

AirRAC Reference Manual

1.00.1

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1 AirRAC Documentation

1.1 Getting Started

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- [Users Guide](#)
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1.2 AirRAC at SourceForge

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

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

- [Boost](#) (C++ STL extensions)
- [Python](#)
- [MySQL client](#)
- [SOCI](#) (C++ DB API)

1.5 Support AirRAC

1.6 About AirRAC

AirRAC is a C++ library of airline revenue accounting classes and functions, mainly targeting simulation purposes. [N](#)

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

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

AirRAC 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 AirRAC 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 AirRAC.

2 AirRAC Directory Hierarchy

2.1 AirRAC Directories

This directory hierarchy is sorted roughly, but not completely, alphabetically:

airrac	10
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3 AirRAC Namespace Index

3.1 AirRAC Namespace List

Here is a list of all namespaces with brief descriptions:

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4 AirRAC Hierarchical Index

4.1 AirRAC Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

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std::auto_ptr< T >	
std::basic_string< Char >	
std::basic_string< char >	
std::string	
std::basic_string< wchar_t >	
std::wstring	
std::bitset< Bits >	
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AIRRAC::YieldParserHelper::YieldRuleParser	56
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std::complex	
TestFixture	21
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std::deque< T >	
std::exception	
std::bad_alloc	
std::bad_cast	
std::bad_exception	
std::bad_typeid	
std::ios_base::failure	
std::logic_error	
std::domain_error	
std::invalid_argument	
std::length_error	
std::out_of_range	
std::runtime_error	
std::overflow_error	
std::range_error	
std::underflow_error	
FacServiceAbstract	25
AIRRAC::FacAirraccServiceContext	23
FileNotFoundException	26
AIRRAC::YieldInputFileNotFound	53
InputFilePath	27
AIRRAC::YieldFilePath	52
std::ios_base	

```
std::basic_ios
  std::basic_istream
    std::basic_ifstream
    std::basic_iostream
      std::basic_fstream
      std::basic_stringstream
    std::basic_istreamstream
  std::basic_ostream
    std::basic_iostream
    std::basic_ofstream
    std::basic_ostringstream
std::basic_ios< char >
  std::basic_istream< char >
    std::basic_ifstream< char >
      std::ifstream
    std::basic_iostream< char >
      std::basic_fstream< char >
        std::fstream
      std::basic_stringstream< char >
        std::stringstream
    std::basic_istreamstream< char >
      std::istreamstream
    std::istream
  std::basic_ostream< char >
    std::basic_iostream< char >
    std::basic_ofstream< char >
      std::ofstream
    std::basic_ostringstream< char >
      std::ostringstream
    std::ostream
std::ios
std::basic_ios< wchar_t >
  std::basic_istream< wchar_t >
    std::basic_ifstream< wchar_t >
      std::wifstream
    std::basic_iostream< wchar_t >
      std::basic_fstream< wchar_t >
        std::wfstream
      std::basic_stringstream< wchar_t >
        std::wstringstream
    std::basic_istreamstream< wchar_t >
      std::wistreamstream
    std::wistream
  std::basic_ostream< wchar_t >
    std::basic_iostream< wchar_t >
    std::basic_ofstream< wchar_t >
      std::wofstream
    std::basic_ostringstream< wchar_t >
      std::wostringstream
    std::wostream
std::wios
std::list< T >
std::map< K, T >
std::multimap< K, T >
```

std::multiset< K >

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AIRRAC::YieldParserHelper::storeDestination	39
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AIRRAC::YieldParserHelper::storeStartRangeTime	45
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std::priority_queue< T >	
std::queue< T >	
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std::set< K >	
std::stack< T >	
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std::valarray< T >	
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5 AirRAC Class Index

5.1 AirRAC Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

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6.1 AirRAC File List

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8 AirRAC Directory Documentation

8.1 test/airrac/ Directory Reference

Files

- file [YieldTestSuite.cpp](#)
- file [YieldTestSuite.hpp](#)

8.2 airrac/ Directory Reference

Directories

- directory [basic](#)
- directory [batches](#)
- directory [bom](#)
- directory [command](#)

- [directory factory](#)
- [directory service](#)

Files

- file [AIRRAC_Service.hpp](#)
- file [AIRRAC_Types.hpp](#)

8.3 airrac/basic/ Directory Reference

Files

- file [BasConst.cpp](#)
- file [BasConst_AIRRAC_Service.hpp](#)
- file [BasConst_General.hpp](#)

8.4 airrac/batches/ Directory Reference

Files

- file [airrac.cpp](#)

8.5 airrac/bom/ Directory Reference

Files

- file [YieldRuleStruct.cpp](#)
- file [YieldRuleStruct.hpp](#)

8.6 airrac/command/ Directory Reference

Files

- file [YieldManager.cpp](#)
- file [YieldManager.hpp](#)
- file [YieldParser.cpp](#)
- file [YieldParser.hpp](#)
- file [YieldParserHelper.cpp](#)
- file [YieldParserHelper.hpp](#)
- file [YieldRuleGenerator.cpp](#)
- file [YieldRuleGenerator.hpp](#)

8.7 airrac/factory/ Directory Reference

Files

- file [FacAircacServiceContext.cpp](#)
- file [FacAircacServiceContext.hpp](#)

8.8 airrac/service/ Directory Reference

Files

- file [AIRRAC_Service.cpp](#)
- file [AIRRAC_ServiceContext.cpp](#)
- file [AIRRAC_ServiceContext.hpp](#)

8.9 test/ Directory Reference

Directories

- directory [airrac](#)

9 AirRAC Namespace Documentation

9.1 AIRRAC Namespace Reference

Classes

- class [AIRRAC_Service](#)
Interface for the AIRRAC Services.
- class [AirportPairNotFoundException](#)
- class [PosOrChannelNotFoundException](#)
- class [FlightDateNotFoundException](#)
- class [FlightTimeNotFoundException](#)
- class [FeaturesNotFoundException](#)
- class [AirlineNotFoundException](#)
- class [YieldInputFileNotFoundException](#)
- class [YieldFileParsingFailedException](#)
- class [QuotingException](#)
- class [YieldFilePath](#)
- struct [YieldRuleStruct](#)
Utility Structure for the parsing of Flight-Date structures.
- class [YieldManager](#)
Command wrapping the travel request process.
- class [YieldParser](#)
Class wrapping the parser entry point.
- class [YieldFileParser](#)
- class [YieldRuleGenerator](#)
- class [FacAircracServiceContext](#)
Factory for the service context.
- class [AIRRAC_ServiceContext](#)
Inner class holding the context for the AIRRAC Service object.

Namespaces

- namespace [YieldParserHelper](#)

Typedefs

- typedef boost::shared_ptr< [AIRRAC_Service](#) > [AIRRAC_ServicePtr_T](#)
- typedef unsigned int [YieldID_T](#)

Variables

- const std::string [DEFAULT_AIRLINE_CODE](#) = "BA"
- const std::string [DEFAULT_AIRLINE_CODE](#)

9.1.1 Typedef Documentation

9.1.1.1 typedef boost::shared_ptr<[AIRRAC_Service](#)> [AIRRAC::AIRRAC_ServicePtr_T](#)

Definition at line 95 of file [AIRRAC_Types.hpp](#).

9.1.1.2 typedef unsigned int [AIRRAC::YieldID_T](#)

ID for the Yield Quote system.

Definition at line 102 of file [AIRRAC_Types.hpp](#).

9.1.2 Variable Documentation

9.1.2.1 const std::string [AIRRAC::DEFAULT_AIRLINE_CODE](#) = "BA"

Default airline name for the [AIRRAC_Service](#).

Definition at line 10 of file [BasConst.cpp](#).

9.1.2.2 const std::string [AIRRAC::DEFAULT_AIRLINE_CODE](#)

Default airline name for the [AIRRAC_Service](#).

Definition at line 10 of file [BasConst.cpp](#).

9.2 AIRRAC::YieldParserHelper Namespace Reference

Classes

- struct [YieldRuleParser](#)
- struct [ParserSemanticAction](#)
- struct [storeYieldId](#)
- struct [storeOrigin](#)
- struct [storeDestination](#)
- struct [storeTripType](#)
- struct [storeDateRangeStart](#)
- struct [storeDateRangeEnd](#)

- struct [storeStartRangeTime](#)
- struct [storeEndRangeTime](#)
- struct [storePOS](#)
- struct [storeCabinCode](#)
- struct [storeChannel](#)
- struct [storeYield](#)
- struct [storeAirlineCode](#)
- struct [storeClass](#)
- struct [doEndYield](#)

Variables

- `stdair::int1_p_t` [int1_p](#)
- `stdair::uint2_p_t` [uint2_p](#)
- `stdair::uint4_p_t` [uint4_p](#)
- `stdair::uint1_4_p_t` [uint1_4_p](#)
- `stdair::hour_p_t` [hour_p](#)
- `stdair::minute_p_t` [minute_p](#)
- `stdair::second_p_t` [second_p](#)
- `stdair::year_p_t` [year_p](#)
- `stdair::month_p_t` [month_p](#)
- `stdair::day_p_t` [day_p](#)

9.2.1 Variable Documentation

9.2.1.1 `stdair::int1_p_t` [AIRRAC::YieldParserHelper::int1_p](#)

1-digit-integer parser

Definition at line 341 of file YieldParserHelper.cpp.

9.2.1.2 `stdair::uint2_p_t` [AIRRAC::YieldParserHelper::uint2_p](#)

2-digit-integer parser

Definition at line 344 of file YieldParserHelper.cpp.

9.2.1.3 `stdair::uint4_p_t` [AIRRAC::YieldParserHelper::uint4_p](#)

4-digit-integer parser

Definition at line 347 of file YieldParserHelper.cpp.

9.2.1.4 `stdair::uint1_4_p_t` [AIRRAC::YieldParserHelper::uint1_4_p](#)

Up-to-4-digit-integer parser

Definition at line 350 of file YieldParserHelper.cpp.

Referenced by [AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser\(\)](#).

9.2.1.5 stdair::hour_p_t AIRRAC::YieldParserHelper::hour_p

Time element parsers.

Definition at line 353 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

9.2.1.6 stdair::minute_p_t AIRRAC::YieldParserHelper::minute_p

Definition at line 354 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

9.2.1.7 stdair::second_p_t AIRRAC::YieldParserHelper::second_p

Definition at line 355 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

9.2.1.8 stdair::year_p_t AIRRAC::YieldParserHelper::year_p

Date element parsers.

Definition at line 358 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

9.2.1.9 stdair::month_p_t AIRRAC::YieldParserHelper::month_p

Definition at line 359 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

9.2.1.10 stdair::day_p_t AIRRAC::YieldParserHelper::day_p

Definition at line 360 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

9.3 stdair Namespace Reference

Forward declarations.

9.3.1 Detailed Description

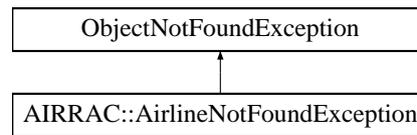
Forward declarations.

10 AirRAC Class Documentation

10.1 AIRRAC::AirlineNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::AirlineNotFoundException::



Public Member Functions

- [AirlineNotFoundException](#) (const std::string &iWhat)

10.1.1 Detailed Description

Definition at line 54 of file AIRRAC_Types.hpp.

10.1.2 Constructor & Destructor Documentation

10.1.2.1 AIRRAC::AirlineNotFoundException::AirlineNotFoundException (const std::string &i-What) [inline]

Constructor.

Definition at line 57 of file AIRRAC_Types.hpp.

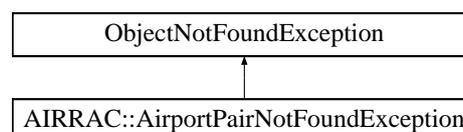
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.2 AIRRAC::AirportPairNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::AirportPairNotFoundException::



Public Member Functions

- [AirportPairNotFoundException](#) (const std::string &iWhat)

10.2.1 Detailed Description

Definition at line 19 of file AIRRAC_Types.hpp.

10.2.2 Constructor & Destructor Documentation

10.2.2.1 AIRRAC::AirportPairNotFound::AirportPairNotFound (const std::string & *iWhat*) [inline]

Constructor.

Definition at line 22 of file AIRRAC_Types.hpp.

The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.3 AIRRAC::AIRRAC_Service Class Reference

Interface for the AIRRAC Services.

```
#include <airrac/AIRRAC_Service.hpp>
```

Public Member Functions

- [AIRRAC_Service](#) (const stdair::BasLogParams &)
- [AIRRAC_Service](#) (const stdair::BasLogParams &, const stdair::BasDBParams &)
- [AIRRAC_Service](#) (stdair::STDAIR_ServicePtr_T ioSTDAIR_ServicePtr)
- void [parseAndLoad](#) (const [YieldFilePath](#) &iYieldFilename)
- [~AIRRAC_Service](#) ()
- void [calculateYields](#) (stdair::TravelSolutionList_T &)
- void [updateYields](#) (stdair::BomRoot &)
- void [buildSampleBom](#) ()
- void [clonePersistentBom](#) ()
- void [buildComplementaryLinks](#) (stdair::BomRoot &)
- void [buildSampleTravelSolutions](#) (stdair::TravelSolutionList_T &)
- std::string [csvDisplay](#) () const
- std::string [csvDisplay](#) (const stdair::TravelSolutionList_T &) const

10.3.1 Detailed Description

Interface for the AIRRAC Services.

Definition at line 30 of file AIRRAC_Service.hpp.

10.3.2 Constructor & Destructor Documentation

10.3.2.1 AIRRAC::AIRRAC_Service::AIRRAC_Service (const stdair::BasLogParams &)

Constructor.

The `initAirracService()` 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.

Parameters:

const stdair::BasLogParams& Parameters for the output log stream.

Definition at line 34 of file AIRRAC_Service.cpp.

10.3.2.2 AIRRAC::AIRRAC_Service::AIRRAC_Service (const stdair::BasLogParams &, const stdair::BasDBParams &)

Constructor.

The `initAirracService()` 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.

Parameters:

const `stdair::BasLogParams&` Parameters for the output log stream.

const `stdair::BasDBParams&` Parameters for the database access.

Definition at line 54 of file `AIRRAC_Service.cpp`.

10.3.2.3 AIRRAC::AIRRAC_Service::AIRRAC_Service (stdair::STDAIR_ServicePtr_T io-STDAIR_ServicePtr)

Constructor.

The `initAirracService()` method is called; see the corresponding documentation for more details.

Moreover, as no reference on any output stream is given, it is assumed that the `StdAir` log service has already been initialised with the proper log output stream by some other methods in the calling chain (for instance, when the `AIRRAC_Service` is itself being initialised by another library service such as `SIMCRS_Service`).

Parameters:

stdair::STDAIR_ServicePtr_T Reference on the `STDAIR` service.

Definition at line 76 of file `AIRRAC_Service.cpp`.

10.3.2.4 AIRRAC::AIRRAC_Service::~AIRRAC_Service ()

Destructor.

Definition at line 92 of file `AIRRAC_Service.cpp`.

10.3.3 Member Function Documentation

10.3.3.1 void AIRRAC::AIRRAC_Service::parseAndLoad (const YieldFilePath & iYieldFilename)

Parse the yield input file, and load them into memory.

The CSV files, describing the airline schedule and the O&Ds for the simulator, are parsed and instantiated in memory accordingly.

Parameters:

const `YieldFilePath&` Filename of the input yield file.

Definition at line 170 of file `AIRRAC_Service.cpp`.

References `buildComplementaryLinks()`, `clonePersistentBom()`, `AIRRAC::YieldParser::generateYieldStore()`, `AIRRAC::AIRRAC_ServiceContext::getOwnStdairServiceFlag()`, and `AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service()`.

Referenced by main().

10.3.3.2 void AIRRAC::AIRRAC_Service::calculateYields (stdair::TravelSolutionList_T &)

Calculate/retrieve a yield.

Definition at line 402 of file AIRRAC_Service.cpp.

References AIRRAC::AIRRAC_ServiceContext::display(), and AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service().

10.3.3.3 void AIRRAC::AIRRAC_Service::updateYields (stdair::BomRoot &)

Update the yields for booking classes and O&D.

Definition at line 433 of file AIRRAC_Service.cpp.

10.3.3.4 void AIRRAC::AIRRAC_Service::buildSampleBom ()

Build a sample BOM tree.

For now, no object is created: the BOM tree remains empty. In the future, it will hold a sample yield store.

Definition at line 223 of file AIRRAC_Service.cpp.

References buildComplementaryLinks(), clonePersistentBom(), AIRRAC::AIRRAC_ServiceContext::getOwnStdairServiceFlag(), and AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service().

Referenced by main().

10.3.3.5 void AIRRAC::AIRRAC_Service::clonePersistentBom ()

Clone the persistent sample BOM tree.

Definition at line 280 of file AIRRAC_Service.cpp.

References buildComplementaryLinks(), AIRRAC::AIRRAC_ServiceContext::getOwnStdairServiceFlag(), and AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service().

Referenced by buildSampleBom(), and parseAndLoad().

10.3.3.6 void AIRRAC::AIRRAC_Service::buildComplementaryLinks (stdair::BomRoot &)

Build all the complementary links in the given bom root object.

Note:

Do nothing for now.

Definition at line 326 of file AIRRAC_Service.cpp.

Referenced by buildSampleBom(), clonePersistentBom(), and parseAndLoad().

10.3.3.7 void AIRRAC::AIRRAC_Service::buildSampleTravelSolutions (stdair::TravelSolutionList_T &)

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:

TravelSolutionList_T& Sample list of travel solution structures. It should be given empty. It is altered with the returned sample.

Definition at line 332 of file AIRRAC_Service.cpp.

References AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service().

Referenced by main().

10.3.3.8 std::string AIRRAC::AIRRAC_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 352 of file AIRRAC_Service.cpp.

References AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service().

Referenced by main().

10.3.3.9 std::string AIRRAC::AIRRAC_Service::csvDisplay (const stdair::TravelSolutionList_T &) 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 380 of file AIRRAC_Service.cpp.

References AIRRAC::AIRRAC_ServiceContext::getSTDAIR_Service().

The documentation for this class was generated from the following files:

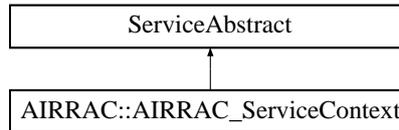
- [airrac/AIRRAC_Service.hpp](#)
- [airrac/service/AIRRAC_Service.cpp](#)

10.4 AIRRAC::AIRRAC_ServiceContext Class Reference

Inner class holding the context for the [AIRRAC](#) Service object.

```
#include <airrac/service/AIRRAC_ServiceContext.hpp>
```

Inheritance diagram for AIRRAC::AIRRAC_ServiceContext::



Friends

- class [AIRRAC_Service](#)
- class [FacAirracServiceContext](#)

10.4.1 Detailed Description

Inner class holding the context for the [AIRRAC](#) Service object.

Definition at line 25 of file [AIRRAC_ServiceContext.hpp](#).

10.4.2 Friends And Related Function Documentation

10.4.2.1 friend class [AIRRAC_Service](#) [friend]

The [AIRRAC_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 31 of file [AIRRAC_ServiceContext.hpp](#).

10.4.2.2 friend class [FacAirracServiceContext](#) [friend]

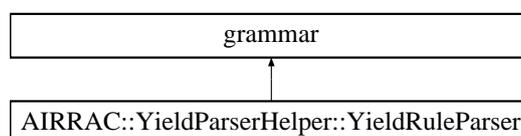
Definition at line 32 of file [AIRRAC_ServiceContext.hpp](#).

The documentation for this class was generated from the following files:

- [airrac/service/AIRRAC_ServiceContext.hpp](#)
- [airrac/service/AIRRAC_ServiceContext.cpp](#)

10.5 grammar Class Reference

Inheritance diagram for grammar::

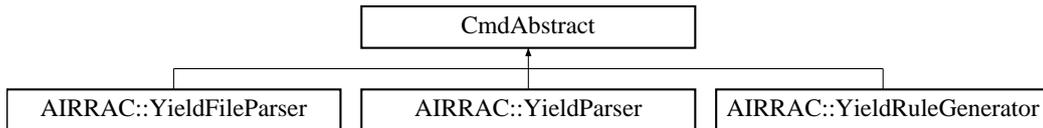


The documentation for this class was generated from the following file:

- [airrac/command/YieldParserHelper.cpp](#)

10.6 CmdAbstract Class Reference

Inheritance diagram for CmdAbstract::

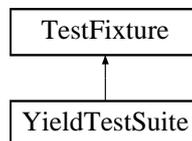


The documentation for this class was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldRuleGenerator.hpp](#)
- [airrac/command/YieldParser.hpp](#)

10.7 TestFixture Class Reference

Inheritance diagram for TestFixture::



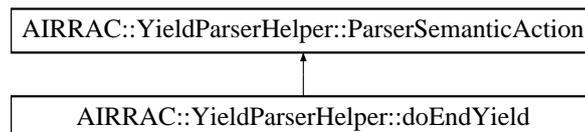
The documentation for this class was generated from the following file:

- [test/airrac/YieldTestSuite.hpp](#)

10.8 AIRRAC::YieldParserHelper::doEndYield Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::doEndYield::



Public Member Functions

- [doEndYield](#) (stdair::BomRoot &, [YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- stdair::BomRoot & [_bomRoot](#)
- [YieldRuleStruct](#) & [_yieldRule](#)

10.8.1 Detailed Description

Mark the end of the yield-rule parsing.

Definition at line 178 of file YieldParserHelper.hpp.

10.8.2 Constructor & Destructor Documentation

10.8.2.1 AIRRAC::YieldParserHelper::doEndYield::doEndYield (stdair::BomRoot &, [YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 314 of file YieldParserHelper.cpp.

10.8.3 Member Function Documentation

10.8.3.1 void AIRRAC::YieldParserHelper::doEndYield::operator() (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 321 of file YieldParserHelper.cpp.

References [_bomRoot](#), [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), and [AIRRAC::YieldRuleStruct::describe\(\)](#).

10.8.4 Member Data Documentation

10.8.4.1 stdair::BomRoot& AIRRAC::YieldParserHelper::doEndYield::_bomRoot

Actor Specific Context.

Definition at line 186 of file YieldParserHelper.hpp.

Referenced by [operator\(\)](#).

10.8.4.2 [YieldRuleStruct](#)& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by `operator()`, `AIRRAC::YieldParserHelper::storeClass::operator()`, `AIRRAC::YieldParserHelper::storeAirlineCode::operator()`, `AIRRAC::YieldParserHelper::storeYield::operator()`, `AIRRAC::YieldParserHelper::storeChannel::operator()`, `AIRRAC::YieldParserHelper::storeCabinCode::operator()`, `AIRRAC::YieldParserHelper::storePOS::operator()`, `AIRRAC::YieldParserHelper::storeEndRangeTime::operator()`, `AIRRAC::YieldParserHelper::storeStartRangeTime::operator()`, `AIRRAC::YieldParserHelper::storeDateRangeEnd::operator()`, `AIRRAC::YieldParserHelper::storeDateRangeStart::operator()`, `AIRRAC::YieldParserHelper::storeTripType::operator()`, `AIRRAC::YieldParserHelper::storeDestination::operator()`, `AIRRAC::YieldParserHelper::storeOrigin::operator()`, and `AIRRAC::YieldParserHelper::storeYieldId::operator()`.

The documentation for this struct was generated from the following files:

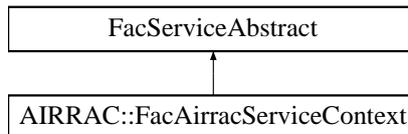
- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.9 AIRRAC::FacAircacServiceContext Class Reference

Factory for the service context.

```
#include <airrac/factory/FacAircacServiceContext.hpp>
```

Inheritance diagram for AIRRAC::FacAircacServiceContext:



Public Member Functions

- [~FacAircacServiceContext \(\)](#)
- [AIRRAC_ServiceContext & create \(\)](#)

Static Public Member Functions

- static [FacAircacServiceContext & instance \(\)](#)

Protected Member Functions

- [FacAircacServiceContext \(\)](#)

10.9.1 Detailed Description

Factory for the service context.

Definition at line 21 of file `FacAircacServiceContext.hpp`.

10.9.2 Constructor & Destructor Documentation

10.9.2.1 AIRRAC::FacAircacServiceContext::~~FacAircacServiceContext ()

Destructor.

The Destruction put the `_instance` to NULL in order to be clean for the next `FacSimfqtServiceContext::instance()`.

Definition at line 17 of file `FacAircacServiceContext.cpp`.

10.9.2.2 AIRRAC::FacAircacServiceContext::FacAircacServiceContext () [inline, protected]

Default Constructor.

This constructor is protected in order to ensure the singleton pattern.

Definition at line 56 of file `FacAircacServiceContext.hpp`.

Referenced by `instance()`.

10.9.3 Member Function Documentation

10.9.3.1 FacAircacServiceContext & AIRRAC::FacAircacServiceContext::instance () [static]

Provide the unique instance.

The singleton is instantiated when first used.

Returns:

`FacServiceContext&`

Definition at line 22 of file `FacAircacServiceContext.cpp`.

References `FacAircacServiceContext()`.

10.9.3.2 AIRRAC_ServiceContext & AIRRAC::FacAircacServiceContext::create ()

Create a new `ServiceContext` object.

This new object is added to the list of instantiated objects.

Returns:

`ServiceContext&` The newly created object.

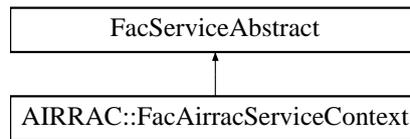
Definition at line 34 of file `FacAircacServiceContext.cpp`.

The documentation for this class was generated from the following files:

- [airrac/factory/FacAircacServiceContext.hpp](#)
- [airrac/factory/FacAircacServiceContext.cpp](#)

10.10 FacServiceAbstract Class Reference

Inheritance diagram for `FacServiceAbstract::`



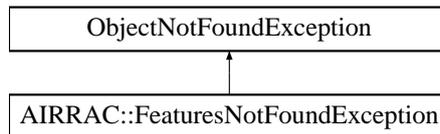
The documentation for this class was generated from the following file:

- [airrac/factory/FacAircacServiceContext.hpp](#)

10.11 AIRRAC::FeaturesNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::FeaturesNotFoundException::



Public Member Functions

- [FeaturesNotFoundException](#) (const std::string &iWhat)

10.11.1 Detailed Description

Definition at line 47 of file AIRRAC_Types.hpp.

10.11.2 Constructor & Destructor Documentation

10.11.2.1 AIRRAC::FeaturesNotFoundException::FeaturesNotFoundException (const std::string &iWhat) [inline]

Constructor.

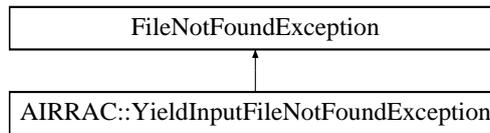
Definition at line 50 of file AIRRAC_Types.hpp.

The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.12 FileNotFoundException Class Reference

Inheritance diagram for FileNotFoundException::



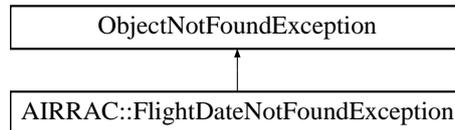
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.13 AIRRAC::FlightDateNotFound Exception Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::FlightDateNotFound Exception::



Public Member Functions

- [FlightDateNotFound Exception](#) (const std::string &iWhat)

10.13.1 Detailed Description

Definition at line 33 of file AIRRAC_Types.hpp.

10.13.2 Constructor & Destructor Documentation

10.13.2.1 AIRRAC::FlightDateNotFound Exception::FlightDateNotFound Exception (const std::string &iWhat) [inline]

Constructor.

Definition at line 36 of file AIRRAC_Types.hpp.

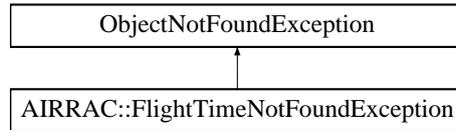
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.14 AIRRAC::FlightTimeNotFound Exception Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::FlightTimeNotFound Exception::



Public Member Functions

- [FlightTimeNotFoundException](#) (const std::string &iWhat)

10.14.1 Detailed Description

Definition at line 40 of file AIRRAC_Types.hpp.

10.14.2 Constructor & Destructor Documentation

10.14.2.1 AIRRAC::FlightTimeNotFoundException::FlightTimeNotFoundException (const std::string &iWhat) [inline]

Constructor.

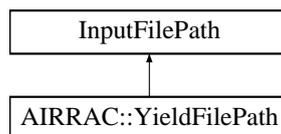
Definition at line 43 of file AIRRAC_Types.hpp.

The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.15 InputFilePath Class Reference

Inheritance diagram for InputFilePath::



The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.16 ObjectNotFoundException Class Reference

Inheritance diagram for ObjectNotFoundException::



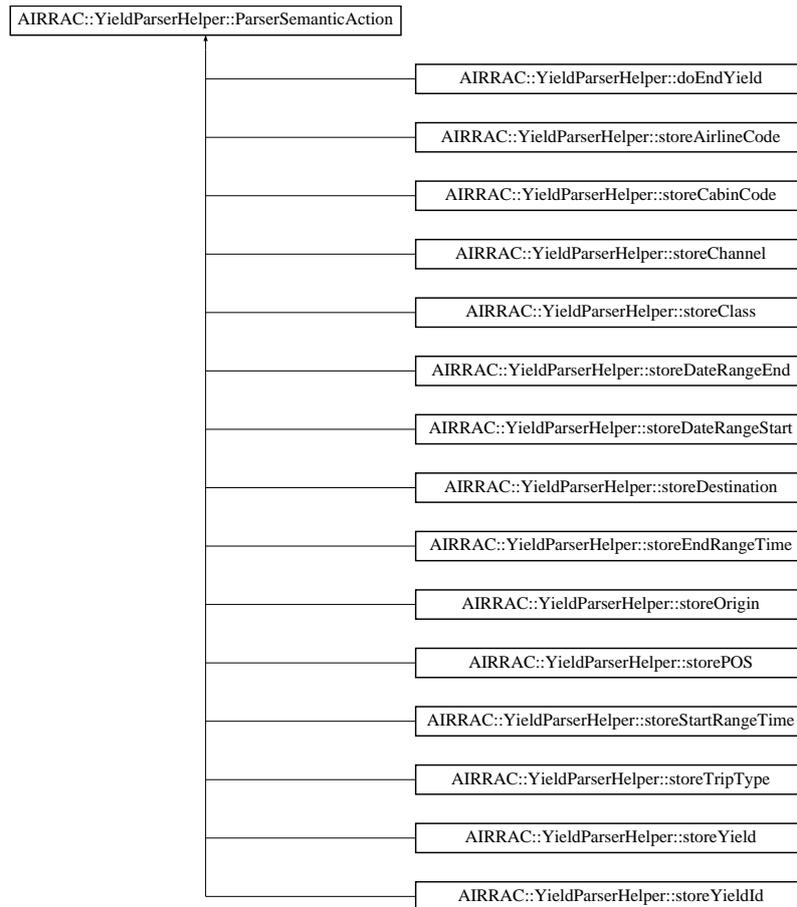
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.17 AIRRAC::YieldParserHelper::ParserSemanticAction Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::ParserSemanticAction::



Public Member Functions

- [ParserSemanticAction](#) ([YieldRuleStruct](#) &)

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.17.1 Detailed Description

Generic Semantic Action (Actor / Functor) for the Yield Parser.

Definition at line 30 of file YieldParserHelper.hpp.

10.17.2 Constructor & Destructor Documentation

10.17.2.1 AIRRAC::YieldParserHelper::ParserSemanticAction::ParserSemanticAction (YieldRuleStruct &)

Actor Constructor.

Definition at line 28 of file YieldParserHelper.cpp.

10.17.3 Member Data Documentation

10.17.3.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

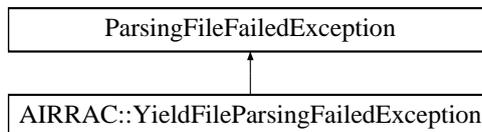
Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.18 ParsingFileFailedException Class Reference

Inheritance diagram for ParsingFileFailedException::



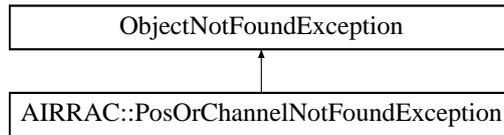
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.19 AIRRAC::PosOrChannelNotFoundExcpion Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::PosOrChannelNotFoundExcpion::



Public Member Functions

- [PosOrChannelNotFoundException](#) (const std::string &iWhat)

10.19.1 Detailed Description

Definition at line 26 of file AIRRAC_Types.hpp.

10.19.2 Constructor & Destructor Documentation

10.19.2.1 AIRRAC::PosOrChannelNotFoundException::PosOrChannelNotFoundException (const std::string &iWhat) [inline]

Constructor.

Definition at line 29 of file AIRRAC_Types.hpp.

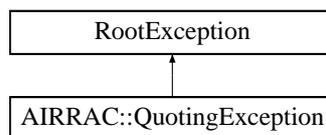
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.20 AIRRAC::QuotingException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::QuotingException::



10.20.1 Detailed Description

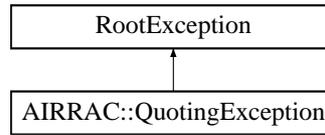
Definition at line 75 of file AIRRAC_Types.hpp.

The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.21 RootException Class Reference

Inheritance diagram for RootException::

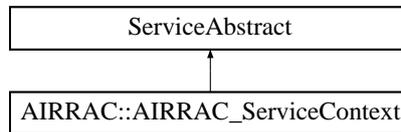


The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.22 ServiceAbstract Class Reference

Inheritance diagram for ServiceAbstract::



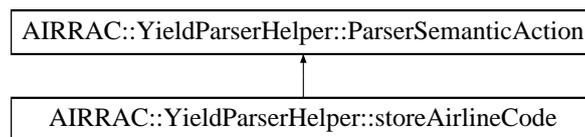
The documentation for this class was generated from the following file:

- [airrac/service/AIRRAC_ServiceContext.hpp](#)

10.23 AIRRAC::YieldParserHelper::storeAirlineCode Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeAirlineCode::



Public Member Functions

- [storeAirlineCode](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.23.1 Detailed Description

Store the parsed airline code.

Definition at line 158 of file YieldParserHelper.hpp.

10.23.2 Constructor & Destructor Documentation

10.23.2.1 AIRRAC::YieldParserHelper::storeAirlineCode::storeAirlineCode ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 270 of file YieldParserHelper.cpp.

10.23.3 Member Function Documentation

10.23.3.1 void AIRRAC::YieldParserHelper::storeAirlineCode::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 275 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), [AIRRAC::YieldRuleStruct::addAirlineCode\(\)](#), and [AIRRAC::YieldRuleStruct::setAirlineCode\(\)](#).

10.23.4 Member Data Documentation

10.23.4.1 [YieldRuleStruct&](#) [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

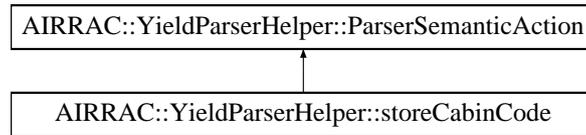
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.24 AIRRAC::YieldParserHelper::storeCabinCode Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeCabinCode::



Public Member Functions

- [storeCabinCode](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (char, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.24.1 Detailed Description

Store the cabin code.

Definition at line 128 of file YieldParserHelper.hpp.

10.24.2 Constructor & Destructor Documentation

10.24.2.1 AIRRAC::YieldParserHelper::storeCabinCode::storeCabinCode ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 212 of file YieldParserHelper.cpp.

10.24.3 Member Function Documentation

10.24.3.1 void AIRRAC::YieldParserHelper::storeCabinCode::operator() (char, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 217 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), and [AIRRAC::YieldRuleStruct::setCabinCode\(\)](#).

10.24.4 Member Data Documentation

10.24.4.1 [YieldRuleStruct](#)& [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#),

AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

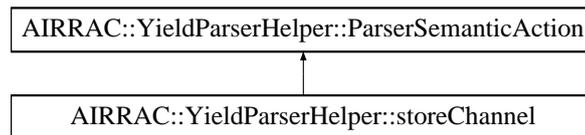
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.25 AIRRAC::YieldParserHelper::storeChannel Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeChannel:



Public Member Functions

- [storeChannel](#) ([YieldRuleStruct](#) &)
- void [operator](#)() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.25.1 Detailed Description

Store the channel distribution.

Definition at line 138 of file YieldParserHelper.hpp.

10.25.2 Constructor & Destructor Documentation

10.25.2.1 AIRRAC::YieldParserHelper::storeChannel::storeChannel ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 233 of file YieldParserHelper.cpp.

10.25.3 Member Function Documentation

10.25.3.1 void AIRRAC::YieldParserHelper::storeChannel::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 238 of file YieldParserHelper.cpp.

References AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule, and AIRRAC::YieldRuleStruct::setChannel().

10.25.4 Member Data Documentation

10.25.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

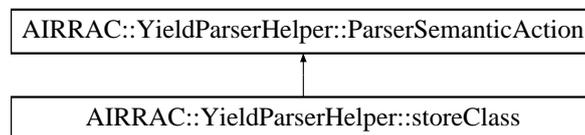
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.26 AIRRAC::YieldParserHelper::storeClass Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeClass:



Public Member Functions

- [storeClass](#) (YieldRuleStruct &)
- void [operator](#)() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.26.1 Detailed Description

Store the parsed class.

Definition at line 168 of file YieldParserHelper.hpp.

10.26.2 Constructor & Destructor Documentation

10.26.2.1 AIRRAC::YieldParserHelper::storeClass::storeClass ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 290 of file YieldParserHelper.cpp.

10.26.3 Member Function Documentation

10.26.3.1 void AIRRAC::YieldParserHelper::storeClass::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 295 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), and [AIRRAC::YieldRuleStruct::addClassCode\(\)](#).

10.26.4 Member Data Documentation

10.26.4.1 [YieldRuleStruct&](#) [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [AIRRAC::YieldParserHelper::storeTripType::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

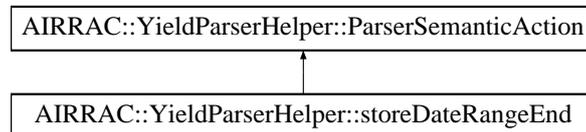
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.27 AIRRAC::YieldParserHelper::storeDateRangeEnd Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeDateRangeEnd::



Public Member Functions

- `storeDateRangeEnd` (`YieldRuleStruct &`)
- `void operator()` (`boost::spirit::qi::unused_type`, `boost::spirit::qi::unused_type`, `boost::spirit::qi::unused_type`) `const`

Public Attributes

- `YieldRuleStruct & _yieldRule`

10.27.1 Detailed Description

Store the parsed end of the date range.

Definition at line 88 of file `YieldParserHelper.hpp`.

10.27.2 Constructor & Destructor Documentation

10.27.2.1 AIRRAC::YieldParserHelper::storeDateRangeEnd::storeDateRangeEnd (`YieldRuleStruct &`)

Actor Constructor.

Definition at line 129 of file `YieldParserHelper.cpp`.

10.27.3 Member Function Documentation

10.27.3.1 void AIRRAC::YieldParserHelper::storeDateRangeEnd::operator() (`boost::spirit::qi::unused_type`, `boost::spirit::qi::unused_type`, `boost::spirit::qi::unused_type`) `const`

Actor Function (functor).

Definition at line 134 of file `YieldParserHelper.cpp`.

References `AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule`, `AIRRAC::YieldRuleStruct::calculateDate()`, and `AIRRAC::YieldRuleStruct::setDateRangeEnd()`.

10.27.4 Member Data Documentation

10.27.4.1 YieldRuleStruct & AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

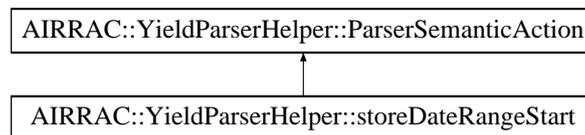
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.28 AIRRAC::YieldParserHelper::storeDateRangeStart Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeDateRangeStart::



Public Member Functions

- [storeDateRangeStart](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.28.1 Detailed Description

Store the parsed start of the date range.

Definition at line 78 of file YieldParserHelper.hpp.

10.28.2 Constructor & Destructor Documentation

10.28.2.1 AIRRAC::YieldParserHelper::storeDateRangeStart::storeDateRangeStart ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 113 of file YieldParserHelper.cpp.

10.28.3 Member Function Documentation

10.28.3.1 void AIRRAC::YieldParserHelper::storeDateRangeStart::operator() (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 118 of file YieldParserHelper.cpp.

References AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule, AIRRAC::YieldRuleStruct::calculateDate(), and AIRRAC::YieldRuleStruct::setDateRangeStart().

10.28.4 Member Data Documentation

10.28.4.1 [YieldRuleStruct](#)& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator>(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator>(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

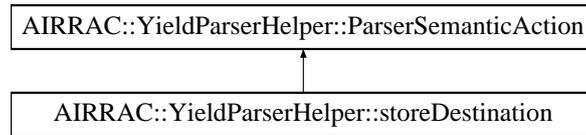
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.29 AIRRAC::YieldParserHelper::storeDestination Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeDestination::



Public Member Functions

- [storeDestination](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.29.1 Detailed Description

Store the parsed destination.

Definition at line 58 of file YieldParserHelper.hpp.

10.29.2 Constructor & Destructor Documentation

10.29.2.1 AIRRAC::YieldParserHelper::storeDestination::storeDestination ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 75 of file YieldParserHelper.cpp.

10.29.3 Member Function Documentation

10.29.3.1 void AIRRAC::YieldParserHelper::storeDestination::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 80 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), and [AIRRAC::YieldRuleStruct::setDestination\(\)](#).

10.29.4 Member Data Documentation

10.29.4.1 [YieldRuleStruct](#)& [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#).

AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

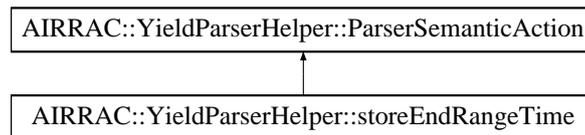
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.30 AIRRAC::YieldParserHelper::storeEndRangeTime Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeEndRangeTime::



Public Member Functions

- [storeEndRangeTime](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.30.1 Detailed Description

Store the parsed end start range time.

Definition at line 108 of file YieldParserHelper.hpp.

10.30.2 Constructor & Destructor Documentation

10.30.2.1 AIRRAC::YieldParserHelper::storeEndRangeTime::storeEndRangeTime ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 168 of file YieldParserHelper.cpp.

10.30.3 Member Function Documentation

10.30.3.1 void AIRRAC::YieldParserHelper::storeEndRangeTime::operator()
(boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type)
const

Actor Function (functor).

Definition at line 173 of file YieldParserHelper.cpp.

References AIRRAC::YieldRuleStruct::_itSeconds, AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule, AIRRAC::YieldRuleStruct::calculateTime(), and AIRRAC::YieldRuleStruct::setTimeRangeEnd().

10.30.4 Member Data Documentation

10.30.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule
[inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

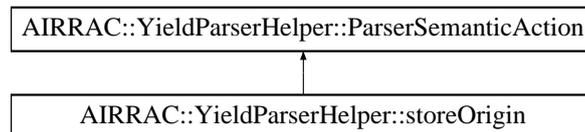
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.31 AIRRAC::YieldParserHelper::storeOrigin Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeOrigin::



Public Member Functions

- `storeOrigin` (`YieldRuleStruct &`)
- `void operator()` (`std::vector< char >`, `boost::spirit::qi::unused_type`, `boost::spirit::qi::unused_type`)
const

Public Attributes

- [YieldRuleStruct](#) & `_yieldRule`

10.31.1 Detailed Description

Store the parsed origin.

Definition at line 48 of file YieldParserHelper.hpp.

10.31.2 Constructor & Destructor Documentation

10.31.2.1 AIRRAC::YieldParserHelper::storeOrigin::storeOrigin ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 59 of file YieldParserHelper.cpp.

10.31.3 Member Function Documentation

10.31.3.1 void AIRRAC::YieldParserHelper::storeOrigin::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 64 of file YieldParserHelper.cpp.

References `AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule`, and `AIRRAC::YieldRuleStruct::setOrigin()`.

10.31.4 Member Data Documentation

10.31.4.1 [YieldRuleStruct](#)& [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by `AIRRAC::YieldParserHelper::doEndYield::operator()`, `AIRRAC::YieldParserHelper::storeClass::operator()`, `AIRRAC::YieldParserHelper::storeAirlineCode::operator()`, `AIRRAC::YieldParserHelper::storeYield::operator()`, `AIRRAC::YieldParserHelper::storeChannel::operator()`, `AIRRAC::YieldParserHelper::storeCabinCode::operator()`, `AIRRAC::YieldParserHelper::storePOS::operator()`, `AIRRAC::YieldParserHelper::storeEndRangeTime::operator()`, `AIRRAC::YieldParserHelper::storeStartRangeTime::operator()`, `AIRRAC::YieldParserHelper::storeDateRangeEnd::operator()`, `AIRRAC::YieldParserHelper::storeDateRangeStart::operator()`, `AIRRAC::YieldParserHelper::storeTripType::operator()`, `AIRRAC::YieldParserHelper::storeDestination::operator()`, `operator()`, and `AIRRAC::YieldParserHelper::storeYieldId::operator()`.

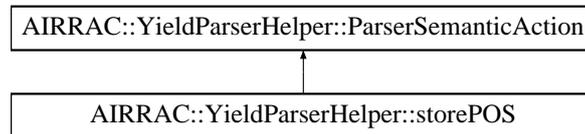
The documentation for this struct was generated from the following files:

- `airrac/command/YieldParserHelper.hpp`
- `airrac/command/YieldParserHelper.cpp`

10.32 AIRRAC::YieldParserHelper::storePOS Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storePOS::



Public Member Functions

- [storePOS](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.32.1 Detailed Description

Store the parsed customer point_of_sale.

Definition at line 118 of file YieldParserHelper.hpp.

10.32.2 Constructor & Destructor Documentation

10.32.2.1 AIRRAC::YieldParserHelper::storePOS::storePOS ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 186 of file YieldParserHelper.cpp.

10.32.3 Member Function Documentation

10.32.3.1 void AIRRAC::YieldParserHelper::storePOS::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 191 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), [AIRRAC::YieldRuleStruct::getDestination\(\)](#), [AIRRAC::YieldRuleStruct::getOrigin\(\)](#), and [AIRRAC::YieldRuleStruct::set-POS\(\)](#).

10.32.4 Member Data Documentation

10.32.4.1 [YieldRuleStruct](#)& [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

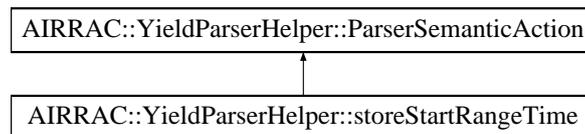
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.33 AIRRAC::YieldParserHelper::storeStartRangeTime Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeStartRangeTime::



Public Member Functions

- [storeStartRangeTime](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.33.1 Detailed Description

Store the parsed start range time.

Definition at line 98 of file YieldParserHelper.hpp.

10.33.2 Constructor & Destructor Documentation

10.33.2.1 AIRRAC::YieldParserHelper::storeStartRangeTime::storeStartRangeTime ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 150 of file YieldParserHelper.cpp.

10.33.3 Member Function Documentation

10.33.3.1 void AIRRAC::YieldParserHelper::storeStartRangeTime::operator() (boost::spirit::qi::unused_type, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 155 of file YieldParserHelper.cpp.

References AIRRAC::YieldRuleStruct::_itSeconds, AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule, AIRRAC::YieldRuleStruct::calculateTime(), and AIRRAC::YieldRuleStruct::setTimeRangeStart().

10.33.4 Member Data Documentation

10.33.4.1 YieldRuleStruct& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

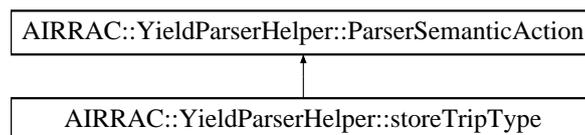
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.34 AIRRAC::YieldParserHelper::storeTripType Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeTripType:



Public Member Functions

- [storeTripType](#) ([YieldRuleStruct](#) &)
- void [operator\(\)](#) (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.34.1 Detailed Description

Store the parsed customer trip type.

Definition at line 68 of file YieldParserHelper.hpp.

10.34.2 Constructor & Destructor Documentation**10.34.2.1 AIRRAC::YieldParserHelper::storeTripType::storeTripType ([YieldRuleStruct](#) &)**

Actor Constructor.

Definition at line 91 of file YieldParserHelper.cpp.

10.34.3 Member Function Documentation**10.34.3.1 void AIRRAC::YieldParserHelper::storeTripType::operator() (std::vector< char >, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const**

Actor Function (functor).

Definition at line 96 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), and [AIRRAC::YieldRuleStruct::setTripType\(\)](#).

10.34.4 Member Data Documentation**10.34.4.1 [YieldRuleStruct](#)& [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#) [inherited]**

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by [AIRRAC::YieldParserHelper::doEndYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeClass::operator\(\)](#), [AIRRAC::YieldParserHelper::storeAirlineCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storeYield::operator\(\)](#), [AIRRAC::YieldParserHelper::storeChannel::operator\(\)](#), [AIRRAC::YieldParserHelper::storeCabinCode::operator\(\)](#), [AIRRAC::YieldParserHelper::storePOS::operator\(\)](#), [AIRRAC::YieldParserHelper::storeEndRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeStartRangeTime::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeEnd::operator\(\)](#), [AIRRAC::YieldParserHelper::storeDateRangeStart::operator\(\)](#), [operator\(\)](#), [AIRRAC::YieldParserHelper::storeDestination::operator\(\)](#), [AIRRAC::YieldParserHelper::storeOrigin::operator\(\)](#), and [AIRRAC::YieldParserHelper::storeYieldId::operator\(\)](#).

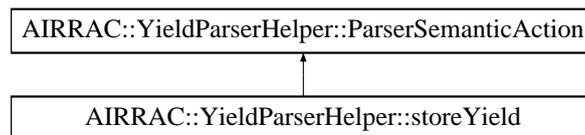
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.35 AIRRAC::YieldParserHelper::storeYield Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeYield::



Public Member Functions

- [storeYield](#) ([YieldRuleStruct](#) &)
- [operator\(\)](#) (double, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.35.1 Detailed Description

Store the parsed yield value.

Definition at line 148 of file YieldParserHelper.hpp.

10.35.2 Constructor & Destructor Documentation

10.35.2.1 AIRRAC::YieldParserHelper::storeYield::storeYield ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 254 of file YieldParserHelper.cpp.

10.35.3 Member Function Documentation

10.35.3.1 void AIRRAC::YieldParserHelper::storeYield::operator() (double, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 259 of file YieldParserHelper.cpp.

References [AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule](#), and [AIRRAC::YieldRuleStruct::setYield\(\)](#).

10.35.4 Member Data Documentation

10.35.4.1 YieldRuleStruct & AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

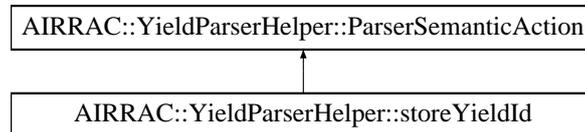
The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.36 AIRRAC::YieldParserHelper::storeYieldId Struct Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldParserHelper::storeYieldId::



Public Member Functions

- [storeYieldId](#) ([YieldRuleStruct](#) &)
- [operator\(\)](#) (unsigned int, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Public Attributes

- [YieldRuleStruct](#) & [_yieldRule](#)

10.36.1 Detailed Description

Store the parsed yield Id.

Definition at line 38 of file YieldParserHelper.hpp.

10.36.2 Constructor & Destructor Documentation

10.36.2.1 AIRRAC::YieldParserHelper::storeYieldId::storeYieldId ([YieldRuleStruct](#) &)

Actor Constructor.

Definition at line 34 of file YieldParserHelper.cpp.

10.36.3 Member Function Documentation

10.36.3.1 void AIRRAC::YieldParserHelper::storeYieldId::operator() (unsigned int, boost::spirit::qi::unused_type, boost::spirit::qi::unused_type) const

Actor Function (functor).

Definition at line 39 of file YieldParserHelper.cpp.

References AIRRAC::YieldRuleStruct::_itSeconds, AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule, AIRRAC::YieldRuleStruct::clearAirlineCodeList(), AIRRAC::YieldRuleStruct::clearClassCodeList(), AIRRAC::YieldRuleStruct::setAirlineCode(), AIRRAC::YieldRuleStruct::setClassCode(), and AIRRAC::YieldRuleStruct::setYieldID().

10.36.4 Member Data Documentation

10.36.4.1 [YieldRuleStruct](#)& AIRRAC::YieldParserHelper::ParserSemanticAction::_yieldRule [inherited]

Actor Context.

Definition at line 34 of file YieldParserHelper.hpp.

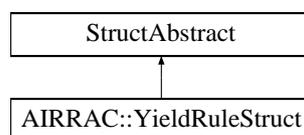
Referenced by AIRRAC::YieldParserHelper::doEndYield::operator(), AIRRAC::YieldParserHelper::storeClass::operator(), AIRRAC::YieldParserHelper::storeAirlineCode::operator(), AIRRAC::YieldParserHelper::storeYield::operator(), AIRRAC::YieldParserHelper::storeChannel::operator(), AIRRAC::YieldParserHelper::storeCabinCode::operator(), AIRRAC::YieldParserHelper::storePOS::operator(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), AIRRAC::YieldParserHelper::storeDateRangeStart::operator(), AIRRAC::YieldParserHelper::storeTripType::operator(), AIRRAC::YieldParserHelper::storeDestination::operator(), AIRRAC::YieldParserHelper::storeOrigin::operator(), and operator().

The documentation for this struct was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.37 StructAbstract Class Reference

Inheritance diagram for StructAbstract::



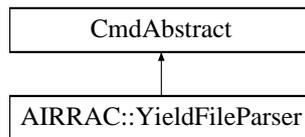
The documentation for this class was generated from the following file:

- [airrac/bom/YieldRuleStruct.hpp](#)

10.38 AIRRAC::YieldFileParser Class Reference

```
#include <airrac/command/YieldParserHelper.hpp>
```

Inheritance diagram for AIRRAC::YieldFileParser::



Public Member Functions

- [YieldFileParser](#) (stdair::BomRoot &, const stdair::Filename_T &iYieldInputFilename)
- void [generateYieldStore](#) ()

10.38.1 Detailed Description

Class wrapping the initialisation and entry point of the parser.

The seemingly redundancy is used to force the instantiation of the actual parser, which is a templatised Boost Spirit grammar. Hence, the actual parser is instantiated within that class object code.

Definition at line 202 of file YieldParserHelper.hpp.

10.38.2 Constructor & Destructor Documentation

10.38.2.1 AIRRAC::YieldFileParser::YieldFileParser (stdair::BomRoot &, const stdair::Filename_T & iYieldInputFilename)

Constructor.

10.38.3 Member Function Documentation

10.38.3.1 void AIRRAC::YieldFileParser::generateYieldStore ()

Parse the yield store input file.

Definition at line 529 of file YieldParserHelper.cpp.

Referenced by AIRRAC::YieldParser::generateYieldStore().

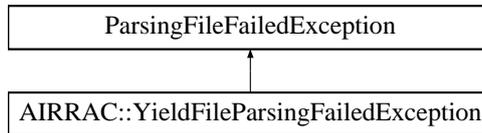
The documentation for this class was generated from the following files:

- [airrac/command/YieldParserHelper.hpp](#)
- [airrac/command/YieldParserHelper.cpp](#)

10.39 AIRRAC::YieldFileParsingFailedException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::YieldFileParsingFailedException::



Public Member Functions

- [YieldFileParsingFailedException](#) (const std::string &iWhat)

10.39.1 Detailed Description

Definition at line 68 of file AIRRAC_Types.hpp.

10.39.2 Constructor & Destructor Documentation

10.39.2.1 AIRRAC::YieldFileParsingFailedException::YieldFileParsingFailedException (const std::string &iWhat) [inline]

Constructor.

Definition at line 71 of file AIRRAC_Types.hpp.

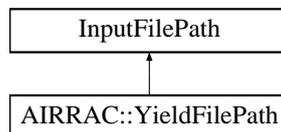
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.40 AIRRAC::YieldFilePath Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::YieldFilePath::



Public Member Functions

- [YieldFilePath](#) (const stdair::Filename_T &iFilename)

10.40.1 Detailed Description

Yield input file.

Definition at line 82 of file AIRRAC_Types.hpp.

10.40.2 Constructor & Destructor Documentation

10.40.2.1 AIRRAC::YieldFilePath::YieldFilePath (const stdair::Filename_T & iFilename) [inline, explicit]

Constructor.

Definition at line 87 of file AIRRAC_Types.hpp.

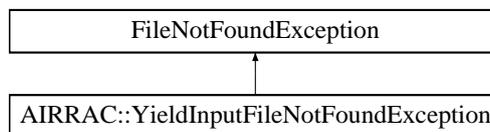
The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.41 AIRRAC::YieldInputFileNotFoundException Class Reference

```
#include <airrac/AIRRAC_Types.hpp>
```

Inheritance diagram for AIRRAC::YieldInputFileNotFoundException::



Public Member Functions

- [YieldInputFileNotFoundException](#) (const std::string &iWhat)

10.41.1 Detailed Description

Definition at line 61 of file AIRRAC_Types.hpp.

10.41.2 Constructor & Destructor Documentation

10.41.2.1 AIRRAC::YieldInputFileNotFoundException::YieldInputFileNotFoundException (const std::string &iWhat) [inline]

Constructor.

Definition at line 64 of file AIRRAC_Types.hpp.

The documentation for this class was generated from the following file:

- [airrac/AIRRAC_Types.hpp](#)

10.42 AIRRAC::YieldManager Class Reference

Command wrapping the travel request process.

```
#include <airrac/command/YieldManager.hpp>
```

Friends

- class [AIRRAC_Service](#)

10.42.1 Detailed Description

Command wrapping the travel request process.

Definition at line 23 of file YieldManager.hpp.

10.42.2 Friends And Related Function Documentation

10.42.2.1 friend class [AIRRAC_Service](#) [friend]

Only the [AIRRAC_Service](#) may access to the methods of that class.

Definition at line 27 of file YieldManager.hpp.

The documentation for this class was generated from the following files:

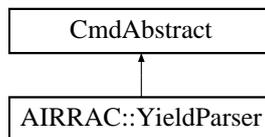
- airrac/command/[YieldManager.hpp](#)
- airrac/command/[YieldManager.cpp](#)

10.43 AIRRAC::YieldParser Class Reference

Class wrapping the parser entry point.

```
#include <airrac/command/YieldParser.hpp>
```

Inheritance diagram for AIRRAC::YieldParser:::



Static Public Member Functions

- static void [generateYieldStore](#) (const [YieldFilePath](#) &, stdair::BomRoot &)

10.43.1 Detailed Description

Class wrapping the parser entry point.

Definition at line 25 of file YieldParser.hpp.

10.43.2 Member Function Documentation

10.43.2.1 void AIRRAC::YieldParser::generateYieldStore (const YieldFilePath &, stdair::BomRoot &) [static]

Parse the CSV file describing an airline yield store, and generates the corresponding data model in memory. It can then be used, for instance in a simulator.

Parameters:

- const YieldFilePath&* The file-name of the CSV-formatted yield input file.
- stdair::BomRoot&* Root of the BOM tree.

Definition at line 16 of file YieldParser.cpp.

References AIRRAC::YieldFileParser::generateYieldStore().

Referenced by AIRRAC::AIRRAC_Service::parseAndLoad().

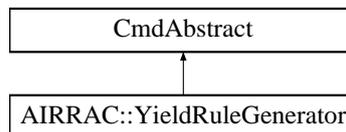
The documentation for this class was generated from the following files:

- [airrac/command/YieldParser.hpp](#)
- [airrac/command/YieldParser.cpp](#)

10.44 AIRRAC::YieldRuleGenerator Class Reference

```
#include <airrac/command/YieldRuleGenerator.hpp>
```

Inheritance diagram for AIRRAC::YieldRuleGenerator::



Friends

- class [YieldFileParser](#)
- struct [YieldParserHelper::doEndYield](#)
- class [YieldParser](#)

10.44.1 Detailed Description

Class handling the generation / instantiation of the Yield BOM.

Definition at line 32 of file YieldRuleGenerator.hpp.

10.44.2 Friends And Related Function Documentation

10.44.2.1 friend class YieldFileParser [friend]

Definition at line 36 of file YieldRuleGenerator.hpp.

10.44.2.2 friend struct [YieldParserHelper::doEndYield](#) [*friend*]

Definition at line 37 of file YieldRuleGenerator.hpp.

10.44.2.3 friend class [YieldParser](#) [*friend*]

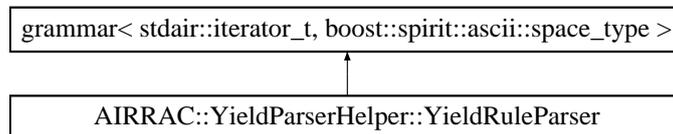
Definition at line 38 of file YieldRuleGenerator.hpp.

The documentation for this class was generated from the following files:

- [airrac/command/YieldRuleGenerator.hpp](#)
- [airrac/command/YieldRuleGenerator.cpp](#)

10.45 AIRRAC::YieldParserHelper::YieldRuleParser Struct Reference

Inheritance diagram for AIRRAC::YieldParserHelper::YieldRuleParser::

**Public Member Functions**

- [YieldRuleParser](#) (stdair::BomRoot &ioBomRoot, [YieldRuleStruct](#) &ioYieldRule)

Public Attributes

- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [start](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [comments](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [yield_rule](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [yield_id](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [origin](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [destination](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [tripType](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [dateRangeStart](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [dateRangeEnd](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [date](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [timeRangeStart](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [timeRangeEnd](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [time](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [point_of_sale](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [cabinCode](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [channel](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [yield](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [segment](#)
- boost::spirit::qi::rule< stdair::iterator_t, boost::spirit::ascii::space_type > [yield_rule_end](#)
- stdair::BomRoot & [_bomRoot](#)
- [YieldRuleStruct](#) & [_yieldRule](#)

10.45.1 Detailed Description

Grammar for the Yield-Rule parser.

Definition at line 387 of file YieldParserHelper.cpp.

10.45.2 Constructor & Destructor Documentation

10.45.2.1 AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser (stdair::BomRoot & ioBomRoot, YieldRuleStruct & ioYieldRule) [inline]

Definition at line 391 of file YieldParserHelper.cpp.

References `_bomRoot`, `AIRRAC::YieldRuleStruct::_itDay`, `AIRRAC::YieldRuleStruct::_itHours`, `AIRRAC::YieldRuleStruct::_itMinutes`, `AIRRAC::YieldRuleStruct::_itMonth`, `AIRRAC::YieldRuleStruct::_itSeconds`, `AIRRAC::YieldRuleStruct::_itYear`, `_yieldRule`, `cabinCode`, `channel`, `comments`, `date`, `dateRangeEnd`, `dateRangeStart`, `AIRRAC::YieldParserHelper::day_p`, `destination`, `AIRRAC::YieldParserHelper::hour_p`, `AIRRAC::YieldParserHelper::minute_p`, `AIRRAC::YieldParserHelper::month_p`, `origin`, `point_of_sale`, `AIRRAC::YieldParserHelper::second_p`, `segment`, `start`, `time`, `timeRangeEnd`, `timeRangeStart`, `tripType`, `AIRRAC::YieldParserHelper::uint1_4_p`, `AIRRAC::YieldParserHelper::year_p`, `yield`, `yield_id`, `yield_rule`, and `yield_rule_end`.

10.45.3 Member Data Documentation

10.45.3.1 boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::start> boost::spirit::ascii::space_type>

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by `YieldRuleParser()`.

10.45.3.2 boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::comments> boost::spirit::ascii::space_type>

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by `YieldRuleParser()`.

10.45.3.3 boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::yield_rule> boost::spirit::ascii::space_type>

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by `YieldRuleParser()`.

10.45.3.4 boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::yield_id> boost::spirit::ascii::space_type>

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by `YieldRuleParser()`.

10.45.3.5 boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::origin> boost::spirit::ascii::space_type>

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.6 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::destination>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.7 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::tripType>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.8 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::dateRangeStart>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.9 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::dateRangeEnd>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.10 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::date>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.11 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::timeRangeStart>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.12 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::timeRangeEnd>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.13 `boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::time>` `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.14 [boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::point_of_sale](#) `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.15 [boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::cabinCode](#) `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.16 [boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::channel](#) `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.17 [boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::yield](#) `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.18 [boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::segment](#) `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.19 [boost::spirit::qi::rule<stdair::iterator_t, AIRRAC::YieldParserHelper::YieldRuleParser::yield_rule_end](#) `boost::spirit::ascii::space_type>`

Definition at line 487 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.20 `stdair::BomRoot& AIRRAC::YieldParserHelper::YieldRuleParser::_bomRoot`

Definition at line 493 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

10.45.3.21 `YieldRuleStruct& AIRRAC::YieldParserHelper::YieldRuleParser::_yieldRule`

Definition at line 494 of file YieldParserHelper.cpp.

Referenced by YieldRuleParser().

The documentation for this struct was generated from the following file:

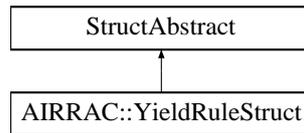
- [airrac/command/YieldParserHelper.cpp](#)

10.46 AIRRAC::YieldRuleStruct Struct Reference

Utility Structure for the parsing of Flight-Date structures.

```
#include <airrac/bom/YieldRuleStruct.hpp>
```

Inheritance diagram for AIRRAC::YieldRuleStruct::



Public Member Functions

- [YieldRuleStruct \(\)](#)
- [~YieldRuleStruct \(\)](#)
- [AIRRAC::YieldID_T getYieldID \(\) const](#)
- [stdair::AirportCode_T getOrigin \(\) const](#)
- [stdair::AirportCode_T getDestination \(\) const](#)
- [stdair::TripType_T getTripType \(\) const](#)
- [stdair::Date_T getDateRangeStart \(\) const](#)
- [stdair::Date_T getDateRangeEnd \(\) const](#)
- [stdair::Duration_T getTimeRangeStart \(\) const](#)
- [stdair::Duration_T getTimeRangeEnd \(\) const](#)
- [stdair::CabinCode_T getCabinCode \(\) const](#)
- [const stdair::CityCode_T getPOS \(\) const](#)
- [stdair::ChannelLabel_T getChannel \(\) const](#)
- [stdair::YieldValue_T getYield \(\) const](#)
- [stdair::AirlineCode_T getAirlineCode \(\) const](#)
- [stdair::ClassCode_T getClassCode \(\) const](#)
- [const unsigned int getAirlineListSize \(\) const](#)
- [const unsigned int getClassCodeListSize \(\) const](#)
- [stdair::AirlineCodeList_T getAirlineList \(\) const](#)
- [stdair::ClassList_StringList_T getClassCodeList \(\) const](#)
- [stdair::Date_T calculateDate \(\) const](#)
- [stdair::Duration_T calculateTime \(\) const](#)
- [const std::string describe \(\) const](#)
- [void setYieldID \(const AIRRAC::YieldID_T iYieldID\)](#)
- [void setOrigin \(const stdair::AirportCode_T &iOrigin\)](#)
- [void setDestination \(const stdair::AirportCode_T &iDestination\)](#)
- [void setTripType \(const stdair::TripType_T &iTripType\)](#)
- [void setDateRangeStart \(const stdair::Date_T &iDateRangeStart\)](#)
- [void setDateRangeEnd \(const stdair::Date_T &iDateRangeEnd\)](#)
- [void setTimeRangeStart \(const stdair::Duration_T &iTimeRangeStart\)](#)
- [void setTimeRangeEnd \(const stdair::Duration_T &iTimeRangeEnd\)](#)
- [void setCabinCode \(const stdair::CabinCode_T &iCabinCode\)](#)
- [void setPOS \(const stdair::CityCode_T &iPOS\)](#)
- [void setChannel \(const stdair::ChannelLabel_T &iChannel\)](#)
- [void setYield \(const stdair::YieldValue_T &iYield\)](#)

- void [setAirlineCode](#) (const stdair::AirlineCode_T &iAirlineCode)
- void [setClassCode](#) (const stdair::ClassCode_T &iClassCode)
- void [clearAirlineCodeList](#) ()
- void [clearClassCodeList](#) ()
- void [addAirlineCode](#) (const stdair::AirlineCode_T &iAirlineCode)
- void [addClassCode](#) (const stdair::ClassCode_T &iClassCode)

Public Attributes

- stdair::year_t [_itYear](#)
- stdair::month_t [_itMonth](#)
- stdair::day_t [_itDay](#)
- stdair::hour_t [_itHours](#)
- stdair::minute_t [_itMinutes](#)
- stdair::second_t [_itSeconds](#)

10.46.1 Detailed Description

Utility Structure for the parsing of Flight-Date structures.

Definition at line 24 of file YieldRuleStruct.hpp.

10.46.2 Constructor & Destructor Documentation

10.46.2.1 AIRRAC::YieldRuleStruct::YieldRuleStruct ()

Constructor.

Definition at line 17 of file YieldRuleStruct.cpp.

10.46.2.2 AIRRAC::YieldRuleStruct::~~YieldRuleStruct ()

Destructor.

Definition at line 34 of file YieldRuleStruct.cpp.

10.46.3 Member Function Documentation

10.46.3.1 AIRRAC::YieldID_T AIRRAC::YieldRuleStruct::getYieldID () const [inline]

Get the yield ID.

Definition at line 40 of file YieldRuleStruct.hpp.

10.46.3.2 stdair::AirportCode_T AIRRAC::YieldRuleStruct::getOrigin () const [inline]

Get the origin.

Definition at line 45 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storePOS::operator()().

10.46.3.3 `stdair::AirportCode_T AIRRAC::YieldRuleStruct::getDestination () const [inline]`

Get the destination.

Definition at line 50 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storePOS::operator()().

10.46.3.4 `stdair::TripType_T AIRRAC::YieldRuleStruct::getTripType () const [inline]`

Get the trip type.

Definition at line 55 of file YieldRuleStruct.hpp.

10.46.3.5 `stdair::Date_T AIRRAC::YieldRuleStruct::getDateRangeStart () const [inline]`

Get the date range start.

Definition at line 60 of file YieldRuleStruct.hpp.

10.46.3.6 `stdair::Date_T AIRRAC::YieldRuleStruct::getDateRangeEnd () const [inline]`

Get the date range end.

Definition at line 65 of file YieldRuleStruct.hpp.

10.46.3.7 `stdair::Duration_T AIRRAC::YieldRuleStruct::getTimeRangeStart () const [inline]`

Get the time range start.

Definition at line 70 of file YieldRuleStruct.hpp.

10.46.3.8 `stdair::Duration_T AIRRAC::YieldRuleStruct::getTimeRangeEnd () const [inline]`

Get the time range end.

Definition at line 75 of file YieldRuleStruct.hpp.

10.46.3.9 `stdair::CabinCode_T AIRRAC::YieldRuleStruct::getCabinCode () const [inline]`

Get the cabin code.

Definition at line 80 of file YieldRuleStruct.hpp.

10.46.3.10 `const stdair::CityCode_T AIRRAC::YieldRuleStruct::getPOS () const [inline]`

Get the point-of-sale.

Definition at line 85 of file YieldRuleStruct.hpp.

10.46.3.11 `stdair::ChannelLabel_T AIRRAC::YieldRuleStruct::getChannel () const [inline]`

Get the channel.

Definition at line 90 of file YieldRuleStruct.hpp.

10.46.3.12 `stdair::YieldValue_T AIRRAC::YieldRuleStruct::getYield () const` `[inline]`

Get the yield.

Definition at line 95 of file YieldRuleStruct.hpp.

10.46.3.13 `stdair::AirlineCode_T AIRRAC::YieldRuleStruct::getAirlineCode () const` `[inline]`

Get the airline code.

Definition at line 100 of file YieldRuleStruct.hpp.

10.46.3.14 `stdair::ClassCode_T AIRRAC::YieldRuleStruct::getClassCode () const` `[inline]`

Get the class code.

Definition at line 105 of file YieldRuleStruct.hpp.

10.46.3.15 `const unsigned int AIRRAC::YieldRuleStruct::getAirlineListSize () const` `[inline]`

Get the size of the airline code list.

Definition at line 110 of file YieldRuleStruct.hpp.

10.46.3.16 `const unsigned int AIRRAC::YieldRuleStruct::getClassCodeListSize () const` `[inline]`

Get the size of the class code list.

Definition at line 115 of file YieldRuleStruct.hpp.

10.46.3.17 `stdair::AirlineCodeList_T AIRRAC::YieldRuleStruct::getAirlineList () const` `[inline]`

Get the airline code list.

Definition at line 120 of file YieldRuleStruct.hpp.

10.46.3.18 `stdair::ClassList_StringList_T AIRRAC::YieldRuleStruct::getClassCodeList () const` `[inline]`

Get the class code list.

Definition at line 125 of file YieldRuleStruct.hpp.

10.46.3.19 `stdair::Date_T AIRRAC::YieldRuleStruct::calculateDate () const`

Calculate the date from the staging details.

Definition at line 38 of file YieldRuleStruct.cpp.

References `_itDay`, `_itMonth`, and `_itYear`.

Referenced by AIRRAC::YieldParserHelper::storeDateRangeEnd::operator(), and AIRRAC::YieldParserHelper::storeDateRangeStart::operator().

10.46.3.20 stdair::Duration_T AIRRAC::YieldRuleStruct::calculateTime () const

Calculate the time from the staging details.

Definition at line 44 of file YieldRuleStruct.cpp.

References `_itHours`, `_itMinutes`, and `_itSeconds`.

Referenced by AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), and AIRRAC::YieldParserHelper::storeStartRangeTime::operator().

10.46.3.21 const std::string AIRRAC::YieldRuleStruct::describe () const

Give a description of the structure (for display purposes).

Definition at line 52 of file YieldRuleStruct.cpp.

Referenced by AIRRAC::YieldParserHelper::doEndYield::operator().

10.46.3.22 void AIRRAC::YieldRuleStruct::setYieldID (const AIRRAC::YieldID_T iYieldID) [inline]

Set the yield ID.

Definition at line 143 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeYieldId::operator().

10.46.3.23 void AIRRAC::YieldRuleStruct::setOrigin (const stdair::AirportCode_T & iOrigin) [inline]

Set the origin.

Definition at line 148 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeOrigin::operator().

10.46.3.24 void AIRRAC::YieldRuleStruct::setDestination (const stdair::AirportCode_T & iDestination) [inline]

Set the destination.

Definition at line 153 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeDestination::operator().

10.46.3.25 void AIRRAC::YieldRuleStruct::setTripType (const stdair::TripType_T & iTripType) [inline]

Set the trip type.

Definition at line 158 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeTripType::operator().

10.46.3.26 void AIRRAC::YieldRuleStruct::setDateRangeStart (const stdair::Date_T & iDateRangeStart) [inline]

Set the date range start.

Definition at line 163 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeDateRangeStart::operator()().

10.46.3.27 void AIRRAC::YieldRuleStruct::setDateRangeEnd (const stdair::Date_T & iDateRangeEnd) [inline]

Set the date range end.

Definition at line 168 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeDateRangeEnd::operator()().

10.46.3.28 void AIRRAC::YieldRuleStruct::setTimeRangeStart (const stdair::Duration_T & iTimeRangeStart) [inline]

Set the time range start.

Definition at line 173 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeStartRangeTime::operator()().

10.46.3.29 void AIRRAC::YieldRuleStruct::setTimeRangeEnd (const stdair::Duration_T & iTimeRangeEnd) [inline]

Set the time range end.

Definition at line 178 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeEndRangeTime::operator()().

10.46.3.30 void AIRRAC::YieldRuleStruct::setCabinCode (const stdair::CabinCode_T & iCabinCode) [inline]

Set the cabin code.

Definition at line 183 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeCabinCode::operator()().

10.46.3.31 void AIRRAC::YieldRuleStruct::setPOS (const stdair::CityCode_T & iPOS) [inline]

Set the point-of-sale.

Definition at line 188 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storePOS::operator()().

10.46.3.32 void AIRRAC::YieldRuleStruct::setChannel (const stdair::ChannelLabel_T & iChannel) [inline]

Set the channel.

Definition at line 193 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeChannel::operator().

10.46.3.33 void AIRRAC::YieldRuleStruct::setYield (const stdair::YieldValue_T & iYield) [inline]

Set the yield.

Definition at line 198 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeYield::operator().

10.46.3.34 void AIRRAC::YieldRuleStruct::setAirlineCode (const stdair::AirlineCode_T & iAirlineCode) [inline]

Set the airline code.

Definition at line 203 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeAirlineCode::operator(), and AIRRAC::YieldParserHelper::storeYieldId::operator().

10.46.3.35 void AIRRAC::YieldRuleStruct::setClassCode (const stdair::ClassCode_T & iClassCode) [inline]

Set the class code.

Definition at line 208 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeYieldId::operator().

10.46.3.36 void AIRRAC::YieldRuleStruct::clearAirlineCodeList () [inline]

Empty the airline code list.

Definition at line 213 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeYieldId::operator().

10.46.3.37 void AIRRAC::YieldRuleStruct::clearClassCodeList () [inline]

Empty the class code list.

Definition at line 218 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeYieldId::operator().

10.46.3.38 void AIRRAC::YieldRuleStruct::addAirlineCode (const stdair::AirlineCode_T & iAirlineCode) [inline]

Add an airline code to the list.

Definition at line 223 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeAirlineCode::operator().

10.46.3.39 void AIRRAC::YieldRuleStruct::addClassCode (const stdair::ClassCode_T & iClassCode) [inline]

Add a class code to the list.

Definition at line 228 of file YieldRuleStruct.hpp.

Referenced by AIRRAC::YieldParserHelper::storeClass::operator().

10.46.4 Member Data Documentation

10.46.4.1 stdair::year_t AIRRAC::YieldRuleStruct::_itYear

Staging Date.

Definition at line 235 of file YieldRuleStruct.hpp.

Referenced by calculateDate(), and AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

10.46.4.2 stdair::month_t AIRRAC::YieldRuleStruct::_itMonth

Definition at line 236 of file YieldRuleStruct.hpp.

Referenced by calculateDate(), and AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

10.46.4.3 stdair::day_t AIRRAC::YieldRuleStruct::_itDay

Definition at line 237 of file YieldRuleStruct.hpp.

Referenced by calculateDate(), and AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

10.46.4.4 stdair::hour_t AIRRAC::YieldRuleStruct::_itHours

Staging Time.

Definition at line 241 of file YieldRuleStruct.hpp.

Referenced by calculateTime(), and AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

10.46.4.5 stdair::minute_t AIRRAC::YieldRuleStruct::_itMinutes

Definition at line 242 of file YieldRuleStruct.hpp.

Referenced by calculateTime(), and AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

10.46.4.6 stdair::second_t AIRRAC::YieldRuleStruct::_itSeconds

Definition at line 243 of file YieldRuleStruct.hpp.

Referenced by calculateTime(), AIRRAC::YieldParserHelper::storeEndRangeTime::operator(), AIRRAC::YieldParserHelper::storeStartRangeTime::operator(), AIRRAC::YieldParserHelper::storeYieldId::operator(), and AIRRAC::YieldParserHelper::YieldRuleParser::YieldRuleParser().

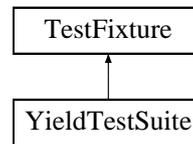
The documentation for this struct was generated from the following files:

- [airrac/bom/YieldRuleStruct.hpp](#)
- [airrac/bom/YieldRuleStruct.cpp](#)

10.47 YieldTestSuite Class Reference

```
#include <test/airrac/YieldTestSuite.hpp>
```

Inheritance diagram for YieldTestSuite::



Public Member Functions

- void [simpleYield](#) ()
- [YieldTestSuite](#) ()

Protected Attributes

- std::stringstream [_describeKey](#)

10.47.1 Detailed Description

Utility class for CPPUnit-based testing.

Definition at line 7 of file YieldTestSuite.hpp.

10.47.2 Constructor & Destructor Documentation

10.47.2.1 YieldTestSuite::YieldTestSuite ()

Constructor.

10.47.3 Member Function Documentation

10.47.3.1 void YieldTestSuite::simpleYield ()

Test a simple yield functionality.

10.47.4 Member Data Documentation

10.47.4.1 std::stringstream [YieldTestSuite::_describeKey](#) [protected]

Definition at line 28 of file YieldTestSuite.hpp.

The documentation for this class was generated from the following file:

- test/airrac/[YieldTestSuite.hpp](#)

11 AirRAC File Documentation

11.1 airrac/AIRRAC_Service.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
```

```
#include <stdair/stdair_service_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
#include <airrac/AIRRAC_Types.hpp>
```

Namespaces

- namespace [stdair](#)
- namespace [AIRRAC](#)

Classes

- class [AIRRAC::AIRRAC_Service](#)
Interface for the [AIRRAC](#) Services.

11.2 airrac/AIRRAC_Types.hpp File Reference

```
#include <vector>
#include <string>
#include <boost/shared_ptr.hpp>
#include <stdair/stdair_exceptions.hpp>
#include <stdair/stdair_file.hpp>
```

Namespaces

- namespace [AIRRAC](#)

Classes

- class [AIRRAC::AirportPairNotFoundException](#)
- class [AIRRAC::PosOrChannelNotFoundException](#)
- class [AIRRAC::FlightDateNotFoundException](#)
- class [AIRRAC::FlightTimeNotFoundException](#)
- class [AIRRAC::FeaturesNotFoundException](#)
- class [AIRRAC::AirlineNotFoundException](#)
- class [AIRRAC::YieldInputFileNotFoundException](#)
- class [AIRRAC::YieldFileParsingFailedException](#)
- class [AIRRAC::QuotingException](#)
- class [AIRRAC::YieldFilePath](#)

Typedefs

- typedef boost::shared_ptr< [AIRRAC_Service](#) > [AIRRAC::AIRRAC_ServicePtr_T](#)
- typedef unsigned int [AIRRAC::YieldID_T](#)

11.3 airrac/basic/BasConst.cpp File Reference

```
#include <airrac/basic/BasConst_General.hpp>
#include <airrac/basic/BasConst_AIRRAC_Service.hpp>
```

Namespaces

- namespace [AIRRAC](#)

Variables

- const std::string [AIRRAC::DEFAULT_AIRLINE_CODE](#) = "BA"

11.4 airrac/basic/BasConst_AIRRAC_Service.hpp File Reference

```
#include <string>
```

Namespaces

- namespace [AIRRAC](#)

Variables

- const std::string [AIRRAC::DEFAULT_AIRLINE_CODE](#)

11.5 airrac/basic/BasConst_General.hpp File Reference

Namespaces

- namespace [AIRRAC](#)

11.6 airrac/batches/airrac.cpp File Reference

```
#include <cassert>
#include <iostream>
#include <sstream>
#include <fstream>
#include <vector>
#include <list>
#include <string>
#include <boost/date_time/posix_time/posix_time.hpp>
#include <boost/date_time/gregorian/gregorian.hpp>
#include <boost/tokenizer.hpp>
#include <boost/program_options.hpp>
```

```
#include <stdair/STDAIR_Service.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/AIRRAC_Service.hpp>
#include <airrac/config/airrac-paths.hpp>
```

Typedefs

- typedef `std::vector< std::string >` [WordList_T](#)

Functions

- const `std::string` [K_AIRRAC_DEFAULT_LOG_FILENAME](#) ("airrac.log")
- const `std::string` [K_AIRRAC_DEFAULT_YIELD_INPUT_FILENAME](#) (STDAIR_SAMPLE_DIR"/yieldstore01.csv")
- `template<class T> std::ostream & operator<<` (`std::ostream &os`, `const std::vector< T > &v`)
- int [readConfiguration](#) (int argc, char *argv[], bool &ioIsBuiltin, `stdair::Filename_T` &ioYieldInputFilename, `std::string` &ioLogFilename)
- int [main](#) (int argc, char *argv[])

Variables

- const bool [K_AIRRAC_DEFAULT_BUILT_IN_INPUT](#) = false
- const int [K_AIRRAC_EARLY_RETURN_STATUS](#) = 99

11.6.1 Typedef Documentation

11.6.1.1 typedef `std::vector<std::string>` [WordList_T](#)

Definition at line 23 of file `airrac.cpp`.

11.6.2 Function Documentation

11.6.2.1 const `std::string` [K_AIRRAC_DEFAULT_LOG_FILENAME](#) ("airrac.log")

Default name and location for the log file.

Referenced by `readConfiguration()`.

11.6.2.2 const `std::string` [K_AIRRAC_DEFAULT_YIELD_INPUT_FILENAME](#) (STDAIR_SAMPLE_DIR"/yieldstore01.csv")

Default name and location for the (CSV) input file.

Referenced by `readConfiguration()`.

11.6.2.3 `template<class T> std::ostream& operator<<` (`std::ostream & os`, `const std::vector< T > & v`)

Definition at line 43 of file `airrac.cpp`.

11.6.2.4 int readConfiguration (int argc, char * argv[], bool & ioIsBuiltin, stdair::Filename_T & ioYieldInputFilename, std::string & ioLogFilename)

Read and parse the command line options.

Definition at line 50 of file airrac.cpp.

References `K_AIRRAC_DEFAULT_BUILT_IN_INPUT`, `K_AIRRAC_DEFAULT_LOG_FILENAME()`, `K_AIRRAC_DEFAULT_YIELD_INPUT_FILENAME()`, and `K_AIRRAC_EARLY_RETURN_STATUS`.

Referenced by `main()`.

11.6.2.5 int main (int argc, char * argv[])

Definition at line 153 of file airrac.cpp.

References `AIRRAC::AIRRAC_Service::buildSampleBom()`, `AIRRAC::AIRRAC_Service::buildSampleTravelSolutions()`, `AIRRAC::AIRRAC_Service::csvDisplay()`, `K_AIRRAC_EARLY_RETURN_STATUS`, `AIRRAC::AIRRAC_Service::parseAndLoad()`, and `readConfiguration()`.

11.6.3 Variable Documentation**11.6.3.1 const bool `K_AIRRAC_DEFAULT_BUILT_IN_INPUT` = false**

Default for the input type. It can be either built-in or provided by an input file. That latter must then be given with the `-i` option.

Definition at line 36 of file airrac.cpp.

Referenced by `readConfiguration()`.

11.6.3.2 const int `K_AIRRAC_EARLY_RETURN_STATUS` = 99

Early return status (so that it can be differentiated from an error).

Definition at line 39 of file airrac.cpp.

Referenced by `main()`, and `readConfiguration()`.

11.7 airrac/bom/YieldRuleStruct.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <stdair/basic/BasConst_General.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/AIRRAC_Types.hpp>
#include <airrac/bom/YieldRuleStruct.hpp>
```

Namespaces

- namespace `AIRRAC`

11.8 airrac/bom/YieldRuleStruct.hpp File Reference

```
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/stdair_date_time_types.hpp>
#include <stdair/stdair_demand_types.hpp>
#include <stdair/stdair_inventory_types.hpp>
#include <stdair/basic/StructAbstract.hpp>
#include <stdair/basic/BasParserHelperTypes.hpp>
#include <airrac/AIRRAC_Types.hpp>
```

Namespaces

- namespace [AIRRAC](#)

Classes

- struct [AIRRAC::YieldRuleStruct](#)
Utility Structure for the parsing of Flight-Date structures.

11.9 airrac/command/YieldManager.cpp File Reference

```
#include <cassert>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/BomManager.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/BookingClass.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
```

```
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/AIRRAC_Types.hpp>
#include <airrac/command/YieldManager.hpp>
```

Namespaces

- namespace [AIRRAC](#)

11.10 airrac/command/YieldManager.hpp File Reference

```
#include <stdair/stdair_basic_types.hpp>
#include <stdair/bom/TravelSolutionTypes.hpp>
```

Namespaces

- namespace [stdair](#)
- namespace [AIRRAC](#)

Classes

- class [AIRRAC::YieldManager](#)
Command wrapping the travel request process.

11.11 airrac/command/YieldParser.cpp File Reference

```
#include <cassert>
#include <string>
#include <stdair/basic/BasFileMgr.hpp>
#include <airrac/command/YieldParserHelper.hpp>
#include <airrac/command/YieldParser.hpp>
```

Namespaces

- namespace [AIRRAC](#)

11.12 airrac/command/YieldParser.hpp File Reference

```
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>
```

Namespaces

- namespace [stdair](#)
- namespace [AIRRAC](#)

Classes

- class [AIRRAC::YieldParser](#)
Class wrapping the parser entry point.

11.13 airrac/command/YieldParserHelper.cpp File Reference

```
#include <cassert>
#include <fstream>
#include <vector>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/basic/BasConst_Request.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/basic/BasParserTypes.hpp>
#include <airrac/command/YieldParserHelper.hpp>
#include <airrac/command/YieldRuleGenerator.hpp>
```

Namespaces

- namespace [AIRRAC](#)
- namespace [AIRRAC::YieldParserHelper](#)

Classes

- struct [AIRRAC::YieldParserHelper::YieldRuleParser](#)

Variables

- [stdair::int1_p_t](#) [AIRRAC::YieldParserHelper::int1_p](#)
- [stdair::uint2_p_t](#) [AIRRAC::YieldParserHelper::uint2_p](#)
- [stdair::uint4_p_t](#) [AIRRAC::YieldParserHelper::uint4_p](#)
- [stdair::uint1_4_p_t](#) [AIRRAC::YieldParserHelper::uint1_4_p](#)
- [stdair::hour_p_t](#) [AIRRAC::YieldParserHelper::hour_p](#)
- [stdair::minute_p_t](#) [AIRRAC::YieldParserHelper::minute_p](#)
- [stdair::second_p_t](#) [AIRRAC::YieldParserHelper::second_p](#)
- [stdair::year_p_t](#) [AIRRAC::YieldParserHelper::year_p](#)
- [stdair::month_p_t](#) [AIRRAC::YieldParserHelper::month_p](#)
- [stdair::day_p_t](#) [AIRRAC::YieldParserHelper::day_p](#)

11.14 airrac/command/YieldParserHelper.hpp File Reference

```
#include <string>
#include <boost/spirit/include/qi.hpp>
#include <stdair/command/CmdAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>
#include <airrac/bom/YieldRuleStruct.hpp>
```

Namespaces

- namespace [stdair](#)
- namespace [AIRRAC](#)
- namespace [AIRRAC::YieldParserHelper](#)

Classes

- struct [AIRRAC::YieldParserHelper::ParserSemanticAction](#)
- struct [AIRRAC::YieldParserHelper::storeYieldId](#)
- struct [AIRRAC::YieldParserHelper::storeOrigin](#)
- struct [AIRRAC::YieldParserHelper::storeDestination](#)
- struct [AIRRAC::YieldParserHelper::storeTripType](#)
- struct [AIRRAC::YieldParserHelper::storeDateRangeStart](#)
- struct [AIRRAC::YieldParserHelper::storeDateRangeEnd](#)
- struct [AIRRAC::YieldParserHelper::storeStartRangeTime](#)
- struct [AIRRAC::YieldParserHelper::storeEndRangeTime](#)
- struct [AIRRAC::YieldParserHelper::storePOS](#)
- struct [AIRRAC::YieldParserHelper::storeCabinCode](#)
- struct [AIRRAC::YieldParserHelper::storeChannel](#)
- struct [AIRRAC::YieldParserHelper::storeYield](#)
- struct [AIRRAC::YieldParserHelper::storeAirlineCode](#)
- struct [AIRRAC::YieldParserHelper::storeClass](#)
- struct [AIRRAC::YieldParserHelper::doEndYield](#)
- class [AIRRAC::YieldFileParser](#)

11.15 airrac/command/YieldRuleGenerator.cpp File Reference

```
#include <cassert>
#include <stdair/bom/BomManager.hpp>
#include <stdair/bom/BomRoot.hpp>
#include <stdair/bom/AirportPair.hpp>
#include <stdair/bom/PosChannel.hpp>
#include <stdair/bom/DatePeriod.hpp>
#include <stdair/bom/TimePeriod.hpp>
#include <stdair/bom/YieldFeatures.hpp>
#include <stdair/bom/AirlineClassList.hpp>
```

```
#include <stdair/factory/FacBomManager.hpp>
#include <stdair/service/Logger.hpp>
#include <airrac/bom/YieldRuleStruct.hpp>
#include <airrac/command/YieldRuleGenerator.hpp>
```

Namespaces

- namespace [AIRRAC](#)

11.16 airrac/command/YieldRuleGenerator.hpp File Reference

```
#include <stdair/command/CmdAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>
```

Namespaces

- namespace [stdair](#)
- namespace [AIRRAC](#)
- namespace [AIRRAC::YieldParserHelper](#)

Classes

- class [AIRRAC::YieldRuleGenerator](#)

11.17 airrac/factory/FacAircracServiceContext.cpp File Reference

```
#include <cassert>
#include <stdair/service/FacSupervisor.hpp>
#include <airrac/factory/FacAircracServiceContext.hpp>
#include <airrac/service/AIRRAC_ServiceContext.hpp>
```

Namespaces

- namespace [AIRRAC](#)

11.18 airrac/factory/FacAircracServiceContext.hpp File Reference

```
#include <string>
#include <stdair/stdair_basic_types.hpp>
#include <stdair/service/FacServiceAbstract.hpp>
```

Namespaces

- namespace [AIRRAC](#)

Classes

- class [AIRRAC::FacAircracServiceContext](#)
Factory for the service context.

11.19 airrac/service/AIRRAC_Service.cpp File Reference

```
#include <cassert>
#include <boost/make_shared.hpp>
#include <stdair/basic/BasChronometer.hpp>
#include <stdair/bom/BomDisplay.hpp>
#include <stdair/service/Logger.hpp>
#include <stdair/STDAIR_Service.hpp>
#include <airrac/basic/BasConst_AIRRAC_Service.hpp>
#include <airrac/factory/FacAircracServiceContext.hpp>
#include <airrac/command/YieldParser.hpp>
#include <airrac/command/YieldManager.hpp>
#include <airrac/service/AIRRAC_ServiceContext.hpp>
#include <airrac/AIRRAC_Service.hpp>
```

Namespaces

- namespace [AIRRAC](#)

11.20 airrac/service/AIRRAC_ServiceContext.cpp File Reference

```
#include <cassert>
#include <sstream>
#include <airrac/basic/BasConst_AIRRAC_Service.hpp>
#include <airrac/service/AIRRAC_ServiceContext.hpp>
```

Namespaces

- namespace [AIRRAC](#)

11.21 airrac/service/AIRRAC_ServiceContext.hpp File Reference

```
#include <string>
#include <stdair/stdair_service_types.hpp>
#include <stdair/service/ServiceAbstract.hpp>
#include <airrac/AIRRAC_Types.hpp>
```

Namespaces

- namespace [stdair](#)
- namespace [AIRRAC](#)

Classes

- class [AIRRAC::AIRRAC_ServiceContext](#)
Inner class holding the context for the [AIRRAC](#) Service object.

11.22 doc/local/authors.doc File Reference

11.23 doc/local/codingrules.doc File Reference

11.24 doc/local/copyright.doc File Reference

11.25 doc/local/documentation.doc File Reference

11.26 doc/local/features.doc File Reference

11.27 doc/local/help_wanted.doc File Reference

11.28 doc/local/howto_release.doc File Reference

11.29 doc/local/index.doc File Reference

11.30 doc/local/installation.doc File Reference

11.31 doc/local/linking.doc File Reference

11.32 doc/local/test.doc File Reference

11.33 doc/local/users_guide.doc File Reference

11.34 doc/local/verification.doc File Reference

11.35 doc/tutorial/tutorial.doc File Reference

11.36 test/airrac/YieldTestSuite.cpp File Reference

11.37 test/airrac/YieldTestSuite.hpp File Reference

```
#include <iosfwd>
```

```
#include <cppunit/extensions/HelperMacros.h>
```

Classes

- class [YieldTestSuite](#)

Functions

- [CPPUNIT_TEST_SUITE_REGISTRATION](#) ([YieldTestSuite](#))

11.37.1 Function Documentation

11.37.1.1 CPPUNIT_TEST_SUITE_REGISTRATION ([YieldTestSuite](#))

12 AirRAC Page Documentation

12.1 People

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Note:

(N) - [Amadeus](#) employees.

12.2 Coding Rules

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

12.2.1 Default Naming Rules for Variables

Variables names follow Java naming conventions. Examples:

- `lNumberOfPassengers`
- `lSeatAvailability`

12.2.2 Default Naming Rules for Functions

Function names follow Java naming conventions. Example:

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

12.2.3 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`

12.2.4 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`

12.2.5 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.

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12.3.1 GNU LESSER GENERAL PUBLIC LICENSE

12.3.1.1 Version 2.1, February 1999

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12.3.3.2 END OF TERMS AND CONDITIONS

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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>
```

```
This library is free software; you can redistribute it and/or
modify it under the terms of the GNU Lesser General Public
License as published by the Free Software Foundation; either
version 2.1 of the License, or (at your option) any later version.
```

```
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```

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Also add information on how to contact you by electronic and paper mail.

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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](#)

12.4 Documentation Rules

12.4.1 General Rules

All classes in AirRAC 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 AirRAC 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
};

```

12.4.2 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.
*
* -----
*
* AirRAC - C++ Simulated Revenue Accounting (RAC) System Library
*
* Copyright (C) 2009-2011 (\see authors file for a list of contributors)
*
* \see copyright file for license information
*
* -----
*/

```

12.4.3 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);
```

12.5 Main features

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

12.5.1 Yield calculation

- Calculation of yields from statistics on tickets/coupons

12.5.2 Yield rule engine

- Yield rules: storage, engine, management

12.5.3 Yield retrieval

- Retrieval of yields for specific booking requests or product assesment

12.5.4 Other features

- CSV input file parsing
- Memory handling

12.6 Make a Difference

Do not ask what AirRAC can do for you. Ask what you can do for AirRAC.

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

- Start using AirRAC
- Tell your friends about AirRAC and help them to get started using it
- If you find a bug, report it to us. 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 AirRAC discussion forums on SourceForge. If you know the answer to a question, help others to overcome their AirRAC 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 us to port AirRAC to new platforms. If you manage to compile AirRAC on a new platform, then tell us how you did it.

- Send us your code. If you have a good AirRAC compatible code, which you can release under the LGPL, and you think it should be included in AirRAC, then send it to us.
- Become an AirRAC developer. Send us an e-mail and tell what you can do for AirRAC.

12.7 Make a new release

12.7.1 Introduction

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

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

12.7.2 Initialisation

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

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

12.7.3 Branch creation

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

```
cd ~/dev/sim/airracgit
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 airrac.spec
```

12.7.4 Commit and publish the release branch

Commit the new release:

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

12.7.5 Update the change-log in the trunk as well

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

```
cd ~/dev/sim/airracgit
git checkout trunk
vi ChangeLog
vi airrac.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
```

12.7.6 Create distribution packages

Create the distribution packages using the following command:

```
cd ~/dev/sim/airracgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/airrac-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, `airrac-0.5.0.tar.gz` and `airrac-0.5.0.tar.bz2`.

12.7.7 Generation the RPM packages

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

```
cd ~/dev/sim/airracgit
git checkout 0.5.0
rm -rf build && mkdir -p build
cd build
cmake -DCMAKE_INSTALL_PREFIX=/home/user/dev/deliveries/airrac-0.5.0 \
  -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 airrac.spec ~/dev/packages/SPECS \
  && cp airrac-0.5.0.tar.bz2 ~/dev/packages/SOURCES
cd ~/dev/packages/SPECS
rpmbuild -ba airrac.spec
rpmlint -i ../SPECS/airrac.spec ../SRPMS/airrac-0.5.0-1.fc15.src.rpm \
  ../RPMS/noarch/airrac-* ../RPMS/i686/airrac-*
```

12.7.8 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 [AirRAC's Git repository](#).

12.7.9 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, `airrac-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.

12.7.10 Upload the files to SourceForge

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

12.7.11 Upload the documentation to SourceForge

In order to update the Web site files, either:

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

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

where `-aiv` options mean:

- `-a`: archive/mirror mode; equals `-rlptgD` (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](#).

12.7.12 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](#).

12.7.13 Send an email on the announcement mailing-list

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

12.8 Installation

12.8.1 Table of Contents

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12.8.2 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 airrac-devel airrac-doc
```

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

12.8.3 AirRAC Requirements

AirRAC 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 AirRAC.

12.8.4 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.

12.8.5 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.

12.8.6 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.

12.8.7 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.

12.8.8 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'`.

12.8.9 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
```

12.8.10 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'`.

12.8.11 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.

12.8.12 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
```

12.8.13 '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/airrac-0.5.0 \
-DLIB_SUFFIX=64 -DCMAKE_BUILD_TYPE:String=Debug -DINSTALL_DOC:BOOL=ON \
-DWITH_STDAIR_PREFIX=/home/user/dev/deliveries/stdair-stable ..
-- 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: fd0a80b436abd00facc362505699501b2e7acf58 trunk
-- Requires Boost-1.41
-- Boost version: 1.46.0
```

```

-- Found the following Boost libraries:
--   program_options
--   date_time
--   iostreams
--   serialization
--   filesystem
--   unit_test_framework
-- Found Boost version: 1.46.0
-- Found BoostWrapper: /usr/include (found suitable version "1.46.0", required is "1.41")
-- Requires MySQL without specifying any version
-- Using mysql-config: /usr/bin/mysql_config
-- Found MySQL: /usr/lib64/mysql/libmysqlclient.so (found version "5.5.14")
-- 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 (found suitable version "3.0.0", required is "3.0")
-- Found SOCIMySQL: /usr/lib64/libsoci_mysql.so (found suitable version "3.0.0", required is "3.0")
-- Found SOCI with MySQL back-end support version: 3.0.0
-- Requires StdAir-0.35
-- Found StdAir version: 0.36.2
-- Requires Doxygen without specifying any version
-- Found Doxygen: /usr/bin/doxygen
-- Found DoxygenWrapper: /usr/bin/doxygen (found version "1.7.4")
-- Found Doxygen version: 1.7.4
-- Had to set the linker language for 'airraclib' to CXX
-- Test 'YieldTestSuite' to be built with 'YieldTestSuite.cpp'
--
-- =====
-- ---      Project Information      ---
-- -----
-- PROJECT_NAME ..... : airrac
-- PACKAGE_PRETTY_NAME ..... : AirRAC
-- PACKAGE ..... : airrac
-- PACKAGE_NAME ..... : AIRRAC
-- PACKAGE_VERSION ..... : 0.5.0
-- GENERIC_LIB_VERSION ..... : 0.5.0
-- GENERIC_LIB_SOVERSION ..... : 99.99
--
-- -----
-- ---      Build Configuration      ---
-- -----
-- Modules to build ..... : airrac
-- Libraries to build ..... : airraclib
-- Binaries to build ..... : airrac
-- Modules to test ..... : airrac
-- Binaries to test ..... : YieldTestSuitetst
--
-- * Module ..... : airrac
--   + Layers to be built ..... : ;basic;bom;factory;command;service
--   + Dependencies on other layers :
--   + Libraries to be built ..... : airraclib
--   + Executables to be built .... : airrac
--   + Test to be checked ..... : YieldTestSuitetst
--
-- BUILD_SHARED_LIBS ..... : ON
-- CMAKE_BUILD_TYPE ..... : Debug
-- CMAKE_MODULE_PATH ..... : /home/user/dev/sim/airrac/airracgithub/config/
-- CMAKE_INSTALL_PREFIX ..... : /home/user/dev/deliveries/airrac-0.5.0
--
-- * 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/airrac-0.5.0/lib64
-- INSTALL_BIN_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/bin
-- INSTALL_INCLUDE_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/include
-- INSTALL_DATA_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/share
-- INSTALL_SAMPLE_DIR ..... : /home/user/dev/deliveries/airrac-0.5.0/share/airrac/samples
-- INSTALL_DOC ..... : ON
--
-----
-- --- Packaging Configuration ---
-----
-- CPACK_PACKAGE_CONTACT ..... : Denis Arnaud <denis_arnaud - at - users dot sourceforge dot net>
-- CPACK_PACKAGE_VENDOR ..... : Denis Arnaud
-- CPACK_PACKAGE_VERSION ..... : 0.5.0
-- CPACK_PACKAGE_DESCRIPTION_FILE . : /home/user/dev/sim/airrac/airracgithub/README
-- CPACK_RESOURCE_FILE_LICENSE .... : /home/user/dev/sim/airrac/airracgithub/COPYING
-- CPACK_GENERATOR ..... : TBZ2
-- CPACK_DEBIAN_PACKAGE_DEPENDS ... :
-- CPACK_SOURCE_GENERATOR ..... : TBZ2;TGZ
-- CPACK_SOURCE_PACKAGE_FILE_NAME . : aircac-0.5.0
--
-----
-- --- External libraries ---
-----
--
-- * 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;unit_test_framework
-- - Boost required libraries ... : optimized;/usr/lib64/libboost_iostreams-mt.so;debug;/usr/lib64/libboost_threading-mt.so
--
-- * 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_INCLUDE_DIRS ..... : /usr/include/soci
-- - SOCI_LIBRARIES ..... : /usr/lib64/libsoci_core.so
-- - SOCI_INCLUDE_DIRS ..... : /usr/lib64/libsoci_mysql.so
--
-- * StdAir:
-- - STDAIR_VERSION ..... : 0.36.2
-- - STDAIR_BINARY_DIRS ..... : /home/user/dev/deliveries/stdair-0.36.2/bin
-- - STDAIR_EXECUTABLES ..... : stdair
-- - STDAIR_LIBRARY_DIRS ..... : /home/user/dev/deliveries/stdair-0.36.2/lib64
-- - STDAIR_LIBRARIES ..... : stdairlib;stdairuicllib
-- - STDAIR_INCLUDE_DIRS ..... : /home/user/dev/deliveries/stdair-0.36.2/include
-- - STDAIR_SAMPLE_DIR ..... : /home/user/dev/deliveries/stdair-0.36.2/share/stdair/samples
--
-- Change a value with: cmake -D<Variable>=<Value>
-- =====
--
-- Configuring done
-- Generating done
-- Build files have been written to: /home/user/dev/sim/airrac/airracgithub/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_airrac
[ 90%] Built target airraclib
[100%] Built target YieldTestSuitetst
Test project /home/user/dev/sim/airrac/airracgithub/build/test/airrac
  Start 1: YieldTestSuitetst
1/1 Test #1: YieldTestSuitetst ..... Passed    0.03 sec

100% tests passed, 0 tests failed out of 1

Total Test time (real) =  0.23 sec
[100%] Built target check_airractst
[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/airracgit
rm -rf build && mkdir build
cd build
```

to remove everything.

12.9 Linking with AirRAC

12.9.1 Table of Contents

- [Introduction](#)
- [Using the pkg-config command](#)
- [Using the airrac-config script](#)
- [M4 macro for the GNU Autotools](#)
- [Using AirRAC with dynamic linking](#)

12.9.2 Introduction

There are two convenient methods of linking your programs with the AirRAC library. The first one employs the `'pkg-config'` command (see <http://pkgconfig.freedesktop.org/>), whereas the second one uses `'airrac-config'` script. These methods are shortly described below.

12.9.3 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 AirRAC based program 'my_prog.cpp', you should use the following command:

```
g++ `pkg-config --cflags airrac` -o my_prog my_prog.cpp `pkg-config --libs airrac`
```

For more information see the 'pkg-config' man pages.

12.9.4 Using the airrac-config script

AirRAC provides a shell script called 'airrac-config', which is installed by default in '\$prefix/bin' ('/usr/local/bin') directory. It can be used to simplify compilation and linking of AirRAC 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++ `airrac-config --cflags` -o my_prog_opt my_prog.cpp `airrac-config --libs`
```

A list of 'airrac-config' options can be obtained by typing:

```
airrac-config --help
```

If the 'airrac-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
```

12.9.5 M4 macro for the GNU Autotools

A M4 macro file is delivered with AirRAC, namely 'airrac.m4', which can be found in, e.g., '/usr/share/aclocal'. When used by a 'configure' script, thanks to the 'AM_PATH_AirRAC' macro (specified in the M4 macro file), the following Makefile variables are then defined:

- 'AirRAC_VERSION' (e.g., defined to 0.23.0)
- 'AirRAC_CFLAGS' (e.g., defined to '-I\${prefix}/include')
- 'AirRAC_LIBS' (e.g., defined to '-L\${prefix}/lib -lairrac')

12.9.6 Using AirRAC with dynamic linking

When using static linking some of the library routines in AirRAC 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 AirRAC library file during your program execution. If you install the AirRAC 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=<AirRAC installation prefix>/lib:$LD_LIBRARY_PATH
```

12.10 Test Rules

This section describes how the functionality of the AirRAC library should be verified. In the `'test/airrac'` subdirectory, test source files are provided. All functionality should be tested using these test source files.

12.10.1 The Test Source Files

Each new AirRAC 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 AirRAC 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/airrac'` subdirectory and should have a name ending with `'TestSuite.cpp'`.

12.10.2 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.

12.10.3 Testing AirRAC Library

One can compile and execute all test programs from the `'test/airrac'` sub-directory by typing:

```
% make check
```

after successful compilation of the AirRAC library.

12.11 Users Guide

12.11.1 Table of Contents

- [Introduction](#)

- [Get Started](#)
 - [Get the AirRAC library](#)
 - [Build the AirRAC project](#)
 - [Build and Run the Tests](#)
 - [Install the AirRAC Project \(Binaries, Documentation\)](#)
- [Exploring the Predefined BOM Tree](#)
 - [Yield Rule Engine BOM Tree](#)
- [Extending the BOM Tree](#)

12.11.2 Introduction

The `AirRAC` library contains classes for yield rule management. This document does not cover all the aspects of the `AirRAC` library. It does however explain the most important things you need to know in order to start using `AirRAC`.

12.11.3 Get Started

12.11.3.1 Get the AirRAC library

12.11.3.2 Build the AirRAC project To run the configuration script the first time, go to the top directory (where the `AirRAC` package has been un-packed), and issue either of the following two commands, depending on whether the `AirRAC` project has been checked out from the Subversion repository or downloaded as a tar-ball package from the Sourceforge Web site:

- `./autogen.sh`
- `./configure`

12.11.3.3 Build and Run the Tests

12.11.3.4 Install the AirRAC Project (Binaries, Documentation)

12.11.4 Exploring the Predefined BOM Tree

`AirRAC` predefines a BOM (Business Object Model) tree specific to the airline IT arena.

12.11.4.1 Yield Rule Engine BOM Tree

- `AIRRAC::YieldRuleStruct`

12.11.5 Extending the BOM Tree

12.12 Supported Systems

12.12.1 Table of Contents

- [Introduction](#)
- [AirRAC 0.1.x](#)
 - [Linux Systems](#)
 - * [Fedora Core 4 with ATLAS](#)
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 - * [SunOS 5.9 with AirRAC External](#)
- [AirRAC 3.9.1](#)
- [AirRAC 3.9.0](#)
- [AirRAC 3.8.1](#)

12.12.2 Introduction

This page is intended to provide a list of AirRAC supported systems, i.e. the systems on which configuration, installation and testing process of the AirRAC 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 AirRAC library on a system not mentioned below, please let us know, so we could update this database.

12.12.3 AirRAC 0.1.x

12.12.3.1 Linux Systems

Fedora Core 4 with ATLAS

- **Platform:** Intel Pentium 4
- **Operating System:** Fedora Core 4 (x86)
- **Compiler:** g++ (GCC) 4.0.2 20051125
- **AirRAC release:** 0.1.0
- **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:** AirRAC configured with:

```
% CXXFLAGS="-O3 -pipe -march=pentium4" ./configure
```
- **Date:** March 7, 2006
- **Tester:** Tony Ottosson

Gentoo Linux with ACML

- **Platform:** AMD Sempron 3000+
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler(s):** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.1
- **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
```

AirRAC configured with:

```
% export CPPFLAGS="-I/usr/include/acml"
% ./configure --with-blas="-lblas"
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

Gentoo Linux with ATLAS

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86)
- **Compiler:** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.1
- **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
```

AirRAC configured with:

```
% ./configure --with-blas="-lblas"
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

Gentoo Linux with MKL

- **Platform:** Intel Pentium M Centrino
- **Operating System:** Gentoo Linux 2006.0 (x86 arch)
- **Compiler:** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.0
- **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:** AirRAC 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)

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
- **AirRAC release:** 0.1.1
- **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
```

AirRAC configured with:

```
% ./configure --with-blas="-lblas"
```

- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

Red Hat Enterprise Linux with AirRAC 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)
- **AirRAC release:** 0.1.0
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirRAC External 2.1.1 package
- **Tests Status:** All tests PASSED
- **Date:** March 7, 2006
- **Tester:** Erik G. Larsson

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
- **AirRAC release:** 0.1.0
- **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:** AirRAC 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)

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
- **AirRAC release:** 0.1.0
- **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:** AirRAC 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)

12.12.3.2 Windows Systems

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)
- **AirRAC release:** 0.1.1
- **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. AirRAC configured with:

```
% ./configure
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

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)
- **AirRAC release:** 0.1.1
- **External Libraries:** Installed from Cygwin's repository:
 - fftw-3.0.1-2
 - fftw-dev-3.0.1-1ATLAS BLAS and LAPACK libraries from AirRAC External 2.1.1 package configured using:

```
% ./configure --enable-atlas --disable-fftw
```
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirRAC configured with:

```
% export LDFLAGS="-L/usr/local/lib"
% ./configure
```
- **Date:** March 31, 2006
- **Tester:** Adam Piatyszek (ediap)

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)
- **AirRAC release:** 0.1.2
- **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. AirRAC 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)

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)
- **AirRAC release:** 0.1.2
- **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. AirRAC 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)

Microsoft Windows XP with MinGW, MSYS and AirRAC 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)
- **AirRAC release:** 0.1.5
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirRAC External 2.2.0 package
- **Tests Status:** All tests PASSED
- **Comments:** Only static library can be built. AirRAC 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)

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
- **AirRAC release:** 0.1.5
- **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 AirRAC based programs compiled and run with success.
- **Comments:** Only static library can be built. AirRAC built by opening the "win32\airrac.vcproj" project file in MSVC++ and executing "Build → Build Solution" command from menu.
- **Date:** August 11, 2006
- **Tester:** Adam Piatyszek (ediap)

12.12.3.3 Unix Systems

SunOS 5.9 with AirRAC External

- **Platform:** SUNW, Sun-Blade-100 (SPARC)
- **Operating System:** SunOS 5.9 Generic_112233-10
- **Compiler(s):** g++ (GCC) 3.4.5
- **AirRAC release:** 0.1.2
- **External Libraries:** BLAS, CBLAS, LAPACK and FFTW libraries from AirRAC 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:** AirRAC 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)

12.13 AirRAC Supported Systems (Previous Releases)

12.13.1 AirRAC 3.9.1

12.13.2 AirRAC 3.9.0

12.13.3 AirRAC 3.8.1

12.14 Tutorials

12.14.1 Table of Contents

- [Introduction](#)
 - [Preparing the AirRAC Project for Development](#)
- [Build a Predefined BOM Tree](#)
 - [Instantiate the BOM Root Object](#)
 - [Instantiate the \(Airline\) Inventory Object](#)
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 - [Build Another Airline Inventory](#)
 - [Dump The BOM Tree Content](#)
 - [Result of the Tutorial Program](#)

12.14.2 Introduction

This page contains some tutorial examples that will help you getting started using AirRAC. Most examples show how to construct some simple business objects, i.e., instances of the so-named Business Object Model (BOM).

12.14.2.1 Preparing the AirRAC Project for Development The source code for these examples can be found in the `batches` and `test/airrac` directories. They are compiled along with the rest of the AirRAC project. See the User Guide ([Users Guide](#)) for more details on how to build the AirRAC project.

12.14.3 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](#)

12.14.3.1 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 `airrac::AIRRAC_ServiceContext` context object, when the `airrac::AIRRAC_Service` is itself instantiated. The corresponding AirRAC type (class) is `airrac::BomRoot`.

In the following sample, that object is named `ioBomRoot`, and is given as input/output parameter of the `airrac::CmdBomManager::buildSampleBom()` method:

12.14.3.2 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) `airrac::InventoryKey` has first to be instantiated.

Thanks to that key, an airline inventory object, i.e. of type (class) `airrac::Inventory`, can be instantiated. Let us name that airline inventory object `lBAInv`.

12.14.3.3 Link the Inventory Object with the BOM Root Then, both objects have to be linked: the airline inventory object (`airrac::Inventory`) has to be linked with the root of the BOM tree (`airrac::BomRoot`). That operation is as simple as using the `airrac::FacBomManager::addToListAndMap()` method:

12.14.3.4 Build Another Airline Inventory Another airline inventory object, corresponding to the Air France (Air France) company, is instantiated the same way:

See the corresponding full program (`cmd_bom_manager_cpp`) for more details.

12.14.3.5 Dump The BOM Tree Content From the `BomRoot` (of type `airrac::BomRoot`) object instance, the list of airline inventories (of type `airrac::Inventory`) can then be retrieved...

... and browsed:

See the corresponding full program (`bom_display_cpp`) for more details.

12.14.3.6 Result of the Tutorial Program When the `airrac.cpp` program is run (with the `-b` option), the output should look like:

```
[D]/home/user/dev/sim/airrac/airracgithub/airrac/batches/airrac.cpp:184: Welcome to AirRAC
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:493: Parsing yield input fi
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:326: YieldRule: 1, SIN-BKK
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:326: YieldRule: 2, SIN-HND
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:326: YieldRule: 3, SIN-NCE
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:326: YieldRule: 4, SIN-BKK
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:326: YieldRule: 5, SIN-HND
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:326: YieldRule: 6, SIN-NCE
[D]/home/user/dev/sim/airrac/airracgithub/airrac/command/YieldParserHelper.cpp:541: Parsing of yield input
[D]/home/user/dev/sim/airrac/airracgithub/airrac/batches/airrac.cpp:205: BOM tree:
=====
BomRoot:  -- ROOT --
=====
+++++
AirportPair: SIN, BKK
+++++
-----
DatePeriod: [2010-Jan-15/2011-Jan-01]
-----
*****
PosChannel: ALL, DC
*****
-----
TimePeriod: 00:00:00-23:59:00
-----
-----
Fare/yield-Features: OW -- Y
-----
-----
AirlineClassList: SQ Y
-----
-----
Fare/yield-Features: RT -- Y
-----
-----
AirlineClassList: SQ Y
-----
+++++
```

```

AirportPair: SIN, HND
+++++
-----
DatePeriod: [2010-Jan-15/2011-Jan-01]
-----
*****
PosChannel: ALL, DC
*****
-----
TimePeriod: 00:00:00-23:59:00
-----
-----
Fare/yield-Features: OW -- Y
-----
-----
AirlineClassList: SQ Y
-----
-----
Fare/yield-Features: RT -- Y
-----
-----
AirlineClassList: SQ Y
-----
+++++
AirportPair: SIN, NCE
+++++
-----
DatePeriod: [2010-Jan-15/2011-Jan-01]
-----
*****
PosChannel: ALL, DC
*****
-----
TimePeriod: 00:00:00-23:59:00
-----
-----
Fare/yield-Features: OW -- Y
-----
-----
AirlineClassList: SQ Y, AF YLMN
-----
-----
Fare/yield-Features: RT -- Y
-----
-----
AirlineClassList: SQ Y, AF YLMN
-----

[D]/home/user/dev/sim/airrac/airracgithub/airrac/batches/airrac.cpp:210: Travel solutions:
  [0] [0] BA, 9, 2011-06-10, LHR, SYD, 21:45 --- Q, 900, 1 1 1 --- [0] Q:8

```

See the corresponding full program (batch_airrac_cpp) for more details.

12.15 Command-Line Test to Demonstrate How To Test the AirRAC Project

```

*/
// //////////////////////////////////////
// Import section
// //////////////////////////////////////
// STL
#include <sstream>
#include <fstream>
#include <string>
// Boost Unit Test Framework (UTF)

```

```

#define BOOST_TEST_DYN_LINK
#define BOOST_TEST_MAIN
#define BOOST_TEST_MODULE YieldTestSuite
#include <boost/test/unit_test.hpp>
// StdAir
#include <stdair/basic/BasLogParams.hpp>
#include <stdair/basic/BasDBParams.hpp>
#include <stdair/basic/BasFileMgr.hpp>
#include <stdair/bom/TravelSolutionStruct.hpp>
#include <stdair/service/Logger.hpp>
// Airrac
#include <airrac/AIRRAC_Service.hpp>
#include <airrac/config/airrac-paths.hpp>

namespace boost_utf = boost::unit_test;

// (Boost) Unit Test XML Report
std::ofstream utfReportStream ("YieldTestSuite_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_tests);
    }

    ~UnitTestConfig() {
    }
};

// //////////////////////////////////////

void testYieldQuoterHelper (const unsigned short iTestFlag,
                           const stdair::Filename_T iYieldInputFilename,
                           const bool isBuiltin) {

    // Output log File
    std::ostringstream oStr;
    oStr << "FQTTestSuite_" << iTestFlag << ".log";
    const stdair::Filename_T lLogFilename (oStr.str());

    // Set the log parameters
    std::ofstream logOutputFile;
    // Open and clean the log outputfile
    logOutputFile.open (lLogFilename.c_str());
    logOutputFile.clear();

    // Initialise the AirRAC service object
    const stdair::BasLogParams lLogParams (stdair::LOG::DEBUG,
                                           logOutputFile);

    // Initialise the AirRAC service object
    AIRRAC::AIRRAC_Service airracService (lLogParams);

    // Build a sample list of travel solutions
    stdair::TravelSolutionList_T lTravelSolutionList;
    airracService.buildSampleTravelSolutions (lTravelSolutionList);

    // Check whether or not a (CSV) input file should be read
    if (isBuiltin == true) {

        // Build the default sample BOM tree (filled with yields) for AirRAC
        airracService.buildSampleBom();

    } else {

```

```

    // Build the BOM tree from parsing the yield input file
    AIRRAC::YieldFilePath lYieldFilePath (iYieldInputFilename);
    airracService.parseAndLoad (lYieldFilePath);
}

// Calculate the yields for the given travel solution
airracService.calculateYields (lTravelSolutionList);

// Close the log file
logOutputFile.close();
}

// ////////////////////////////////// Main: Unit Test Suite //////////////////////////////////

// Set the UTF configuration (re-direct the output to a specific file)
BOOST_GLOBAL_FIXTURE (UnitTestConfig);

// Start the test suite
BOOST_AUTO_TEST_SUITE (master_test_suite)

BOOST_AUTO_TEST_CASE (airrac_simple_yield) {

    // Input file name
    const stdair::Filename_T lYieldInputFilename (STDAIR_SAMPLE_DIR "/yieldstore01.csv");

    // State whether the BOM tree should be built-in or parsed from an input file
    const bool isBuiltin = false;

    // Try to yieldQuote the sample default list of travel solutions
    BOOST_CHECK_NO_THROW (testYieldQuoterHelper (0, lYieldInputFilename, isBuiltin));
}

BOOST_AUTO_TEST_CASE (airrac_error_parsing_input_file) {

    // Input file name
    const stdair::Filename_T lYieldInputFilename (STDAIR_SAMPLE_DIR "/yieldstoreError01.csv");

    // State whether the BOM tree should be built-in or parsed from an input file
    const bool isBuiltin = false;

    // Try to yield quote the sample default list of travel solutions
    BOOST_CHECK_THROW (testYieldQuoterHelper (1, lYieldInputFilename, isBuiltin),
        AIRRAC::YieldFileParsingFailedException);
}

BOOST_AUTO_TEST_CASE (airrac_error_missing_input_file) {

    // Input file name
    const stdair::Filename_T lYieldInputFilename (STDAIR_SAMPLE_DIR "/missingFile.csv");

    // State whether the BOM tree should be built-in or parsed from an input file
    const bool isBuiltin = false;

    // Try to yield quote the sample default list of travel solutions
    BOOST_CHECK_THROW (testYieldQuoterHelper (2, lYieldInputFilename, isBuiltin),
        AIRRAC::YieldInputFileNotFoundException);
}

BOOST_AUTO_TEST_CASE (airrac_simple_yield_built_in) {

    // State whether the BOM tree should be built-in or parsed from an input file
    const bool isBuiltin = true;

```

```
// Try to yield quote the sample default list of travel solutions
BOOST_CHECK_NO_THROW (testYieldQuoterHelper (3, " ", isBuiltin));

}

// End the test suite
BOOST_AUTO_TEST_SUITE_END()

/*!
```