::map<DTD_T, RealNumber_T> DTDFratMap_T;
00097
00099     typedef std::map<FloatDuration_T, float> DTDProbMap_T;
00100
00103     typedef std::vector<CensorshipFlag_T> CensorshipFlagList_T;
00104
00107     typedef double BookingRatio_T;
00108
00110     typedef double Yield_T;
00111
00113     typedef unsigned int YieldLevel_T;
00114
00116     typedef std::map<YieldLevel_T, MeanStdDevPair_T> YieldLevelDemandMap_T;
00117
00119     typedef std::pair<Yield_T, MeanStdDevPair_T> YieldDemandPair_T;
00120
00122     typedef double BidPrice_T;
00123
00125     typedef std::vector<BidPrice_T> BidPriceVector_T;
00126
00128     typedef unsigned int SeatIndex_T;
```

```

00129
00131  typedef std::string  ControlMode_T;
00132
00134  typedef double  OverbookingRate_T;
00135
00138  typedef double  BookingLimit_T;
00139
00142  typedef double  ProtectionLevel_T;
00143
00145  typedef std::vector<double>  EmsrValueList_T;
00146
00149  typedef std::vector<double>  BookingLimitVector_T;
00150
00153  typedef std::vector<double>  ProtectionLevelVector_T;
00154
00156  typedef boost::multi_array<double, 2>  SnapshotBlock_T;
00157
00159  typedef SnapshotBlock_T::index_range  SnapshotBlockRange_T;
00160
00162  typedef SnapshotBlock_T::array_view<1>::type  SegmentCabinDTDSnapshotView_T;
00163
00165  typedef SnapshotBlock_T::array_view<2>::type
SegmentCabinDTDRangeSnapshotView_T;
00166
00168  typedef SnapshotBlock_T::const_array_view<1>::type
ConstSegmentCabinDTDSnapshotView_T;
00169
00171  typedef SnapshotBlock_T::const_array_view<2>::type
ConstSegmentCabinDTDRangeSnapshotView_T;
00172
00174  typedef unsigned short  BlockNumber_T;
00175
00177  typedef unsigned short  BlockIndex_T;
00178
00179  }
00180 #endif // __STDAIR_STDAIR_INVENTORY_TYPES_HPP

```

## 35.545 stdair/stdair\_log.hpp File Reference

```
#include <string>
```

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*
- namespace [stdair::LOG](#)

### Enumerations

- enum [stdair::LOG::EN\\_LogLevel](#) {  
[stdair::LOG::CRITICAL](#) = 0, [stdair::LOG::ERROR](#), [stdair::LOG::NOTIFICATION](#),  
[stdair::LOG::WARNING](#),  
[stdair::LOG::DEBUG](#), [stdair::LOG::VERBOSE](#), [stdair::LOG::LAST\\_VALUE](#) }



## Variables

- static const std::string [stdair::LOG::\\_logLevels](#) [LAST\_VALUE]

## 35.546 stdair\_log.hpp

```

00001 #ifndef __STDAIR_STDAIR_LOG_HPP
00002 #define __STDAIR_STDAIR_LOG_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009
00010 namespace stdair {
00011
00012     // Forward declarations
00013     class STDAIR_Service;
00014
00015     // ////////////////////////////////// Log //////////////////////////////////
00016     namespace LOG {
00017         typedef enum {
00018             CRITICAL = 0,
00019             ERROR,
00020             NOTIFICATION,
00021             WARNING,
00022             DEBUG,
00023             VERBOSE,
00024             LAST_VALUE
00025         } EN_LogLevel;
00026
00027         static const std::string _logLevels[LAST_VALUE] =
00028             {"C", "E", "N", "W", "D", "V"};
00029     }
00030 }
00031
00032 #endif // __STDAIR_STDAIR_LOG_HPP

```

## 35.547 stdair/stdair\_maths\_types.hpp File Reference

```

#include <string>
#include <vector>
#include <map>
#include <boost/random/linear_congruential.hpp>
#include <boost/random/uniform_real.hpp>
#include <boost/random/normal_distribution.hpp>
#include <boost/random/exponential_distribution.hpp>
#include <boost/random/variante_generator.hpp>

```

## Namespaces

- namespace [stdair](#)

*Handle on the StdAir library context.*

## Typedefs

- typedef unsigned int [stdair::ReplicationNumber\\_T](#)
- typedef unsigned long int [stdair::ExponentialSeed\\_T](#)
- typedef unsigned long int [stdair::UniformSeed\\_T](#)
- typedef unsigned long int [stdair::RandomSeed\\_T](#)
- typedef boost::minstd\_rand [stdair::BaseGenerator\\_T](#)
- typedef boost::uniform\_real [stdair::UniformDistribution\\_T](#)
- typedef boost::variate\_generator< BaseGenerator\_T &, UniformDistribution\_T > [stdair::UniformGenerator\\_T](#)
- typedef boost::normal\_distribution [stdair::NormalDistribution\\_T](#)
- typedef boost::variate\_generator< BaseGenerator\_T &, NormalDistribution\_T > [stdair::NormalGenerator\\_T](#)
- typedef boost::exponential\_distribution [stdair::ExponentialDistribution\\_T](#)
- typedef boost::variate\_generator< BaseGenerator\_T &, ExponentialDistribution\_T > [stdair::ExponentialGenerator\\_T](#)
- typedef double [stdair::MeanValue\\_T](#)
- typedef double [stdair::StdDevValue\\_T](#)
- typedef std::pair< MeanValue\_T, StdDevValue\_T > [stdair::MeanStdDevPair\\_T](#)
- typedef float [stdair::Probability\\_T](#)

## 35.548 stdair\_maths\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_MATHS_TYPES_HPP
00002 #define __STDAIR_STDAIR_MATHS_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 #include <map>
00011 // Boost Random
00012 #include <boost/random/linear_congruential.hpp>
00013 #include <boost/random/uniform_real.hpp>
00014 #include <boost/random/normal_distribution.hpp>
00015 #include <boost/random/exponential_distribution.hpp>
00016 #include <boost/random/variate_generator.hpp>
00017
00018 namespace stdair {
00019
00020 // ////////// Type definitions //////////
00024 typedef unsigned int ReplicationNumber_T;
00025
00029 typedef unsigned long int ExponentialSeed_T;
00030

```

```

00034  typedef unsigned long int UniformSeed_T;
00035
00039  typedef unsigned long int RandomSeed_T;
00040
00044  typedef boost::minstd_rand BaseGenerator_T;
00045
00049  typedef boost::uniform_real<> UniformDistribution_T;
00050
00054  typedef boost::variate_generator<BaseGenerator_T&,
00055                                UniformDistribution_T> UniformGenerator_T;
00056
00060  typedef boost::normal_distribution<> NormalDistribution_T;
00061
00065  typedef boost::variate_generator<BaseGenerator_T&,
00066                                NormalDistribution_T> NormalGenerator_T;
00067
00069  typedef boost::exponential_distribution<> ExponentialDistribution_T;
00070
00071
00073  typedef boost::variate_generator<BaseGenerator_T&,
00074                                ExponentialDistribution_T>
ExponentialGenerator_T;
00075
00079  typedef double MeanValue_T;
00080
00084  typedef double StdDevValue_T;
00085
00089  typedef std::pair<MeanValue_T, StdDevValue_T> MeanStdDevPair_T;
00090
00094  typedef float Probability_T;
00095
00096 }
00097 #endif // __STDAIR_STDAIR_MATHS_TYPES_HPP

```

### 35.549 stdair/stdair\_rm\_types.hpp File Reference

```

#include <string>
#include <vector>
#include <stdair/stdair_basic_types.hpp>

```

#### Namespaces

- namespace [stdair](#)  
Handle on the StdAir library context.

#### Typedefs

- typedef std::string [stdair::ForecasterMode\\_T](#)
- typedef short [stdair::HistoricalDataLimit\\_T](#)
- typedef std::string [stdair::OptimizerMode\\_T](#)
- typedef NbOfBookings\_T [stdair::PolicyDemand\\_T](#)
- typedef std::vector< double > [stdair::GeneratedDemandVector\\_T](#)

- typedef std::vector< GeneratedDemandVector\_T > stdair::GeneratedDemandVectorHolder\_T
- typedef double stdair::SellupProbability\_T
- typedef std::vector< SellupProbability\_T > stdair::SellupProbabilityVector\_T
- typedef std::vector< double > stdair::SellupFactorHolder\_T

### 35.550 stdair\_rm\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_RM_TYPES_HPP
00002 #define __STDAIR_STDAIR_RM_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // STL
00008 #include <string>
00009 #include <vector>
00010 // StdAir
00011 #include <stdair/stdair_basic_types.hpp>
00012
00013 namespace stdair {
00014
00015     // ////////// Type definitions //////////
00017     typedef std::string ForecasterMode_T;
00018
00020     typedef short HistoricalDataLimit_T;
00021
00023     typedef std::string OptimizerMode_T;
00024
00026     typedef NbOfBookings_T PolicyDemand_T;
00027
00030     typedef std::vector<double> GeneratedDemandVector_T;
00031
00033     typedef std::vector<GeneratedDemandVector_T> GeneratedDemandVectorHolder_T;
00034
00036     typedef double SellupProbability_T;
00037
00039     typedef std::vector<SellupProbability_T> SellupProbabilityVector_T;
00040
00042     typedef std::vector<double> SellupFactorHolder_T;
00043
00044 }
00045 #endif // __STDAIR_STDAIR_RM_TYPES_HPP

```

### 35.551 stdair/STDAIR\_Service.hpp File Reference

```

#include <string>

#include <stdair/stdair_inventory_types.hpp>

#include <stdair/stdair_service_types.hpp>

#include <stdair/basic/BasLogParams.hpp>

#include <stdair/basic/BasDBParams.hpp>

#include <stdair/basic/ServiceInitialisationType.hpp>

```

```
#include <stdair/basic/EventType.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
```

### Classes

- class [stdair::STDAIR\\_Service](#)  
*Interface for the STDAIR Services.*

### Namespaces

- namespace [stdair](#)  
*Handle on the StdAir library context.*

### 35.552 STDAIR\_Service.hpp

```
00001
00012 #ifndef __STDAIR_STDAIR_HPP
00013 #define __STDAIR_STDAIR_HPP
00014
00015 // //////////////////////////////////////
00016 // Import section
00017 // //////////////////////////////////////
00018 // STL
00019 #include <string>
00020 // StdAir
00021 #include <stdair/stdair_inventory_types.hpp>
00022 #include <stdair/stdair_service_types.hpp>
00023 #include <stdair/basic/BasLogParams.hpp>
00024 #include <stdair/basic/BasDBParams.hpp>
00025 #include <stdair/basic/ServiceInitialisationType.hpp>
00026 #include <stdair/basic/EventType.hpp>
00027 #include <stdair/bom/TravelSolutionTypes.hpp>
00028
00029 namespace stdair {
00030
00031     class BomRoot;
00032     class EventQueue;
00033     class EventStruct;
00034     struct ProgressStatusSet;
00035     struct BookingRequestStruct;
00036     class STDAIR_ServiceContext;
00037
00038
00039
00040     class STDAIR_Service {
00041     public:
00042         // ////////////////////////////////// Constructors and destructors //////////////////////////////////
00043         STDAIR_Service();
00044
00045         STDAIR_Service (const BasLogParams&);
00046
00047         STDAIR_Service (const BasLogParams&, const BasDBParams&);
00048
00049         ~STDAIR_Service();
00050
00051
00052
00053
00054
00055
00056
00057
00058
00059
00060
00061
00062
00063
00064
00065
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00075
00076
00077
00078
00079
00080
00081
00082
00083
00084
00085
00086
```

```
00087 public:
00088 // //////////////// Business support methods ////////////////
00108 void buildSampleBom();
00109
00131 void buildDummyInventory (const CabinCapacity_T& iCabinCapacity);
00132
00147 void buildSampleTravelSolutionForPricing (TravelSolutionList_T&);
00148
00166 void buildSampleTravelSolutions (TravelSolutionList_T&);
00167
00196 BookingRequestStruct buildSampleBookingRequest (const bool isForCRS = false);
00197
00212 const Count_T& getExpectedTotalNumberOfEventsToBeGenerated() const;
00213
00230 const Count_T&
00231 getExpectedTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType&)
const;
00232
00245 const Count_T& getActualTotalNumberOfEventsToBeGenerated() const;
00246
00260 const Count_T&
00261 getActualTotalNumberOfEventsToBeGenerated (const EventType::EN_EventType&) co
nst;
00262
00279 ProgressStatusSet popEvent (EventStruct&) const;
00280
00286 bool isQueueDone() const;
00287
00292 void reset() const;
00293
00294
00295 public:
00296 // //////////////// Export support methods ////////////////
00306 std::string jsonExport (const AirlineCode_T&, const FlightNumber_T&,
00307 const Date_T& iDepartureDate) const;
00308
00309
00310 public:
00311 // //////////////// Display support methods ////////////////
00325 std::string list (const AirlineCode_T& iAirlineCode = "all",
00326 const FlightNumber_T& iFlightNumber = 0) const;
00327
00334 std::string listAirportPairDateRange () const;
00335
00345 bool check (const AirlineCode_T&, const FlightNumber_T&,
00346 const Date_T& iDepartureDate) const;
00347
00360 bool check (const AirportCode_T&, const AirportCode_T&,
00361 const Date_T& iDepartureDate) const;
00362
00370 std::string csvDisplay() const;
00371
00381 std::string csvDisplay (const AirlineCode_T&, const FlightNumber_T&,
00382 const Date_T& iDepartureDate) const;
00383
00391 std::string csvDisplay (const TravelSolutionList_T&) const;
00392
00403 std::string csvDisplay (const AirportCode_T&, const AirportCode_T&,
00404 const Date_T& iDepartureDate) const;
00405
00406
```

```

00407 public:
00408     // //////////// Getters ////////////
00417     BomRoot& getBomRoot() const;
00418
00427     EventQueue& getEventQueue() const;
00428
00434     BasLogParams getLogParams() const;
00435
00442     const BasDBParams& getDBParams() const;
00443
00452     const ServiceInitialisationType& getServiceInitialisationType() const;
00453
00454
00455 private:
00456     // //////////// Construction and Destruction helper methods ////////////
00463     STDAIR_Service (const STDAIR_Service&);
00464
00469     void initServiceContext();
00470
00488     void logInit (const BasLogParams&);
00489
00495     void dbInit (const BasDBParams&);
00496
00512     void init();
00513
00517     void finalise();
00518
00519
00520 private:
00521     // //////////// Service Context ////////////
00525     STDAIR_ServiceContext* _stdairServiceContext;
00526 };
00527 }
00528 #endif // __STDAIR_STDAIR_HPP

```

### 35.553 stdair/stdair\_service\_types.hpp File Reference

```
#include <boost/shared_ptr.hpp>
```

#### Namespaces

- namespace `stdair`  
Handle on the StdAir library context.

#### Typedefs

- typedef `boost::shared_ptr< STDAIR_Service >` `stdair::STDAIR_ServicePtr_T`

### 35.554 stdair\_service\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_SERVICE_HPP
00002 #define __STDAIR_STDAIR_SERVICE_HPP
00003
00004 // ////////////

```

```

00005 // Import section
00006 // //////////////////////////////////////
00007 // Boost (Extended STL)
00008 #include <boost/shared_ptr.hpp>
00009
00010 namespace stdair {
00011
00012     // Forward declarations
00013     class STDAIR_Service;
00014
00015     typedef boost::shared_ptr<STDAIR_Service> STDAIR_ServicePtr_T;
00016
00017 }
00018 #endif // __STDAIR_STDAIR_SERVICE_HPP

```

### 35.555 stdair/stdair\_types.hpp File Reference

```

#include <stdair/stdair_exceptions.hpp>
#include <stdair/stdair_log.hpp>
#include <stdair/stdair_db.hpp>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_maths_types.hpp>
#include <stdair/stdair_fare_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/stdair_rm_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_service_types.hpp>

```

### 35.556 stdair\_types.hpp

```

00001 #ifndef __STDAIR_STDAIR_TYPES_HPP
00002 #define __STDAIR_STDAIR_TYPES_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 // StdAir
00008 #include <stdair/stdair_exceptions.hpp>
00009 #include <stdair/stdair_log.hpp>
00010 #include <stdair/stdair_db.hpp>
00011 #include <stdair/stdair_basic_types.hpp>
00012 #include <stdair/stdair_demand_types.hpp>
00013 #include <stdair/stdair_maths_types.hpp>
00014 #include <stdair/stdair_fare_types.hpp>
00015 #include <stdair/stdair_inventory_types.hpp>
00016 #include <stdair/stdair_rm_types.hpp>
00017 #include <stdair/stdair_date_time_types.hpp>
00018 #include <stdair/stdair_service_types.hpp>
00019

```



```
00020 #endif // __STDAIR_STDAIR_TYPES_HPP
```

## 35.557 stdair/ui/cmdline/readline\_autocomp.hpp File Reference

```
#include <string>
#include <iosfwd>
#include <cstdio>
#include <sys/types.h>
#include <sys/file.h>
#include <sys/stat.h>
#include <sys/errno.h>
#include <readline/readline.h>
#include <readline/history.h>
```

### Classes

- struct [COMMAND](#)

### Typedefs

- typedef int(\* [pt2Func](#) )(char \*)

### Functions

- char \* [getwd](#) ()
- char \* [xmalloc](#) (size\_t)
- int [com\\_list](#) (char \*)
- int [com\\_view](#) (char \*)
- int [com\\_rename](#) (char \*)
- int [com\\_stat](#) (char \*)
- int [com\\_pwd](#) (char \*)
- int [com\\_delete](#) (char \*)
- int [com\\_help](#) (char \*)
- int [com\\_cd](#) (char \*)
- int [com\\_quit](#) (char \*)
- char \* [stripwhite](#) (char \*iString)
- [COMMAND](#) \* [find\\_command](#) (char \*iString)
- char \* [dupstr](#) (char \*iString)
- int [execute\\_line](#) (char \*line)
- char \* [command\\_generator](#) (char \*text, int state)
- char \*\* [fileman\\_completion](#) (char \*text, int start, int end)
- void [initialize\\_readline](#) ()

- void [too\\_dangerous](#) (char \*caller)
- int [valid\\_argument](#) (char \*caller, char \*arg)

#### Variables

- [COMMAND commands](#) []
- int [done](#)
- static char [syscom](#) [1024]

### 35.557.1 Typedef Documentation

#### 35.557.1.1 typedef int(\* pt2Func)(char \*)

Definition at line 35 of file [readline\\_autocomp.hpp](#).

### 35.557.2 Function Documentation

#### 35.557.2.1 char\* getwd ( )

[readline\\_autocomp.hpp](#) -- A tiny application which demonstrates how to use the GNU Readline library. This application interactively allows users to manipulate files and their modes.

Referenced by [com\\_pwd\(\)](#).

#### 35.557.2.2 char\* xmalloc ( size\_t )

Referenced by [dupstr\(\)](#).

#### 35.557.2.3 void com\_list ( char \* arg )

List the file(s) named in arg.

Definition at line 264 of file [readline\\_autocomp.hpp](#).

#### 35.557.2.4 int com\_view ( char \* arg )

Definition at line 274 of file [readline\\_autocomp.hpp](#).

References [valid\\_argument\(\)](#).

#### 35.557.2.5 int com\_rename ( char \* arg )

Definition at line 284 of file [readline\\_autocomp.hpp](#).

References [too\\_dangerous\(\)](#).

#### 35.557.2.6 int com\_stat ( char \* arg )

Definition at line 289 of file [readline\\_autocomp.hpp](#).

References [valid\\_argument\(\)](#).

#### 35.557.2.7 int com\_pwd ( char \* *ignore* )

Definition at line 367 of file [readline\\_autocomp.hpp](#).

References [getwd\(\)](#).

Referenced by [com\\_cd\(\)](#).

#### 35.557.2.8 int com\_delete ( char \* *arg* )

Definition at line 315 of file [readline\\_autocomp.hpp](#).

References [too\\_dangerous\(\)](#).

#### 35.557.2.9 int com\_help ( char \* *arg* )

Print out help for ARG, or for all of the commands if ARG is not present.

Definition at line 324 of file [readline\\_autocomp.hpp](#).

References [COMMAND::name](#).

#### 35.557.2.10 int com\_cd ( char \* *arg* )

Definition at line 356 of file [readline\\_autocomp.hpp](#).

References [com\\_pwd\(\)](#).

#### 35.557.2.11 int com\_quit ( char \* *arg* )

Definition at line 381 of file [readline\\_autocomp.hpp](#).

#### 35.557.2.12 char \* stripwhite ( char \* *string* )

Strip whitespace from the start and end of STRING. Return a pointer into STRING.

Definition at line 152 of file [readline\\_autocomp.hpp](#).

#### 35.557.2.13 COMMAND \* find\_command ( char \* *name* )

Look up NAME as the name of a command, and return a pointer to that command. Return a NULL pointer if NAME isn't a command name.

Definition at line 136 of file [readline\\_autocomp.hpp](#).

References [COMMAND::name](#).

Referenced by [execute\\_line\(\)](#).

#### 35.557.2.14 char\* dupstr ( char \* *iString* )

Duplicate a string

Definition at line 85 of file [readline\\_autocomp.hpp](#).

References [xmalloc\(\)](#).

Referenced by [command\\_generator\(\)](#).

### 35.557.2.15 int execute\_line ( char \* line )

Execute a command line.

Definition at line 94 of file [readline\\_autocomp.hpp](#).

References [find\\_command\(\)](#), and [COMMAND::func](#).

### 35.557.2.16 char \* command\_generator ( char \* text, int state )

Generator function for command completion. STATE lets us know whether to start from scratch; without any state (i.e. STATE == 0), then we start at the top of the list.

Definition at line 222 of file [readline\\_autocomp.hpp](#).

References [dupstr\(\)](#).

Referenced by [fileman\\_completion\(\)](#).

### 35.557.2.17 char \*\* fileman\_completion ( char \* text, int start, int end )

Attempt to complete on the contents of TEXT. START and END bound the region of rl\_line\_buffer that contains the word to complete. TEXT is the word to complete. We can use the entire contents of rl\_line\_buffer in case we want to do some simple parsing. Return the array of matches, or NULL if there aren't any.

Definition at line 200 of file [readline\\_autocomp.hpp](#).

References [command\\_generator\(\)](#).

Referenced by [initialize\\_readline\(\)](#).

### 35.557.2.18 void initialize\_readline ( )

Tell the GNU Readline library how to complete. We want to try to complete on command names if this is the first word in the line, or on filenames if not.

Definition at line 185 of file [readline\\_autocomp.hpp](#).

References [fileman\\_completion\(\)](#).

### 35.557.2.19 void too\_dangerous ( char \* caller )

Definition at line 387 of file [readline\\_autocomp.hpp](#).

Referenced by [com\\_delete\(\)](#), and [com\\_rename\(\)](#).

### 35.557.2.20 int valid\_argument ( char \* caller, char \* arg )

Definition at line 395 of file [readline\\_autocomp.hpp](#).

Referenced by [com\\_stat\(\)](#), and [com\\_view\(\)](#).

## 35.557.3 Variable Documentation

## 35.557.3.1 COMMAND commands[]

Initial value:

```
{
  { "cd", (*com_cd)(), "Change to directory DIR" },
  { "delete", com_delete, "Delete FILE" },
  { "help", com_help, "Display this text" },
  { "?", com_help, "Synonym for 'help'" },
  { "list", com_list, "List files in DIR" },
  { "ls", com_list, "Synonym for 'list'" },
  { "pwd", com_pwd, "Print the current working directory" },
  { "quit", com_quit, "Quit using airinv" },
  { "rename", com_rename, "Rename FILE to NEWNAME" },
  { "stat", com_stat, "Print out statistics on FILE" },
  { "view", com_view, "View the contents of FILE" },
  { (char*) NULL, (pt2Func) NULL, (char*) NULL }
}
```

Definition at line 58 of file [readline\\_autocomp.hpp](#).

## 35.557.3.2 int done

When non-zero, this global means the user is done using this program.

Definition at line 80 of file [readline\\_autocomp.hpp](#).

## 35.557.3.3 char syscom[1024] [static]

String to pass to system(). This is for the LIST, VIEW and RENAME commands.

Definition at line 259 of file [readline\\_autocomp.hpp](#).

## 35.558 readline\_autocomp.hpp

```
00001
00006 #ifndef __AIRINV_READLINE_AUTOCOMP_HPP
00007 #define __AIRINV_READLINE_AUTOCOMP_HPP
00008
00009 // STL
00010 #include <string>
00011 #include <iosfwd>
00012 #include <cstdio>
00013 #include <sys/types.h>
00014 #include <sys/file.h>
00015 #include <sys/stat.h>
00016 #include <sys/errno.h>
00017
00018 #include <readline/readline.h>
00019 #include <readline/history.h>
00020
00021 extern char* getwd();
00022 extern char* xmalloc (size_t);
00023
00024 /* The names of functions that actually do the manipulation. */
00025 int com_list (char*);
00026 int com_view (char*);
00027 int com_rename (char*);
```

```
00028 int com_stat (char*);
00029 int com_pwd (char*);
00030 int com_delete (char*);
00031 int com_help (char*);
00032 int com_cd (char*);
00033 int com_quit (char*);
00034
00035 typedef int (*pt2Func) (char*);
00036
00041 typedef struct {
00045     char const* name;
00046
00050     pt2Func *func;
00051
00055     char *doc;
00056 } COMMAND;
00057
00058 COMMAND commands[] = {
00059     { "cd", (*com_cd)(), "Change to directory DIR" },
00060     { "delete", com_delete, "Delete FILE" },
00061     { "help", com_help, "Display this text" },
00062     { "?", com_help, "Synonym for 'help'" },
00063     { "list", com_list, "List files in DIR" },
00064     { "ls", com_list, "Synonym for 'list'" },
00065     { "pwd", com_pwd, "Print the current working directory" },
00066     { "quit", com_quit, "Quit using airinv" },
00067     { "rename", com_rename, "Rename FILE to NEWNAME" },
00068     { "stat", com_stat, "Print out statistics on FILE" },
00069     { "view", com_view, "View the contents of FILE" },
00070     { (char*) NULL, (pt2Func) NULL, (char*) NULL }
00071 };
00072
00073 // Forward declarations
00074 char* stripwhite (char* iString);
00075 COMMAND* find_command (char* iString);
00076
00080 int done;
00081
00085 char* dupstr (char* iString) {
00086     char* r = xmalloc (std::strlen (iString) + 1);
00087     strcpy (r, iString);
00088     return r;
00089 }
00090
00094 int execute_line (char* line) {
00095     register int i;
00096     COMMAND* command;
00097     char* word;
00098
00099     /* Isolate the command word. */
00100     i = 0;
00101     while (line[i] && whitespace (line[i])) {
00102         i++;
00103     }
00104     word = line + i;
00105
00106     while (line[i] && !whitespace (line[i])) {
00107         i++;
00108     }
00109
00110     if (line[i]) {
00111         line[i++] = '\0';
```

```
00112     }
00113
00114     command = find_command (word);
00115
00116     if (!command) {
00117         std::cerr << word << ": No such command for airinv." << std::endl;
00118         return -1;
00119     }
00120
00121     /* Get argument to command, if any. */
00122     while (whitespace (line[i])) {
00123         i++;
00124     }
00125
00126     word = line + i;
00127
00128     /* Call the function. */
00129     return (*(command->func)) (word);
00130 }
00131
00132 COMMAND* find_command (char* name) {
00133     register int i;
00134
00135     for (i = 0; commands[i].name; i++) {
00136         if (strcmp (name, commands[i].name) == 0) {
00137             return (&commands[i]);
00138         }
00139     }
00140
00141     return (COMMAND*) NULL;
00142 }
00143
00144 char* stripwhite (char* string) {
00145     register char *s, *t;
00146
00147     for (s = string; whitespace (*s); s++) {
00148     }
00149
00150     if (*s == 0) {
00151         return s;
00152     }
00153
00154     t = s + strlen (s) - 1;
00155     while (t > s && whitespace (*t)) {
00156         t--;
00157     }
00158     *++t = '\0';
00159
00160     return s;
00161 }
00162
00163 /* ***** */
00164 /*
00165 /*          Interface to Readline Completion
00166 /*
00167 /* ***** */
00168
00169 char* command_generator (char* text, int state);
00170 char** fileman_completion (char* text, int start, int end);
00171
00172 void initialize_readline() {
00173     /* Allow conditional parsing of the ~/.inputrc file. */
```

```
00187   rl_readline_name = "airinv";
00188
00189   /* Tell the completer that we want a crack first. */
00190   rl_attempted_completion_function = (rl_completion_func_t*) fileman_completion;
00191 }
00192
00200 char** fileman_completion (char* text, int start, int end) {
00201   char **matches;
00202
00203   matches = (char**) NULL;
00204
00210   if (start == 0) {
00211     matches = completion_matches (text, command_generator);
00212   }
00213
00214   return matches;
00215 }
00216
00222 char* command_generator (char* text, int state) {
00223   static int list_index, len;
00224   char* name;
00225
00231   if (!state) {
00232     list_index = 0;
00233     len = strlen (text);
00234   }
00235
00236   /* Return the next name which partially matches from the command list. */
00237   while (name = commands[list_index].name) {
00238     ++list_index;
00239
00240     if (strncmp (name, text, len) == 0) {
00241       return dupstr (name);
00242     }
00243   }
00244
00245   /* If no names matched, then return NULL. */
00246   return (char*) NULL;
00247 }
00248
00249 /* ***** */
00250 /* ***** */
00251 /*             airinv Commands             */
00252 /* ***** */
00253 /* ***** */
00254
00259 static char syscom[1024];
00260
00264 void com_list (char* arg) {
00265   if (!arg) {
00266     arg = "";
00267   }
00268
00269   std::ostringstream ostr;
00270   ostr << "ls -FClg " << arg;
00271   return system (ostr.c_str());
00272 }
00273
00274 int com_view (char* arg) {
00275   if (!valid_argument ("view", arg)) {
00276     return 1;
00277   }
}
```



```

00278
00279     std::ostringstream oStr;
00280     oStr << "more " << arg;
00281     return system (syscom);
00282 }
00283
00284 int com_rename (char* arg) {
00285     too_dangerous ("rename");
00286     return 1;
00287 }
00288
00289 int com_stat (char* arg) {
00290     struct stat finfo;
00291
00292     if (!valid_argument ("stat", arg)) {
00293         return 1;
00294     }
00295
00296     if (stat (arg, &finfo) == -1) {
00297         perror (arg);
00298         return 1;
00299     }
00300
00301     std::cout << "Statistics for `" << arg << "':" << std::endl;
00302
00303     const std::string lPluralEnd1 = (finfo.st_nlink == 1) ? "" : "s";
00304     const std::string lPluralEnd2 = (finfo.st_size == 1) ? "" : "s";
00305     std::cout << arg << " has "
00306               << finfo.st_nlink << " link" << lPluralEnd1 << ", and is "
00307               << finfo.st_size << " byte" << lPluralEnd2 << " in length."
00308               << std::endl;
00309     std::cout << " Inode Last Change at: " << ctime (&finfo.st_ctime) << std::endl;
00310
00311     std::cout << " Last access at: " << ctime (&finfo.st_atime) << std::endl;
00312     std::cout << " Last modified at: " << ctime (&finfo.st_mtime) << std::endl;
00313     return 0;
00314 }
00315
00316 int com_delete (char* arg) {
00317     too_dangerous ("delete");
00318     return 1;
00319 }
00320
00321 int com_help (char* arg) {
00322     register int i;
00323     int printed = 0;
00324
00325     for (i = 0; commands[i].name; i++) {
00326         if (!*arg || (strcmp (arg, commands[i].name) == 0)) {
00327             printf ("%s\t\t%s.\n", commands[i].name, commands[i].doc);
00328             printed++;
00329         }
00330     }
00331
00332     if (!printed) {
00333         printf ("No commands match '%s'. Possibilities are:\n", arg);
00334
00335         for (i = 0; commands[i].name; i++) {
00336             /* Print in six columns. */
00337             if (printed == 6) {
00338                 printed = 0;
00339                 printf ("\n");
00340             }
00341         }
00342     }

```

```
00343     }
00344
00345     printf ("%s\t", commands[i].name);
00346     printed++;
00347 }
00348
00349     if (printed)
00350     printf ("\n");
00351 }
00352     return 0;
00353 }
00354
00355 /* Change to the directory ARG. */
00356 int com_cd (char* arg) {
00357     if (chdir (arg) == -1) {
00358         perror (arg);
00359         return 1;
00360     }
00361
00362     com_pwd ("");
00363     return 0;
00364 }
00365
00366 /* Print out the current working directory. */
00367 int com_pwd (char* ignore) {
00368     char dir[1024], *s;
00369
00370     s = getwd (dir);
00371     if (s == 0) {
00372         printf ("Error getting pwd: %s\n", dir);
00373         return 1;
00374     }
00375
00376     printf ("Current directory is %s\n", dir);
00377     return 0;
00378 }
00379
00380 /* The user wishes to quit using this program. Just set DONE non-zero. */
00381 int com_quit (char* arg) {
00382     done = 1;
00383     return 0;
00384 }
00385
00386 /* Function which tells you that you can't do this. */
00387 void too_dangerous (char* caller) {
00388     fprintf (stderr,
00389             "%s: Too dangerous for me to distribute. Write it yourself.\n",
00390             caller);
00391 }
00392
00393 /* Return non-zero if ARG is a valid argument for CALLER, else print
00394  * an error message and return zero. */
00395 int valid_argument (char* caller, char* arg) {
00396     if (!arg || !*arg) {
00397         fprintf (stderr, "%s: Argument required.\n", caller);
00398         return 0;
00399     }
00400
00401     return 1;
00402 }
00403
00404 #endif // _AIRINV_READLINE_AUTOCOMP_HPP
```

## 35.559 stdair/ui/cmdline/SReadline.hpp File Reference

C++ wrapper around libreadline.

```
#include <stdio.h>
#include <readline/readline.h>
#include <readline/history.h>
#include <readline/keymaps.h>
#include <string>
#include <fstream>
#include <vector>
#include <stdexcept>
#include <map>
#include <boost/algorithm/string/trim.hpp>
#include <boost/tokenizer.hpp>
#include <boost/function.hpp>
```

### Classes

- class [swift::SKeymap](#)  
*The readline keymap wrapper.*
- class [swift::SReadline](#)  
*The readline library wrapper.*

### Namespaces

- namespace [swift](#)  
*The wrapper namespace.*

#### 35.559.1 Detailed Description

C++ wrapper around libreadline. Supported: editing, history, custom completers, keymaps. Attention: implementation is not thread safe! It is mainly because the readline library provides pure C interface and has many calls for an "atomic" completion operation

Definition in file [SReadline.hpp](#).

## 35.560 SReadline.hpp

```
00001
00011 //
00012 // Date:      17 December 2005
```

```
00013 //          03 April    2006
00014 //          20 April    2006
00015 //          07 May      2006
00016 //
00017 // Copyright (c) Sergey Satskiy 2005 - 2006
00018 //          <sergesatsky@yahoo.com>
00019 //
00020 // Permission to copy, use, modify, sell and distribute this software
00021 // is granted provided this copyright notice appears in all copies.
00022 // This software is provided "as is" without express or implied
00023 // warranty, and with no claim as to its suitability for any purpose.
00024 //
00025
00026 #ifndef SREADLINE_H
00027 #define SREADLINE_H
00028
00029 #include <stdio.h>
00030
00031 #include <readline/readline.h>
00032 #include <readline/history.h>
00033 #include <readline/keymaps.h>
00034
00035 #include <string>
00036 #include <fstream>
00037 #include <vector>
00038 #include <stdexcept>
00039 #include <map>
00040
00041 #include <boost/algorithm/string/trim.hpp>
00042 #include <boost/tokenizer.hpp>
00043 #include <boost/function.hpp>
00044
00045
00050 namespace {
00054     typedef std::vector<std::string> TokensStorage;
00055
00059     typedef std::vector<TokensStorage> CompletionsStorage;
00060
00064     typedef boost::function<int (int, int)> KeyCallback;
00065
00069     typedef std::map<int, KeyCallback> KeysBind;
00070
00074     const size_t DefaultHistoryLimit (64);
00075
00079     CompletionsStorage Completions;
00080
00084     TokensStorage Tokens;
00085
00089     std::map<Keymap, KeysBind> Keymaps;
00090
00094     bool KeymapWasSetup (false);
00095
00099     Keymap Earlykeymap (0);
00100
00101
00108     char* Generator (const char* text, int State);
00109
00110
00118     char** UserCompletion (const char* text, int start, int end);
00119
00120
00128     int KeyDispatcher (int Count, int Key);
```

```

00129
00130
00135 int StartupHook (void);
00136
00137
00145 template <typename Container>
00146 bool AreTokensEqual (const Container& Pattern, const Container& Input) {
00147     if (Input.size() > Pattern.size()) {
00148         return false;
00149     }
00150
00151     typename Container::const_iterator k (Pattern.begin());
00152     typename Container::const_iterator j (Input.begin());
00153     for ( ; j != Input.end(); ++k, ++j) {
00154         const std::string lPattern = *k;
00155         if (lPattern == "%file") {
00156             continue;
00157         }
00158
00159         const std::string lInput = *j;
00160         if (lPattern != lInput) {
00161             return false;
00162         }
00163     }
00164     return true;
00165 }
00166
00167 // See description near the prototype
00168 template <typename ContainerType>
00169 void SplitTokens (const std::string& Source, ContainerType& Container) {
00170     typedef boost::tokenizer<boost::char_separator<char> > TokenizerType;
00171
00172     // Set of token separators
00173     boost::char_separator<char> Separators (" \t\n");
00174     // Tokens provider
00175     TokenizerType Tokenizer (Source, Separators);
00176
00177     Container.clear();
00178     for (TokenizerType::const_iterator k (Tokenizer.begin());
00179          k != Tokenizer.end(); ++k) {
00180         // Temporary storage for the token, in order to trim that latter
00181         std::string SingleToken (*k);
00182
00183         boost::algorithm::trim (SingleToken);
00184         Container.push_back (SingleToken);
00185     }
00186 }
00187
00188 // See description near the prototype
00189 char** UserCompletion (const char* text, int start, int end) {
00190     // No default completion at all
00191     rl_attempted_completion_over = 1;
00192
00193     if (Completions.empty() == true) {
00194         return NULL;
00195     }
00196
00197     // Memorise all the previous tokens
00198     std::string PreInput (rl_line_buffer, start);
00199     SplitTokens (PreInput, Tokens);
00200
00201     // Detect whether we should call the standard file name completer

```

```
00202     // or a custom one
00203     bool FoundPretender (false);
00204
00205     for (CompletionsStorage::const_iterator k (Completions.begin());
00206          k != Completions.end(); ++k) {
00207         const TokensStorage& lTokenStorage = *k;
00208         if (AreTokensEqual (lTokenStorage, Tokens) == false) {
00209             continue;
00210         }
00211
00212         if (lTokenStorage.size() > Tokens.size()) {
00213             FoundPretender = true;
00214             if (lTokenStorage [Tokens.size()] == "%file") {
00215                 // Standard file name completer - called for the "%file" keyword
00216                 return rl_completion_matches (text, rl_filename_completion_function);
00217             }
00218         }
00219     }
00220
00221     if (FoundPretender) {
00222         return rl_completion_matches (text, Generator);
00223     }
00224     return NULL;
00225 }
00226
00227 // See description near the prototype
00228 char* Generator (const char* text, int State) {
00229     static int Length;
00230     static CompletionsStorage::const_iterator Iterator;
00231
00232     if ( State == 0 ) {
00233         Iterator = Completions.begin();
00234         Length = strlen (text);
00235     }
00236
00237     for ( ; Iterator != Completions.end(); ++Iterator) {
00238         const TokensStorage& lCompletion = *Iterator;
00239         if (AreTokensEqual (lCompletion, Tokens) == false) {
00240             continue;
00241         }
00242
00243         if (lCompletion.size() > Tokens.size()) {
00244             if (lCompletion [Tokens.size()] == "%file") {
00245                 continue;
00246             }
00247
00248             const char* lCompletionCharStr (lCompletion [Tokens.size()].c_str());
00249             if (strncmp (text, lCompletionCharStr, Length) == 0) {
00250                 // Readline will free the allocated memory
00251                 const size_t lCompletionSize = strlen (lCompletionCharStr) + 1;
00252                 char* NewString (static_cast<char*> (malloc (lCompletionSize)));
00253                 strcpy (NewString, lCompletionCharStr);
00254
00255                 ++Iterator;
00256
00257                 return NewString;
00258             }
00259         }
00260     }
00261
00262     return NULL;
00263 }
```

```
00264
00265
00266 // See the description near the prototype
00267 int KeyDispatcher (int Count, int Key ) {
00268     std::map< Keymap, KeysBind >::iterator Set (Keymaps.find (rl_get_keymap()));
00269     if (Set == Keymaps.end()) {
00270         // Most probably it happens because the header was
00271         // included into many compilation units and the
00272         // keymap setting calls were made in different files.
00273         // This is the problem of "global" data.
00274         // The storage of all the registered keymaps is in anonymous
00275         // namespace.
00276         throw std::runtime_error ("Error selecting a keymap.");
00277     }
00278
00279     (Set->second)[Key] (Count, Key);
00280     return 0;
00281 }
00282
00283 // See the description near the prototype
00284 int StartupHook (void) {
00285     if (KeymapWasSetup) {
00286         rl_set_keymap (Earlykeymap);
00287     }
00288     return 0;
00289 }
00290
00291 } // Anonymous namespace
00292
00293
00299 namespace swift {
00300
00307 class SKeymap {
00308 private:
00309     // Readline keymap
00310     Keymap keymap;
00311
00312 public:
00319     explicit SKeymap (bool PrintableBound = false) : keymap (NULL) {
00320         if (PrintableBound == true) {
00321             // Printable characters are bound
00322             keymap = rl_make_keymap();
00323         } else {
00324             // Empty keymap
00325             keymap = rl_make_bare_keymap();
00326         }
00327     }
00328
00329     if (keymap == NULL) {
00330         throw std::runtime_error ("Cannot allocate keymap.");
00331     }
00332
00333     // Register a new keymap in the global list
00334     Keymaps [keymap] = KeysBind();
00335 }
00336
00342     explicit SKeymap (Keymap Pattern) : keymap (rl_copy_keymap (Pattern)) {
00343         if ( keymap == NULL ) {
00344             throw std::runtime_error( "Cannot allocate keymap." );
00345         }
00346
00347         // Register a new keymap in the global list
```

```
00348     Keymaps [keymap] = KeysBind();
00349 }
00350
00354 ~SKeymap() {
00355     // Deregister the keymap
00356     Keymaps.erase (keymap);
00357     rl_discard_keymap (keymap);
00358 }
00359
00366 void Bind (int Key, KeyCallback Callback) {
00367     Keymaps [keymap][Key] = Callback;
00368
00369     if (rl_bind_key_in_map (Key, KeyDispatcher, keymap) != 0) {
00370         // Remove from the map just bound key
00371         Keymaps [keymap].erase (Key);
00372         throw std::runtime_error ("Invalid key.");
00373     }
00374 }
00375
00381 void Unbind (int Key) {
00382     rl_unbind_key_in_map (Key, keymap);
00383     Keymaps [keymap].erase (Key);
00384 }
00385
00386 // void Bind (const std::string& Sequence, boost::function<int (int, int)>);
00387 // void Unbind (std::string& Sequence);
00388
00389 public:
00395 SKeymap (const SKeymap& rhs) {
00396     if (this == &rhs) {
00397         return;
00398     }
00399     keymap = rl_copy_keymap (rhs.keymap);
00400 }
00401
00407 SKeymap& operator= (const SKeymap& rhs) {
00408     if (this == &rhs) {
00409         return *this;
00410     }
00411     keymap = rl_copy_keymap (rhs.keymap);
00412     return *this;
00413 }
00414
00415 friend class SReadline;
00416 };
00417
00424 class SReadline {
00425 public:
00431 SReadline (const size_t Limit = DefaultHistoryLimit) :
00432     HistoryLimit (Limit), HistoryFileName (""),
00433     OriginalCompletion (rl_attempted_completion_function) {
00434     rl_startup_hook = StartupHook;
00435     rl_attempted_completion_function = UserCompletion;
00436     using_history();
00437 }
00438
00446 SReadline( const std::string & historyFileName,
00447            const size_t Limit = DefaultHistoryLimit ) :
00448     HistoryLimit( Limit ),
00449     HistoryFileName( historyFileName ),
00450     OriginalCompletion( rl_attempted_completion_function )
00451 {
```



```

00452     rl_startup_hook = StartupHook;
00453     rl_attempted_completion_function = UserCompletion;
00454     using_history();
00455     LoadHistory( HistoryFileName );
00456 }
00457
00462 ~SReadline() {
00463     rl_attempted_completion_function = OriginalCompletion;
00464     SaveHistory (HistoryFileName);
00465 }
00466
00473 std::string GetLine (const std::string& Prompt) {
00474     bool Unused;
00475     return GetLine (Prompt, Unused);
00476 }
00477
00486 template <typename Container>
00487 std::string GetLine (const std::string& Prompt, Container& ReadTokens) {
00488     bool Unused;
00489     return GetLine (Prompt, ReadTokens, Unused);
00490 }
00491
00501 template <typename Container>
00502 std::string GetLine (const std::string& Prompt, Container& ReadTokens,
00503                     bool& BreakOut) {
00504     std::string Input (GetLine (Prompt, BreakOut));
00505     SplitTokens (Input, ReadTokens);
00506     return Input;
00507 }
00508
00509
00517 std::string GetLine (const std::string& Prompt, bool& BreakOut) {
00518     BreakOut = true;
00519
00520     char* ReadLine (readline (Prompt.c_str()));
00521     if (ReadLine == NULL) {
00522         return std::string();
00523     }
00524
00525     // It's OK
00526     BreakOut = false;
00527     std::string Input (ReadLine);
00528     free (ReadLine); ReadLine = NULL;
00529
00530     boost::algorithm::trim (Input);
00531     if (Input.empty() == false) {
00532         if (history_length == 0
00533             || Input != history_list()[ history_length - 1 ]->line) {
00534             add_history (Input.c_str());
00535
00536             if (history_length >= static_cast<int> (HistoryLimit)) {
00537                 stifle_history (HistoryLimit);
00538             }
00539         }
00540     }
00541
00542     return Input;
00543 }
00544
00545
00551 template <typename ContainerType>
00552 void GetHistory (ContainerType& Container) {

```

```
00553         for (int k (0); k < history_length; ++k ) {
00554             Container.push_back (history_list()[k]->line);
00555         }
00556     }
00557
00564     bool SaveHistory (std::ostream& OS) {
00565         if (!OS) {
00566             return false;
00567         }
00568
00569         for (int k (0); k < history_length; ++k) {
00570             OS << history_list()[ k ]->line << std::endl;
00571         }
00572         return true;
00573     }
00574
00581     bool SaveHistory (const std::string& FileName) {
00582         if (FileName.empty() == true) {
00583             return false;
00584         }
00585
00586         std::ofstream OS (FileName.c_str());
00587         return SaveHistory (OS);
00588     }
00589
00594     void ClearHistory() {
00595         clear_history();
00596     }
00597
00604     bool LoadHistory (std::istream& IS) {
00605         if (!IS) {
00606             return false;
00607         }
00608
00609         ClearHistory();
00610         std::string OneLine;
00611
00612         while (!getline (IS, OneLine).eof()) {
00613             boost::algorithm::trim( OneLine );
00614             if ((history_length == 0)
00615                 || OneLine != history_list()[history_length - 1]->line) {
00616                 add_history (OneLine.c_str());
00617             }
00618         }
00619         stifle_history (HistoryLimit);
00620         return true;
00621     }
00622
00629     bool LoadHistory (const std::string& FileName) {
00630         if (FileName.empty() == true) {
00631             return false;
00632         }
00633
00634         std::ifstream IS (FileName.c_str());
00635         return LoadHistory (IS);
00636     }
00637
00657     template <typename ContainerType>
00658     void RegisterCompletions (const ContainerType& Container) {
00659         Completions.clear();
00660         for (typename ContainerType::const_iterator k (Container.begin());
00661             k != Container.end(); ++k) {
```

```

00662         std::vector<std::string> OneLine;
00663         const std::string& kStr = static_cast<std::string> (*k);
00664
00665         SplitTokens (kStr, OneLine);
00666         Completions.push_back (OneLine);
00667     }
00668 }
00669
00675 void SetKeymap (SKeymap& NewKeymap) {
00676     rl_set_keymap (NewKeymap.keymap);
00677     KeymapWasSetup = true;
00678     Earlykeymap = NewKeymap.keymap;
00679 }
00680
00681
00682 private:
00683     // ////////////////////////////////// Attributes //////////////////////////////////
00687     const size_t HistoryLimit;
00688
00692     const std::string HistoryFileName;
00693
00697     rl_completion_func_t* OriginalCompletion;
00698 };
00699
00700 }; // namespace swift
00701
00702 #endif
00703

```

## 35.561 test/stdair/MPBomRoot.cpp File Reference

### 35.562 MPBomRoot.cpp

```

00001
00005 // //////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 // StdAir Test
00011 #include <test/stdair/MPBomRoot.hpp>
00012
00013 namespace myprovider {
00014
00015     // //////////////////////////////////
00016     BomRoot::BomRoot (const Key_T& iKey) : stdair::BomRoot (iKey) {
00017     }
00018
00019     // //////////////////////////////////
00020     BomRoot::~BomRoot () {
00021     }
00022
00023 }

```

## 35.563 test/stdair/MPBomRoot.hpp File Reference

## 35.564 MPBomRoot.hpp

```

00001 #ifndef __MYPROVIDER_BOMROOT_HPP
00002 #define __MYPROVIDER_BOMROOT_HPP
00003
00008 // //////////////////////////////////////
00009 // Import section
00010 // //////////////////////////////////////
00011 // STL
00012 #include <string>
00013 // StdAir
00014 #include <stdair/bom/BomRoot.hpp>
00015
00016 namespace myprovider {
00017
00020 class BomRoot : public stdair::BomRoot {
00021 public:
00022     // ////////////////////////////////// Display support methods //////////////////////////////////
00024     std::string toString() const { return describeKey(); }
00025
00028     const std::string describeKey() const { return std::string (""); }
00029
00030 public:
00034     BomRoot (const Key_T&);
00036     ~BomRoot ();
00038     BomRoot ();
00039     BomRoot (const BomRoot&);
00040 };
00041
00042 }
00046 #endif // __MYPROVIDER_BOMROOT_HPP

```

## 35.565 test/stdair/MPInventory.cpp File Reference

## 35.566 MPInventory.cpp

```

00001
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////
00008 // STL
00009 #include <cassert>
00010 // StdAir
00011 #include <stdair/stdair_inventory_types.hpp>
00012 // StdAir Test
00013 #include <test/stdair/MPInventory.hpp>
00014
00015 namespace myprovider {
00016
00017     // //////////////////////////////////////
00018     Inventory::Inventory (const Key_T& iKey) : stdair::Inventory (iKey) {
00019     }
00020
00021     // //////////////////////////////////////
00022     Inventory::~Inventory () {
00023     }
00024
00025     // //////////////////////////////////////
00026     std::string Inventory::toString() const {

```

```

00027     std::ostringstream ostr;
00028     ostr << _key.toString();
00029     return ostr.str();
00030 }
00031
00032 // //////////////////////////////////////
00033 const std::string Inventory::describeKey() const {
00034     return _key.toString();
00035 }
00036
00037 }

```

### 35.567 test/stdair/MPInventory.hpp File Reference

#### 35.568 MPInventory.hpp

```

00001 #ifndef __MYPROVIDER_INVENTORY_HPP
00002 #define __MYPROVIDER_INVENTORY_HPP
00003
00008 // //////////////////////////////////////
00009 // Import section
00010 // //////////////////////////////////////
00011 // STL
00012 #include <list>
00013 // StdAir
00014 #include <stdair/bom/Inventory.hpp>
00015
00016 namespace myprovider {
00017
00018     class Inventory : public stdair::Inventory {
00019     public:
00020         // //////////// Display support methods ////////////
00022         std::string toString() const;
00023
00026         const std::string describeKey() const;
00027
00028     public:
00032         Inventory (const Key_T&);
00034         ~Inventory();
00036         Inventory ();
00037         Inventory (const Inventory&);
00038     };
00039
00040 // //////////// Type definitions ////////////
00042 typedef std::list<Inventory*> InventoryList_T;
00043
00044 }
00048 #endif // __MYPROVIDER_INVENTORY_HPP

```

### 35.569 test/stdair/StandardAirlineITTestSuite.cpp File Reference

#### 35.570 StandardAirlineITTestSuite.cpp

```

00001
00005 // //////////////////////////////////////
00006 // Import section
00007 // //////////////////////////////////////

```

```
00008 // STL
00009 #include <sstream>
00010 #include <fstream>
00011 #include <string>
00012 // Boost MPL
00013 #include <boost/mpl/push_back.hpp>
00014 #include <boost/mpl/vector.hpp>
00015 #include <boost/mpl/at.hpp>
00016 #include <boost/mpl/assert.hpp>
00017 #include <boost/type_traits/is_same.hpp>
00018 // Boost Unit Test Framework (UTF)
00019 #define BOOST_TEST_DYN_LINK
00020 #define BOOST_TEST_MAIN
00021 #define BOOST_TEST_MODULE StdAirTest
00022 #if BOOST_VERSION >= 103900
00023 #include <boost/test/unit_test.hpp>
00024 #else // BOOST_VERSION >= 103900
00025 #include <boost/test/test_tools.hpp>
00026 #include <boost/test/results_reporter.hpp>
00027 #include <boost/test/unit_test_suite.hpp>
00028 #include <boost/test/output_test_stream.hpp>
00029 #include <boost/test/unit_test_log.hpp>
00030 #include <boost/test/framework.hpp>
00031 #include <boost/test/detail/unit_test_parameters.hpp>
00032 #endif // BOOST_VERSION >= 103900
00033 // Boost Serialisation
00034 #include <boost/archive/text_oarchive.hpp>
00035 #include <boost/archive/text_iarchive.hpp>
00036 // StdAir
00037 #include <stdair/stdair_inventory_types.hpp>
00038 #include <stdair/service/Logger.hpp>
00039 #include <stdair/STDAIR_Service.hpp>
00040 #include <stdair/basic/float_utils.hpp>
00041 #include <stdair/bom/BomDisplay.hpp>
00042 #include <stdair/bom/BomRoot.hpp>
00043 #include <stdair/bom/BomManager.hpp>
00044 #include <stdair/factory/FacBom.hpp>
00045 #include <stdair/factory/FacBomManager.hpp>
00046 // StdAir Test Suite
00047 #include <test/stdair/StdairTestLib.hpp>
00048 #include <test/stdair/MPInventory.hpp>
00049
00050 namespace boost_utf = boost::unit_test;
00051
00052 #if BOOST_VERSION >= 103900
00053
00054 // (Boost) Unit Test XML Report
00055 std::ofstream utfReportStream ("StandardAirlineITTestSuite_utfresults.xml");
00056
00060 struct UnitTestConfig {
00062     UnitTestConfig() {
00063         boost_utf::unit_test_log.set_stream (utfReportStream);
00064         boost_utf::unit_test_log.set_format (boost_utf::XML);
00065         boost_utf::unit_test_log.set_threshold_level (boost_utf::log_test_units);
00066         // boost_utf::unit_test_log.set_threshold_level (boost_utf::log_successful_te
00067         sts);
00068     }
00069
00070     ~UnitTestConfig() {
00071     }
00072 };
00073
```

```

00074
00075 // ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////
00076
00077 // Set the UTF configuration (re-direct the output to a specific file)
00078 BOOST_GLOBAL_FIXTURE (UnitTestFixture);
00079
00080 // Start the test suite
00081 BOOST_AUTO_TEST_SUITE (master_test_suite)
00082
00083
00084 BOOST_AUTO_TEST_CASE (float_comparison_test) {
00085     float a = 0.2f;
00086     a = 5*a;
00087     const float b = 1.0f;
00088
00089     // Test the Boost way
00090     BOOST_CHECK_MESSAGE (a == b, "The two floats (" << a << " and " << b
00091                          << ") should be equal, but are not");
00092     BOOST_CHECK_CLOSE (a, b, 0.0001);
00093
00094     // Test the Google way
00095     const FloatingPoint<float> lhs (a), rhs (b);
00096     BOOST_CHECK_MESSAGE (lhs.AlmostEquals (rhs),
00097                          "The two floats (" << a << " and " << b
00098                          << ") should be equal, but are not");
00099 }
00100
00101 BOOST_AUTO_TEST_CASE (mpl_structure_test) {
00102     const stdair::ClassCode_T lBookingClassCodeA ("A");
00103     const stdair_test::BookingClass lA (lBookingClassCodeA);
00104     const stdair_test::Cabin lCabin (lA);
00105
00106     BOOST_CHECK_EQUAL (lCabin.toString(), lBookingClassCodeA);
00107     BOOST_CHECK_MESSAGE (lCabin.toString() == lBookingClassCodeA,
00108                          "The cabin key, '" << lCabin.toString()
00109                          << "' is not equal to '" << lBookingClassCodeA << "'");
00110
00111     // MPL
00112     typedef boost::mpl::vector<stdair_test::BookingClass> MPL_BookingClass;
00113     typedef boost::mpl::push_back<MPL_BookingClass,
00114                                   stdair_test::Cabin>::type types;
00115
00116     if (boost::is_same<stdair_test::BookingClass,
00117                     stdair_test::Cabin::child>::value == false) {
00118         BOOST_REQUIRE ("The two types must be equal, but are not");
00119     }
00120
00121     if (boost::is_same<boost::mpl::at_c<types, 1>::type,
00122                     stdair_test::Cabin>::value == false) {
00123         BOOST_REQUIRE ("The type must be stdair_test::Cabin, but is not");
00124     }
00125 }
00126
00127 BOOST_AUTO_TEST_CASE (stdair_service_initialisation_test) {
00128     // Output log File
00129     const std::string lLogFilename ("StandardAirlineITTestSuite_init.log");
00130
00131     // Set the log parameters
00132     std::ofstream logOutputFile;
00133
00134     // Open and clean the log outputfile
00135     logOutputFile.open (lLogFilename.c_str());

```

```

00146     logOutputFile.clear();
00147
00148     // Initialise the stdair BOM
00149     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00150     stdair::STDAIR_Service stdairService (lLogParams);
00151
00152     // Retrieve (a reference on) the top of the BOM tree
00153     stdair::BomRoot& lBomRoot = stdairService.getBomRoot();
00154
00155     // Retrieve the BomRoot key, and compare it to the expected one
00156     const std::string& lBomRootKeyStr = lBomRoot.describeKey();
00157     const std::string lBomRootString (" -- ROOT -- ");
00158
00159     // DEBUG
00160     STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
00161                      << "'. It should be equal to '" << lBomRootString << "'");
00162
00163     BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
00164     BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
00165                          "The BOM root key, '" << lBomRootKeyStr
00166                          << "', should be equal to '" << lBomRootString
00167                          << "', but is not.");
00168
00169     // Build a sample BOM tree
00170     stdairService.buildSampleBom();
00171
00172     // DEBUG: Display the whole BOM tree
00173     const std::string& lCSVDump = stdairService.csvDisplay();
00174     STDAIR_LOG_DEBUG (lCSVDump);
00175
00176     // Close the Log outputFile
00177     logOutputFile.close();
00178 }
00179
00183 BOOST_AUTO_TEST_CASE (bom_structure_instantiation_test) {
00184     // Step 0.0: initialisation
00185     // Create the root of the Bom tree (i.e., a BomRoot object)
00186     stdair::BomRoot& lBomRoot =
00187         stdair::FacBom<stdair::BomRoot>::instance().create();
00188
00189     // Step 0.1: Inventory level
00190     // Create an Inventory (BA)
00191     const stdair::AirlineCode_T lBAAirlineCode ("BA");
00192     const stdair::InventoryKey lBAKey (lBAAirlineCode);
00193     myprovider::Inventory& lBAInv =
00194         stdair::FacBom<myprovider::Inventory>::instance().create (lBAKey);
00195     stdair::FacBomManager::addToList (lBomRoot, lBAInv);
00196
00197     BOOST_CHECK_EQUAL (lBAInv.describeKey(), lBAAirlineCode);
00198     BOOST_CHECK_MESSAGE (lBAInv.describeKey() == lBAAirlineCode,
00199                          "The inventory key, '" << lBAInv.describeKey()
00200                          << "', should be equal to '" << lBAAirlineCode
00201                          << "', but is not");
00202
00203     // Create an Inventory for AF
00204     const stdair::AirlineCode_T lFAirlineCode ("AF");
00205     const stdair::InventoryKey lAFKey (lFAirlineCode);
00206     myprovider::Inventory& lAFInv =
00207         stdair::FacBom<myprovider::Inventory>::instance().create (lAFKey);
00208     stdair::FacBomManager::addToList (lBomRoot, lAFInv);
00209
00210     BOOST_CHECK_EQUAL (lAFInv.describeKey(), lFAirlineCode);

```



```

00211 BOOST_CHECK_MESSAGE (lAInv.describeKey() == lAAirlineCode,
00212     "The inventory key, '" << lAInv.describeKey()
00213     << "'", should be equal to '" << lAAirlineCode
00214     << "'", but is not");
00215
00216 // Browse the inventories
00217 const myprovider::InventoryList_T& lInventoryList =
00218     stdair::BomManager::getList<myprovider::Inventory> (lBomRoot);
00219 const std::string lInventoryKeyArray[2] = {lBAAirlineCode, lAAirlineCode};
00220 short idx = 0;
00221 for (myprovider::InventoryList_T::const_iterator itInv =
00222     lInventoryList.begin(); itInv != lInventoryList.end();
00223     ++itInv, ++idx) {
00224     const myprovider::Inventory* lInv_ptr = *itInv;
00225     BOOST_REQUIRE (lInv_ptr != NULL);
00226
00227     BOOST_CHECK_EQUAL (lInventoryKeyArray[idx], lInv_ptr->describeKey());
00228     BOOST_CHECK_MESSAGE (lInventoryKeyArray[idx] == lInv_ptr->describeKey(),
00229         "The inventory key, '" << lInventoryKeyArray[idx]
00230         << "'", does not match that of the Inventory object: '"
00231         << lInv_ptr->describeKey() << "'");
00232 }
00233 }
00234
00238 BOOST_AUTO_TEST_CASE (bom_structure_serialisation_test) {
00239
00240     // Backup (thanks to Boost.Serialisation) file
00241     const std::string lBackupFilename = "StandardAirlineITTestSuite_serial.txt";
00242
00243     // Output log File
00244     const std::string lLogFilename ("StandardAirlineITTestSuite_serial.log");
00245
00246     // Set the log parameters
00247     std::ofstream logOutputFile;
00248
00249     // Open and clean the log outputfile
00250     logOutputFile.open (lLogFilename.c_str());
00251     logOutputFile.clear();
00252
00253     // Initialise the stdair BOM
00254     const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG, logOutputFile);
00255     stdair::STDAIR_Service stdairService (lLogParams);
00256
00257     // Build a sample BOM tree
00258     stdairService.buildSampleBom();
00259
00260     // DEBUG: Display the whole BOM tree
00261     const std::string& lCSVDump = stdairService.csvDisplay();
00262     STDAIR_LOG_DEBUG (lCSVDump);
00263
00264     // Retrieve (a reference on) the top of the BOM tree
00265     stdair::BomRoot& lBomRoot = stdairService.getBomRoot();
00266
00267     // Retrieve the BomRoot key, and compare it to the expected one
00268     const std::string lBAInvKeyStr ("BA");
00269     stdair::Inventory* lBAInv_ptr = lBomRoot.getInventory (lBAInvKeyStr);
00270
00271     // DEBUG
00272     STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
00273         << lBAInvKeyStr << "' key.");
00274
00275     BOOST_REQUIRE_MESSAGE (lBAInv_ptr != NULL,

```

```

00276             "An Inventory object should exist with the key, '"
00277             << lBAInvKeyStr << "'.";
00278
00279 // create and open a character archive for output
00280 std::ofstream ofs (lBackupFilename.c_str());
00281
00282 // save data to archive
00283 {
00284     boost::archive::text_oarchive oa (ofs);
00285     // write class instance to archive
00286     oa << lBomRoot;
00287     // archive and stream closed when destructors are called
00288 }
00289
00290 // ... some time later restore the class instance to its original state
00291 stdair::BomRoot& lRestoredBomRoot =
00292     stdair::FacBom<stdair::BomRoot>::instance().create();
00293 {
00294     // create and open an archive for input
00295     std::ifstream ifs (lBackupFilename.c_str());
00296     boost::archive::text_iarchive ia(ifs);
00297     // read class state from archive
00298     ia >> lRestoredBomRoot;
00299     // archive and stream closed when destructors are called
00300 }
00301
00302 // DEBUG: Display the whole BOM tree
00303 std::ostringstream oRestoredCSVDumpStr;
00304 stdair::BomDisplay::csvDisplay (oRestoredCSVDumpStr, lRestoredBomRoot);
00305 STDAIR_LOG_DEBUG (oRestoredCSVDumpStr.str());
00306
00307 // Retrieve the BomRoot key, and compare it to the expected one
00308 const std::string& lBomRootKeyStr = lRestoredBomRoot.describeKey();
00309 const std::string lBomRootString (" -- ROOT -- ");
00310
00311 // DEBUG
00312 STDAIR_LOG_DEBUG ("The BOM root key is '" << lBomRootKeyStr
00313                  << "'. It should be equal to '" << lBomRootString << "'");
00314
00315 BOOST_CHECK_EQUAL (lBomRootKeyStr, lBomRootString);
00316 BOOST_CHECK_MESSAGE (lBomRootKeyStr == lBomRootString,
00317                     "The BOM root key, '" << lBomRootKeyStr
00318                     << "', should be equal to '" << lBomRootString
00319                     << "', but is not.");
00320
00321 // Retrieve the Inventory
00322 stdair::Inventory* lRestoredBAInv_ptr =
00323     lRestoredBomRoot.getInventory (lBAInvKeyStr);
00324
00325 // DEBUG
00326 STDAIR_LOG_DEBUG ("There should be an Inventory object corresponding to the '"
00327                  << lBAInvKeyStr << "' key.");
00328
00329 BOOST_CHECK_MESSAGE (lRestoredBAInv_ptr != NULL,
00330                     "An Inventory object should exist with the key, '"
00331                     << lBAInvKeyStr << "'.");
00332
00333 // Close the Log outputFile
00334 logOutputFile.close();
00335 }
00336
00337 // End the test suite

```

```

00338 BOOST_AUTO_TEST_SUITE_END()
00339
00340 #else // BOOST_VERSION >= 103900
00341 boost_utf::test_suite* init_unit_test_suite (int, char* []) {
00342     boost_utf::test_suite* test = BOOST_TEST_SUITE ("Unit test example 1");
00343     return test;
00344 }
00345 #endif // BOOST_VERSION >= 103900
00346

```

## 35.571 test/stdair/StdairTestLib.hpp File Reference

```

#include <string>
#include <sstream>

```

### Classes

- struct [stdair\\_test::BookingClass](#)
- struct [stdair\\_test::Cabin](#)

### Namespaces

- namespace [stdair\\_test](#)

## 35.572 StdairTestLib.hpp

```

00001 #ifndef __STDAIR_TST_STDAIR_TEST_LIB_HPP
00002 #define __STDAIR_TST_STDAIR_TEST_LIB_HPP
00003
00004 // //////////////////////////////////////
00005 // Import section
00006 // //////////////////////////////////////
00007 #include <string>
00008 #include <sstream>
00009
00013 namespace stdair_test {
00014
00016     struct BookingClass {
00017         std::string _classCode;
00019         BookingClass (const std::string& iClassCode)
00020             : _classCode (iClassCode) {
00021         }
00022
00024         std::string toString() const {
00025             std::ostringstream oStr;
00026             oStr << _classCode;
00027             return oStr.str();
00028         }
00029     };
00030
00032     struct Cabin {
00033         BookingClass _bookingClass;
00034         Cabin (const BookingClass& iBkgClass)

```

```
00035         : _bookingClass (iBkgClass) {
00036     }
00037
00039     std::string toString() const {
00040         std::ostringstream ostr;
00041         ostr << _bookingClass._classCode;
00042         return ostr.str();
00043     }
00044
00046     typedef BookingClass child;
00047 };
00048 }
00049
00050 #endif // __STDAIR_TST_STDAIR_TEST_LIB_HPP
```

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