API Developer Notes

Low Fare Air Shopping Using FareQuoteSuperBB_#

26 October 2011

Version 2.1

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Overview

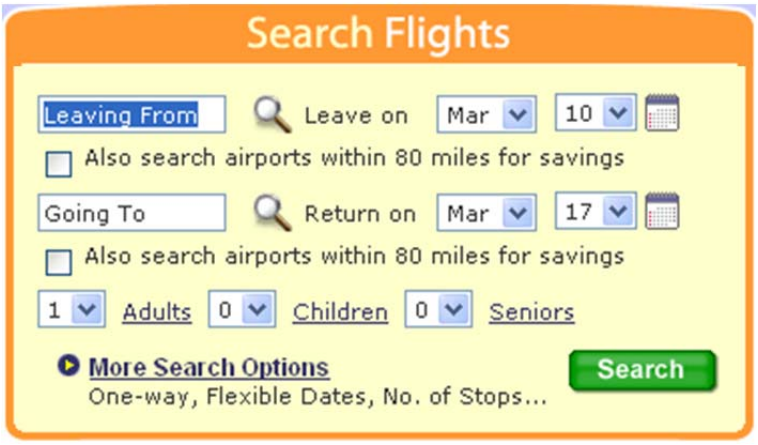
One of the simplest ways to build an air shopping and booking Web site is to follow the low fare shopping model for selecting flights. This approach presents both fares and available flights at the same time, and is what most travelers expect to see when booking online travel.

This document describes a generic air shopping process and the associated Galileo Web Services transactions used.

Note: This document previously referenced the XML Transaction FareQuoteShop_#. This transaction is now retired, and FareQuoteSuperBB_# can be used Low Fare Shopping on both the Apollo and Galileo CRS.

Entering the Itinerary

The shopping process usually starts with the traveler entering the desired itinerary in a screen similar to:



Important details to collect at this stage are:

- Origin and destination cities or airports.
- Departure dates.
- Number of travelers.

The interface should support one-way and round trip flights, but multiple destinations and open jaw trips can also be supported.

If the interface supports infants, details about infants (both with and without a seat) must also be collected at this point. Knowledge of infants without a seat is especially important, as there is generally no fare or a reduced fare for these passengers.

Other additional inputs that can be provided include:

- Preferred airlines.
- Maximum number of stops.
- Departure times
- Departure time windows.

It is recommended that drop-down calendars are used for dates. Calendar controls present only valid dates and usually have properties for minimum and maximum dates that can be set to prevent illogical date entry.

If a multi-airport city is entered, one of two approaches can be used

1. Present the traveler with the option of selecting a specific airport from the multi-airport city.
2. Use the city code to return flights to or from all airports within the city.

Regardless of which option is used, a city name must be converted to a city code or airport code to submit a low fare shopping request. City and airport codes are available in the Reference Data files.

Galileo Web Services (GWS) uses Travel Codes Translator eBL to encode and decode reference data. Because Travel Codes Translator eBL interfaces directly the Reference Data Content Manager web site, all GWS customers using Travel Codes Translator eBL automatically have access to current reference data. See the *Travel Codes Translator eBL* book in the GWS Help for more information.

XML Select includes Reference Data distribution files in the product installation. By default, these files are located in: C:\Program Files\Galileo International\XML Select\SDK\Local Data.

Requesting Fares and Valid Flights

Use the FareQuoteSuperBB_# request to shop for low fares on the Galileo or Apollo CRS (depending on your permissions.

The FareQuoteSuperBB_# request allows a user to find the best price options for a proposed journey, using origin/destination and date information, without requiring a booked itinerary. It combines air availability and the fare quote request, and it allows a user to enter criteria to limit the shopping request, such as time period, specific carriers to include or exclude, private fare modifiers, and passenger type.

One or more itineraries and the associated best fares available on those flights are displayed. It differs from other air availability and faring transactions because it does not require a booked itinerary to perform the faring functions.

To use this transaction, your agency must be signed up for the Low Fare Shopping function and have the appropriate field in the AAT table set to Y (yes). The user may also be signed up for agency and/or airline private fares to receive private fares.

FareQuoteSuperBB_# Request

A FareQuoteSuperBB_# request can be sent to the Galileo or Apollo CRS. It typically looks like:

```
<FareQuoteSuperBB_#>
    <AirAvailMods>
        <GenAvail>
            <NumSeats>2</NumSeats>
            <Class/>
            <StartDt>20060511</StartDt>
            <StartPt>DEN</StartPt>
            <EndPt>MCO</EndPt>
            <StartTm>0800</StartTm>
            <TmWndInd>D</TmWndInd>
            <StartTmWnd>0600</StartTmWnd>
            <EndTmWnd>1200</EndTmWnd>
            <JrnyTm>99</JrnyTm>
            <FltTypeInd>E</FltTypeInd>
            <FltTypePref/>
            <StartPtInd>B</StartPtInd>
            <EndPtInd>B</EndPtInd>
            <IgnoreTSPref>Y</IgnoreTSPref>
            <IncNonStopDirectsInd>Y</IncNonStopDirectsInd>
            <IncStopDirectsInd>Y</IncStopDirectsInd>
            <IncSingleOnlineConxInd>Y</IncSingleOnlineConxInd>
            <IncDoubleOnlineConxInd>Y</IncDoubleOnlineConxInd>
            <IncTripleOnlineConxInd>N</IncTripleOnlineConxInd>
            <IncSingleInterlineConxInd>Y</IncSingleInterlineConxInd>
            <IncDoubleInterlineConxInd>Y</IncDoubleInterlineConxInd>
            <IncTripleInterlineConxInd>N</IncTripleInterlineConxInd>
        </GenAvail>
        <AirVPrefInd>
            <AirVIncExcInd>I</AirVIncExcInd>
            <RelaxAirVPref>N</RelaxAirVPref>
            <SectorNum>0</SectorNum>
        </AirVPrefInd>
        <AirVPrefs>
            <AirVAry>
                <AirVInfo>
```

Outbound flight

Desired StartTm must fall within the time window

Time windows can have a dramatic effect on the results.

Use these to specify the maximum number of stops

I = Include
E = Exclude
O = Online Only, no interline connections.

Preferred carriers for outbound flight (optional)

```
                <AirV>DL</AirV>
            </AirVInfo>
            <AirVInfo>
                <AirV>UA</AirV>
            </AirVInfo>
        </AirVAry>
    </AirVPrefs>
</AirAvailMods>

<AirAvailMods>
    <GenAvail>
        <NumSeats>2</NumSeats>
        <Class/>
        <StartDt>20060515</StartDt>
        <StartPt>MCO</StartPt>
        <EndPt>DEN</EndPt>
        <StartTm>0800</StartTm>
        <TmWndInd>D</TmWndInd>
        <StartTmWnd>0600</StartTmWnd>
        <EndTmWnd>1200</EndTmWnd>
        <JrnyTm>99</JrnyTm>
        <FltTypeInd>E</FltTypeInd>
        <FltTypePref/>
        <StartPtInd>B</StartPtInd>
        <EndPtInd>B</EndPtInd>
        <IgnoreTSPref>Y</IgnoreTSPref>
        <IncNonStopDirectsInd>Y</IncNonStopDirectsInd>
        <IncStopDirectsInd>Y</IncStopDirectsInd>
        <IncSingleOnlineConxInd>Y</IncSingleOnlineConxInd>
        <IncDoubleOnlineConxInd>Y</IncDoubleOnlineConxInd>
        <IncTripleOnlineConxInd>N</IncTripleOnlineConxInd>
        <IncSingleInterlineConxInd>Y</IncSingleInterlineConxInd>
        <IncDoubleInterlineConxInd>Y</IncDoubleInterlineConxInd>
        <IncTripleInterlineConxInd>N</IncTripleInterlineConxInd>
    </GenAvail>
    <AirVPrefInd>
        <AirVIncExcInd>I</AirVIncExcInd>
        <RelaxAirVPref>N</RelaxAirVPref>
        <SectorNum>0</SectorNum>
    </AirVPrefInd>
```

Cabin – F, C or Y (optional)

Return flight

Preferred carriers for return flight (optional)

```
        <AirVPrefs>
            <AirVAry>
                <AirVInfo>
                    <AirV>DL</AirV>
                </AirVInfo>
                <AirVInfo>
                    <AirV>UA</AirV>
                </AirVInfo>
            </AirVAry>
        </AirVPrefs>
    </AirAvailMods>
```

This part of the request specifies the desired itinerary

You can access private and public fares using one transaction, but you must specify in the <PFInfo> element in the request that you want private fares returned. You can also specify that you *only* want private fares.

```
    <SuperBBMods>
        <PFInfo>
            <ReqAirVPFs>Y</ReqAirVPFs>
            <PFAry>
                <PF>
                    <StartODRange>00</StartODRange>
                    <EndODRange>00</EndODRange>
                    <CRS>1V</CRS>
                    <PCC>yourPCC</PCC>
                    <AirV/>
                    <Acct> yourAcctCode </Acct>
                    <Contract/>
                    <PublishedFaresInd>Y</PublishedFaresInd>
                    <Type>V</Type>
                    <PFTypeRestrict/>
                    <AcctCodeRestrict>N</AcctCodeRestrict>
                    <Spare1/>
                </PF>
            </PFAry>
        </PFInfo>
```

This part of the request specifies fare information

A Private Fare section is required to obtain Private Fares

Private fares

Only one account code per request

'Y' = Published and Private fares.
'N' =Only Private fares.

A = Airline Private Fares only.
G = Agency Private Fares only.
Empty = both

Y to get only fares that match your PF account code fares.

For Net fares you must send a second FareQuoteSuperBB_# transaction because net fares need to be specifically requested by setting the <NetFaresOnly> element to Y. **There is no integrated display of NET fares/private fares/published fares.**

You can specify:

1. Net/Cat35 Fares only.
2. Private Fares only (not including NET/Cat35)
3. Published fares only.
4. Integrated display of 2 and 3.

Alternatively, you could mark up the net fares by 0 (or any other value) so that they are stored to have a net price and a selling price. In this case, the selling price is returned as a normal private fare.

```
<GenQuoteInfo>
    <NetFaresOnly>N</GenQuoteInfo>
</GenQuoteInfo>

<PassengerType>
    <PsgrAry>
        <Psgr>
            <LNameNum>01</LNameNum>
            <PsgrNum>01</PsgrNum>
            <AbsNameNum>01</AbsNameNum>
            <PTC>ADT</PTC>
            <Age><![CDATA[  ]]></Age>
            <PricePTCOnly>N</PricePTCOnly>
        </Psgr>
        <Psgr>
            <LNameNum>02</LNameNum>
            <PsgrNum>01</PsgrNum>
            <AbsNameNum>02</AbsNameNum>
            <PTC>CNN</PTC>
            <Age>08</Age>
            <PricePTCOnly>N</PricePTCOnly>
        </Psgr>
    </PsgrAry>
</PassengerType>
</SuperBBMods>
</FareQuoteSuperBB_#>
```

Net fares
Set to Y for net fares **only**.
Set to N to get fares that are not net fares.

Passenger type code.

For passenger type code search, set this to Y.

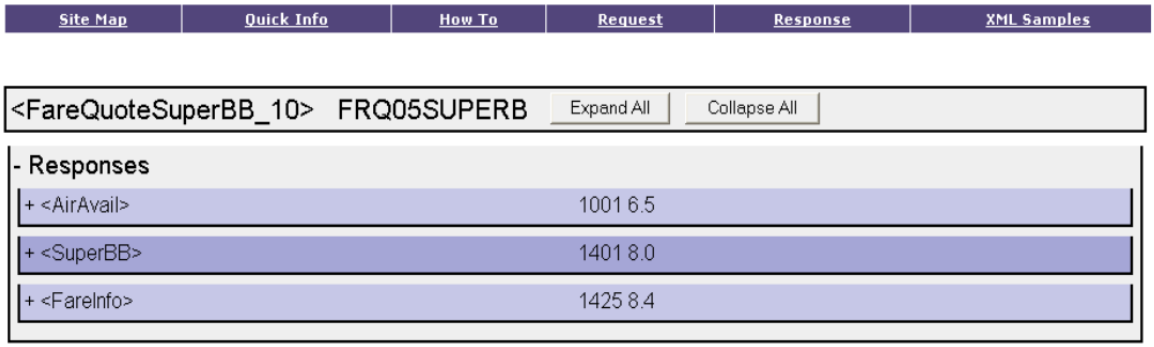
Passenger descriptions for fares.

Using the <Optimize> Element

FareQuoteSuperBB is actually two transactions combined into one.

- The first part of FareQuoteSuperBB requests availability. The record number for an availability response is 1001.
- The second part of the FareQuoteSuperBB requests fares. The record number for the fares response is 1425.

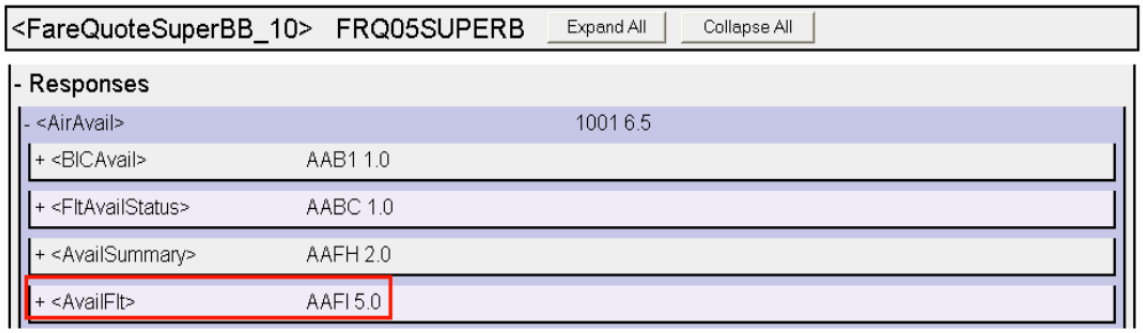
The following image of the XML Select online help shows the response Record Number 1001, 1401, and 1425.



<AirAvail> = Record Number 1001; major version 6, minor version 5.

<FareInfo> = Record Number 1425; major version 8, minor version 0.

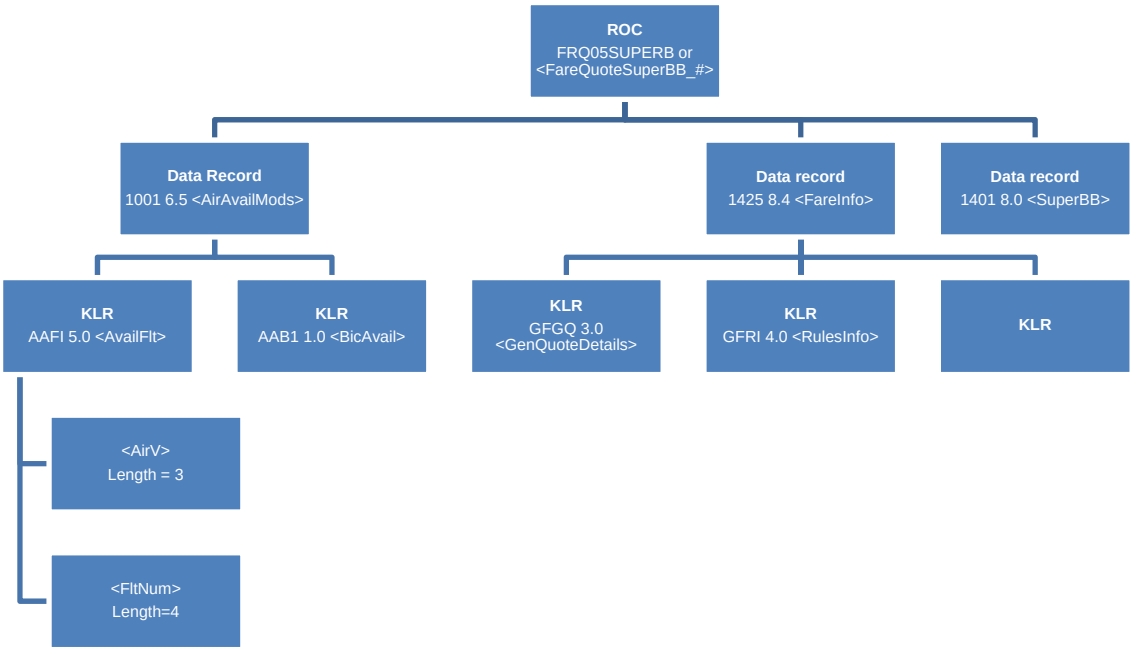
The Response Record Number 1001 contains the Air Availability information. The structured data KLR AAFI is given the XML Select tag name <AvailFlt> as shown in the following image:



<BICAvail> = KLR AAB1; major version 1, minor version 0.

<AvailFlt> = KLR AAFI; major version 5, minor version 0.

Structured data procedures (PROCS) are the equivalent of an XML Transaction and are constructed of one or more Data Records, which are constructed of one or more Key Logical Records (KLR), which are constructed of many data fields. The following diagram demonstrates these relationships.



Optimization of the FareQuoteSuperBB_# request ensures that unnecessary data is not processed or returned by the host. The benefits of optimization are:

- Faster processing time on the host.
- A reduced data payload.

In order to implement optimization you must decide which KLRs in the response are useful and instruct the host to only return these KLRs. The <Optimize> element in the XML Request is used for this purpose. Using optimize you can indicate exactly what data records the host is to return and within those data records exactly what KLRs to return. All data fields within the specified KLRs are returned.

The <Optimize> filter is sent in the FareQuoteSuperBB_# request to define the information (i.e., Record Numbers and KLRs) that are returned in the response. If the <Optimize> filter is omitted, all available tags are returned in the response.

The following is an example of a typical optimize section that contains all of the necessary records and KLRs to successfully parse a low fare shopping response:

```
<Optimize><!--This optimize section is for the Availability portion of the response (1001 Record Number) -->
    <RecType>1001</RecType><!-- 1001 = <AirAvail> -->
    <KlrIDAry>
        <KlrID>AAFI</KlrID><!-- <AvailFlt> -->
        <KlrID>AAB1</KlrID><!-- <BICAvail> -->
    </KlrIDAry>
</Optimize>
<Optimize><!--This Optimize section is for the Fares portion of the response (1425 Record Number) -->
    <RecType>1425</RecType><!-- 1425 = <FareInfo> -->
    <KlrIDAry>
        <KlrID>GFGQ</KlrID><!-- <GenQuoteDetails> -->
```

```
            <KlrID>GFXI</KlrID><!-- <FlightItemCrossRef> -->
            <KlrID>GFPI</KlrID><!-- <PsgrTypes> -->
            <KlrID>GFRI</KlrID><!-- <RulesInfo>-->
            <KlrID>GFPX</KlrID><!-- <EnhancedPrivateFares> -->
            <KlrID>GFFB</KlrID><!-- <FareBasisCodeSummary> -->
    </Optimize>
```

Default Booking Class Table

Booking Class	Description
A	First
B	Economy
BN	Night Economy
C	Business
CN	Night Business
D	Business
E	Economy
F	First
FN	Night First
G	Conditional Res
H	Economy
HN	Night Economy
I	Business Class Discounted
J	Business Premium
JN	Business
K	Economy
KN	Economy
L	Economy
LN	Economy
M	Economy
MN	Night Tourist
N	Economy
P	Premium First
PN	Night First
Q	Economy
QN	Night Coach
R	Special Class
S	Economy
T	Tourist

Booking Class	Description
TN	Economy
U	Shuttle
V	Economy
VN	Night Coach
W	Promotion
X	Economy Discounted
Y	Economy
YN	Night Economy
Z	Business Discounted

Response

The *FareQuoteSuperBB_# Response* is organized around fares and groups of flights for each origin / destination city pair (see the *Low Fare Response Organization* diagram). Each fare contains a list of flights for each city pair that qualifies for the fare. Only flights in these lists can be combined to book the specific fare. Each flight also has an associated class of service (know as a BIC, or booking identification code). The flight must be booked with the specified class of service in order to obtain the fare.

FareQuoteSuperBB_# Response

For every Origin Destination pair within the FareQuoteSuperBB_# request there is a corresponding <AirAvail> element in the FareQuoteSuperBB_# response. For every fare available, there is a <FareInfo> element in the response. Within the <FareInfo> element, the <FlightItemCrossRef> element is used to correlate each fare to its applicable flights.

```
<FareQuoteSuperBB_#>
    <AirAvail>
        <AvailFlt>
            <AirV>DL</AirV>
            <FltNum>1056</FltNum>
            <OpSuf/>
            <StartDt>20060511</StartDt>
            <StartAirp>DEN</StartAirp>
            <EndAirp>ATL</EndAirp>
            <StartTm>605</StartTm>
            <EndTm>1100</EndTm>
            <DayChg>00</DayChg>
            <Conx>Y</Conx>
            <AirpChg>N</AirpChg>
            <Equip>M80</Equip>
            <Spare1/>
```

First leg of multi-leg flight

Multi-leg indicator - Y for connected flights

```
        <NumStops>0</NumStops>
        <OpAirVInd>N</OpAirVInd>
        <Perf>7</Perf>
        <LinkSellAgrmnt>SS</LinkSellAgrmnt>
        <DispOption>Y</DispOption>
        <InsideAvailOption>L</InsideAvailOption>
        <GenTrafRestriction/>
        <DaysOperates>NYYYYYY</DaysOperates>
        <JrnyTm>320</JrnyTm>
        <EndDt>20060511</EndDt>
        <OpAirV/>
        <OpFltDesignator/>
        <OpFltSuf/>
        <StartTerminal/>
        <EndTerminal>S</EndTerminal>
        <FltTm>175</FltTm>
        <LSAInd>N</LSAInd>
        <GalileoAirVInd>Y</GalileoAirVInd>
        <ETktEligibility>E</ETktEligibility>
        <ScheduleLevelCarrier/>
        <FrstDwnlnStp/>
        <LastDwnlnStp/>
        <SponsoredFltInd>N</SponsoredFltInd>
        <SponsoredFltLineNum>00</SponsoredFltLineNum>
        <NeutralFltLineNum>12</NeutralFltLineNum>
        <SponsoredFltKey>00000</SponsoredFltKey>
    </AvailFlt>
    <AvailFlt>
        <AirV>DL</AirV>
        <FltNum>693</FltNum>
        <OpSuf/>
        <StartDt>20060511</StartDt>
        <StartAirp>ATL</StartAirp>
        <EndAirp>MCO</EndAirp>
        <StartTm>1200</StartTm>
        <EndTm>1325</EndTm>
        <DayChg>00</DayChg>
        <Conx>N</Conx>
        <AirpChg>N</AirpChg>
        <Equip>757</Equip>
```

A value of P indicates point-to-point. If this value is P, omit <AvailJrnyNum> in PNRBFManagement_# air segment sell.

Second leg of multi-leg flight

Multi-leg indicator - N for last leg

```
            <Spare1/>
            <NumStops>0</NumStops>
            <OpAirVInd>N</OpAirVInd>
            <Perf>8</Perf>
            <LinkSellAgrmnt>SS</LinkSellAgrmnt>
            <DispOption>Y</DispOption>
            <InsideAvailOption>L</InsideAvailOption>
            <GenTrafRestriction/>
            <DaysOperates>YYYYYYY</DaysOperates>
            <JrnyTm>320</JrnyTm>
            <EndDt>20060511</EndDt>
            <OpAirV/>
            <OpFltDesignator/>
            <OpFltSuf/>
            <StartTerminal>S</StartTerminal>
            <EndTerminal/>
            <FltTm>85</FltTm>
            <LSAInd>N</LSAInd>
            <GalileoAirVInd>Y</GalileoAirVInd>
            <ETktEligibility>E</ETktEligibility>
            <ScheduleLevelCarrier/>
            <FrstDwnlnStp/>
            <LastDwnlnStp/>
            <SponsoredFltInd>N</SponsoredFltInd>
            <SponsoredFltLineNum>00</SponsoredFltLineNum>
            <NeutralFltLineNum>13</NeutralFltLineNum>
            <SponsoredFltKey>00000</SponsoredFltKey>
        </AvailFlt>
```

The next part of the response is the list of <FareInfo> elements. Each <FareInfo> element describes an available fare for the entire itinerary. There are many sections within each <FareInfo> element. Some provide fare details and some are used to identify the specific flights that are associated with the fare. Descriptions of the most important sections follow.

<GenQuoteDetails> Element

The <GenQuoteDetails> element contains a summary of each fare, including base fare, tax, and currency information, as well as the related ticketing dates and an indication of whether or not this is a private fare.

The last date to ticket (<LastTkDt>) is the date of departure or the date defined by the advanced purchase rules of the fare, whichever is nearest However after you sell the actual flights and store the fare, Galileo has a seven-day price guarantee. If there are no advance purchase rules loaded, then the last date to ticket is seven days from the day you store the fare

```
<GenQuoteDetails>
    <UniqueKey>1</UniqueKey>
    <QuoteNum>1</QuoteNum>
    <QuoteType>G</QuoteType>
    <LastTkDt>20070907</LastTkDt>
    <QuoteDt>20070706</QuoteDt>
    <IntlSaleInd/>
    <BaseFareCurrency>EUR</BaseFareCurrency>
    <BaseFareAmt>152000</BaseFareAmt>
    <LowestOrNUCFare>0</LowestOrNUCFare>
    <BaseDecPos>2</BaseDecPos>
    <EquivCurrency>GBP</EquivCurrency>
    <EquivAmt>102300</EquivAmt>
    <EquivDecPos>2</EquivDecPos>
    <TotCurrency>GBP</TotCurrency>
    <TotAmt>106620</TotAmt>
    <TotDecPos>2</TotDecPos>
    <ITNum/>
    <RteBasedQuote>Y</RteBasedQuote>
    <M0>N</M0>
    <M5>N</M5>
    <M10>N</M10>
    <M15>N</M15>
    <M20>N</M20>
    <M25>N</M25>
    <Spare1>N</Spare1>
    <PrivFQd>N</PrivFQd>
    <PFOverrides>N</PFOverrides>
    <FlatFQd>N</FlatFQd>
    <DirMinApplied>N</DirMinApplied>
    <VATIncInd>N</VATIncInd>
    <PenApplies>N</PenApplies>
    <Spare2>N</Spare2>
    <QuoteBasis>N</QuoteBasis>
    <TaxDataAry>
        <TaxData>
            <Country>UB</Country>
            <Amt>00008.00</Amt>
        </TaxData>
        <TaxData>
```

<BaseFareCurrency> is always the currency of the departure city, unless there are fares specifically stored under another currency.

The fare before tax.

The Equivalent Currency defaults to the currency of the country specified in the PCC/GTID. This currency can be overridden by using the following in the request:
<GenQuoteInfo>
<EquivCurrency> </EquivCurrency>
</GenQuoteInfo>

<EquivAmt> does not include taxes and surcharges. It is the equivalent of the base fare.

The <TotCurrency> defaults to the currency of the country specified in the PCC/GTID, unless an <EquivCurrency> is specified. If an equivalent currency is specified, the <TotCurrency> is the same as <EquivCurrency>.

Total amount equals base amt + taxes + surcharges.

```
            <Country>FR</Country>
            <Amt>00008.00</Amt>
        </TaxData>
        <TaxData>
            <Country>IZ</Country>
            <Amt>00000.70</Amt>
        </TaxData>
        <TaxData>
            <Country>QX</Country>
            <Amt>00005.50</Amt>
        </TaxData>
        <TaxData>
            <Country>YQ</Country>
            <Amt>00021.00</Amt>
        </TaxData>
    </TaxDataAry>
</GenQuoteDetails>
```

There is one <GenQuoteDetails> element for each passenger type in the request.

<PsgrTypes> Element

You can have data for multiple passengers within a Fare Quote if you request it. The passenger information is located in the <PsgrTypes> element. The corresponding <GenQuoteDetails> and <PsgrTypes> elements have the same <UniqueKey> number.

```
<PsgrTypes>
    <UniqueKey>0001</UniqueKey>
    <PICReq>ADT</PICReq>
    <QueryAmt>0</QueryAmt>
    <QueryIATAFmt>N</QueryIATAFmt>
    <QueryApolloFmt>N</QueryApolloFmt>
    <PercentQuery>N</PercentQuery>
    <AmtQuery>N</AmtQuery>
    <AgeQuery>N</AgeQuery>
    <ReqReturnedPIC>Y</ReqReturnedPIC>
    <QuoteOnlyPICReq>N</QuoteOnlyPICReq>
    <HasDiscData>N</HasDiscData>

    <RespPIC>ADT</RespPIC>
    <RespAmt>0</RespAmt>
    <RespIATAFmt>N</RespIATAFmt>
    <RespATPCOFmt>N</RespATPCOFmt>
```

Match this to a GenQuoteDetails section

Passenger type as defined by the request.

The returned fare is specific to the PTC defined in the request.

Identifies the PTC to which the fare applies. For example, the request may ask for a CNN fare but if the CNN fare does not exist, ADT is returned as being the fare used.

```
        <PercentResp>N</PercentResp>
        <AmtResp>N</AmtResp>
        <AgeResp>N</AgeResp>
        <PFCsApply>Y</PFCsApply>
        <NPFReq>N</NPFReq>
        <Spare1>N</Spare1>
        <PICPsgrs>1</PICPsgrs>
        <PsgrNum>1</PsgrNum>
    </PsgrTypes>
```

The **<**BICInfo> section (not shown) can apply to all passengers or may apply to individual passengers. If it applies to individual passengers, it is this <UniqueKey> that displays in the <Num> field of the <PsgrDescNumAry> section to indicate the passenger description to which this booking code applies.

<FlightItemCrossRef> Element

The fare described by each <FareInfo> element is associated with specific flight choices for each origin / destination city pair of the itinerary. The <FlightItemCrossRef> element provides references to the flights that correspond to the fare, and there is a <FlightItemCrossRef> element for each origin / destination city pair. A round trip itinerary, therefore, has two <FlightItemCrossRef> elements for each fare. The <FlightItemCrossRef> element looks like:

```
<FlightItemCrossRef>
    <UniqueKey>0000</UniqueKey>
    <ODNum>1</ODNum>
    <ODNumLegs>2</ODNumLegs>

    <FltItemAry>
        <FltItem>
            <IndexNum>4</IndexNum>
            <BICAry>
                <BICInfo>
                    <BIC>T</BIC>
                    <PsgrDescNumAry/>
                </BICInfo>
            </BICAry>
        </FltItem>
```

Origin/destination city pair – in this case, the outbound flight

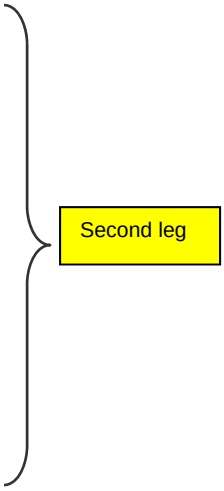
Tells you if multiple legs are in the flight

Refers to a flight listed in the AvailFlt section for this city pair

Class of service to book for this specific flight and fare.

First leg

```
        <FltItem>
            <IndexNum>5</IndexNum>
            <BICAry>
                <BICInfo>
                    <BIC>T</BIC>
                    <PsgrDescNumAry/>
                </BICInfo>
            </BICAry>
        </FltItem>
    </FltItemAry>
</FlightItemCrossRef>
```



<FlightItemCrossRef> Element Descriptions

The following table highlights the most important elements within the <FlightItemCrossRef> element.

Note: If the request contains an <Optimize> filter, the filter must include <RecType> 1425 and <KlrId> GFXI in the request to see the <FlightItemCrossRef> section.

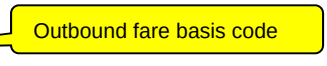
Field	Description
<ODNum>	This number shows the <AirAvail> block that this <FlightItemCrossRef> is related to. E.g., If <ODNum> = 1 it references flights in the first <AirAvail> section.
<ODNumLegs>	The number of segments/flights that make up the journey from the origin to the destination. Use this number to obtain the number of <FltItem> section that make up the journey. E.g., If there are two segments to the journey, every two <FltItem> sections make up the journey
<FltItem>	Contains information required to make a valid sale for the fare. There are an array of <FltItem> sections in each response. Use the <FltItem> sections to find the first segment of the first single connection that satisfies the journey within the first <FltItem>. If the Origin Destination pair is made up of two segments (<ODNumLegs> indicates this) ,the next <FltItem> is the second segment of the journey. The next <FltItem> pair shows alternative flights for making the same journey. E.g., In the preceding code example, <FltItem> 3 and <FltItem> 4 indicate flights for the journey for ODNum 1 and <FltItem> 7 and <FltItem> 8 are alternate flights for the same journey for this fare.
<IndexNum>	A field within <FlightItm> that indicates which <AvailFlt> section within the relevant <AirAvail> section contains the flight information for the quote. E.g., In the preceding code example, <IndexNum> 3 and <IndexNum> 4 indicate flights for the journey. Count to the 3rd and 4th <AvailFlight> item within the relevant <AirAvail> section (if <ODNum> = 1, it is the first <AirAvail> sectio.) to obtain the flight information for this fare quote.
<BICInfo>	The <BIC> field within the <BicInfo> section contains the booking class that this flight item must be booked in to get the relevant fare quote. In some cases it is possible to have multiple booking codes that can be used on a flight. If multiple booking codes are allowed, the <BicInfo> sections are members of the array <BICAry>. In rare circumstances different passenger descriptions can require different booking codes. If the booking code applies to all passengers then <PsgrDescNumAr> is not populated. If the booking code only applies to certain passengers then the <Num> field of <PsgrDescNumAry> contains a list of the passenger description numbers to which this booking code applies. This only occurs if the *FareQuoteSuperBB* request has

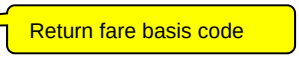
Field	Description
	specified different passenger types.

<FareBasisCodeSummary> Element

Another item in the fare description is the <FareBasisCodeSummary>. This section provides the fare basis codes or fare class codes for the fares. The classes of service in the <BIC> element of the <FlightItemCrossRef> element are necessary to actually book the fare. Note that there are one or more fare basis codes for each origin / destination city pair, as shown:

```
<FareBasisCodeSummary>
   <FICAry>
      <FICInfo>
         <PsgrDescNum>1</PsgrDescNum>
         <ODNum>1</ODNum>
         <FIC>WE71MN9</FIC>
      </FICInfo>
      <FICInfo>
         <PsgrDescNum>1</PsgrDescNum>
         <ODNum>2</ODNum>
         <FIC>WE71MN9</FIC>
      </FICInfo>
   </FICAry>
</FareBasisCodeSummary>
```



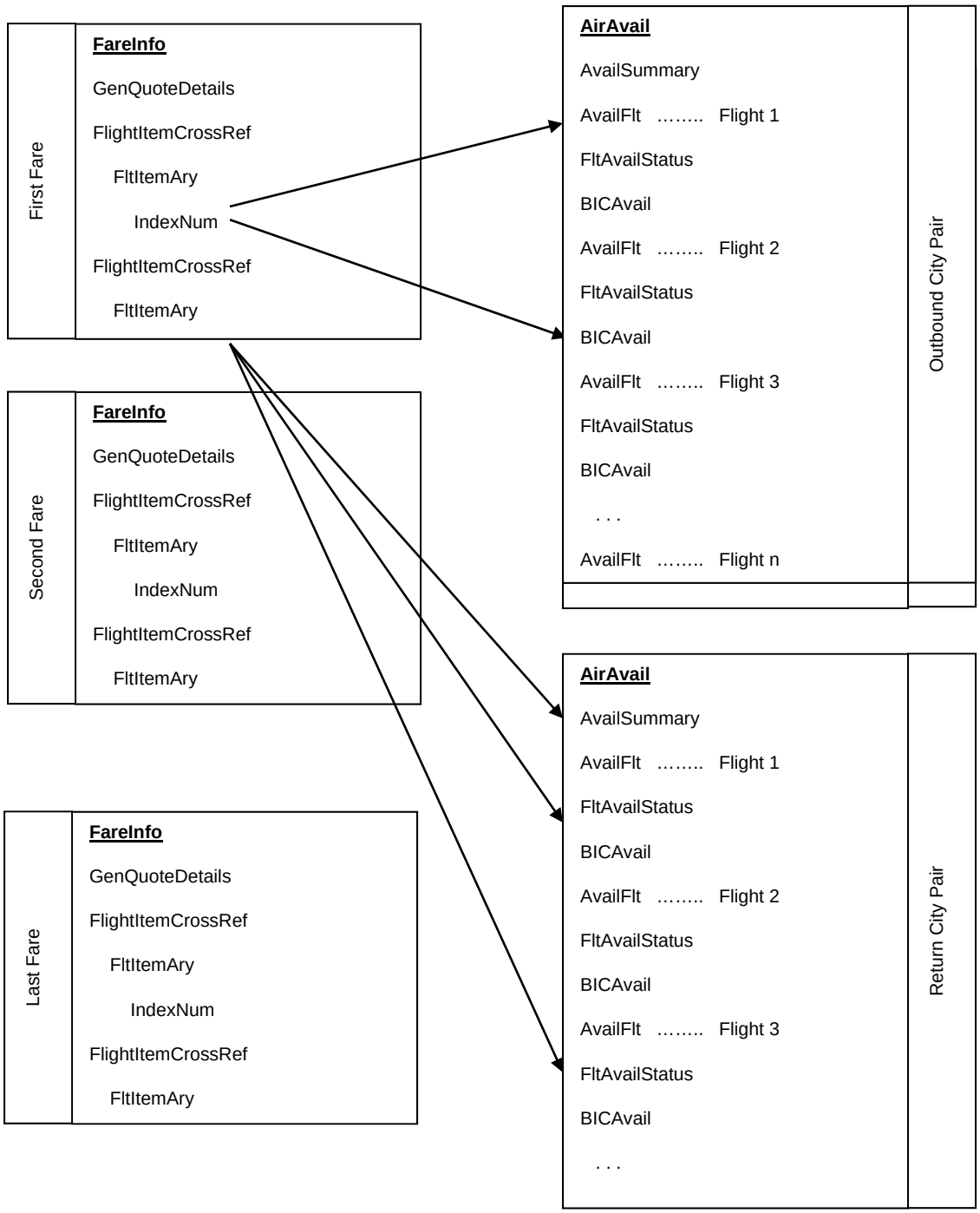


There are many other sections in the FareInfo description. They include more detailed tax and surcharge information, fare construction, rules, and informational messages to display for the traveler. The relationship of these sections is illustrated in the *Low Fare Response Organization* diagram.

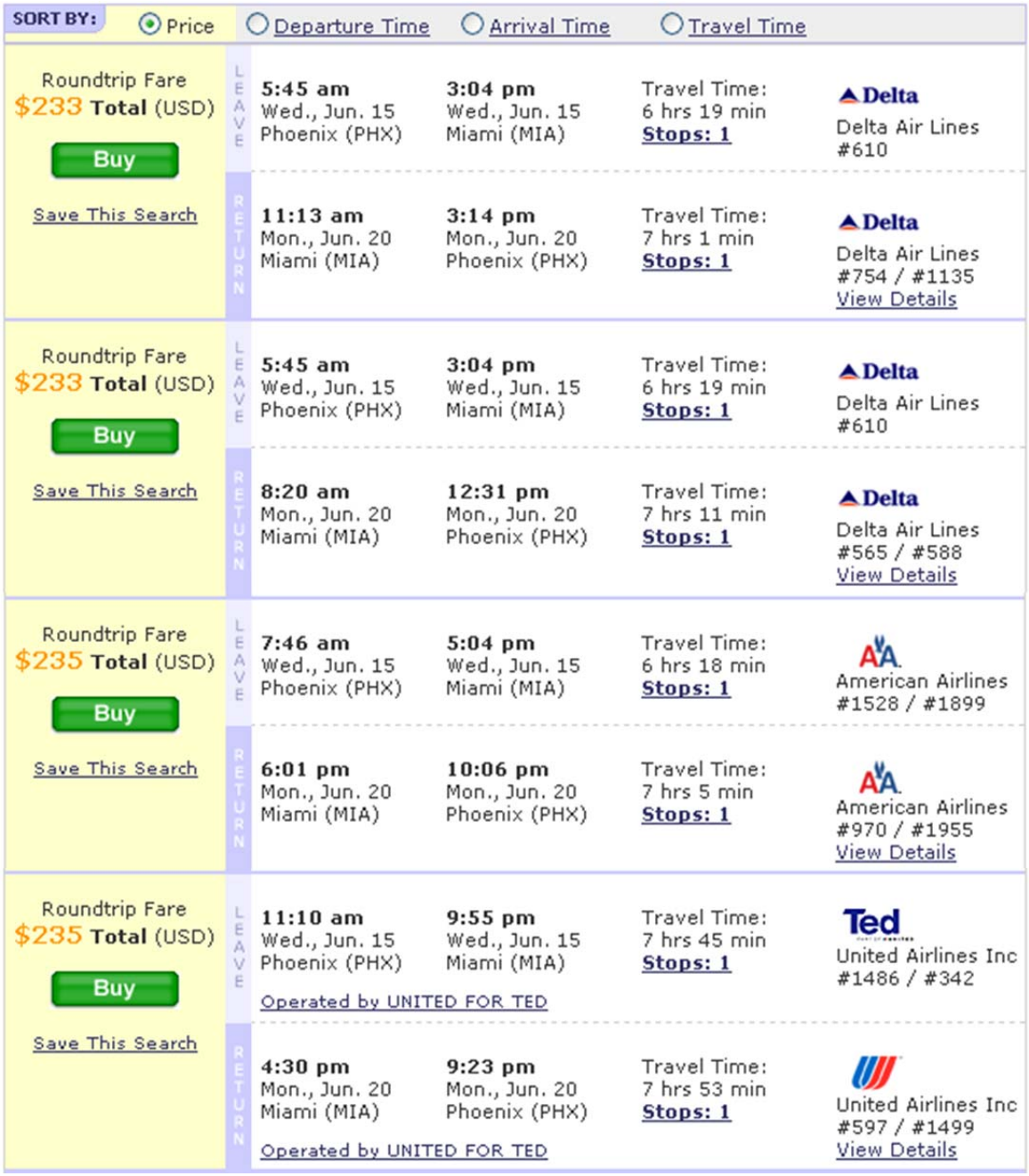
Low Fare Response Organization

The following diagram shows an example of a response for a round trip.

Round Trip Example



After the SuperBB response is processed, the itinerary options can be presented to the customer in a format that is similar to:



Typically, the SuperBB results provide more than one flight option within each fare for each portion of the trip. The customer should only be allowed to select flights from within a specific fare for the itinerary. Only flights associated with a specific fare can be booked together.

Flight Services

It is also possible to show additional information, such as meal service, elapsed flying time, terminal information, and other in-flight services using the FlightService_# request. The request includes the specifics of the flight:

```
<FlightService_#>
    <InFltServiceMods>
        <InFltServiceReq>
            <AirV>UA</AirV>
            <FltNum>0567</FltNum>
            <StartDt>20051115</StartDt>
            <StartCity>DEN</StartCity>
            <EndCity>LAX</EndCity>
            <BIC>Y</BIC>
        </InFltServiceReq>
    </InFltServiceMods>
</FlightService_#>
```

The response returns a series of <InFltServiceCode> elements. The interpretation of these codes is shown in the *In-Flight Service Codes* table on *page 23*.

```
<FlightService_#>
    <InFltService>
        <FltData>
            <Status>0</Status>
            <AirV>UA</AirV>
            <Unused/>
            <FltNum>567</FltNum>
            <OpSuf/>
            <StartDt>20051115</StartDt>
            <NumLegs>1</NumLegs>
        </FltData>
        <InFltLegData>
            <StartCity>DEN</StartCity>
            <EndCity>LAX</EndCity>
            <JrnyTm>226</JrnyTm>
            <Equip>735</Equip>
            <Meals/>
            <StTerm/>
            <EndTerm>7</EndTerm>
            <ElectronicTkInd>Y</ElectronicTkInd>
```

```
        </InFltLegData>
        <InFltServiceCode>
            <Code>04</Code>
        </InFltServiceCode>
        <InFltServiceCode>
            <Code>09</Code>
        </InFltServiceCode>
    </InFltService>
</FlightService_#>
```

In-Flight Service Codes

Code	Description
01	Movie
02	Telephone
03	Telex
04	Audio Programming
05	Television
06	Resv Booking Service
07	Duty Free Sales
08	Smoking
09	Non-Smoking
10	Short Feature Video
11	No Duty Free
12	In-Seat Power Source
13	Internet Access

Appendix: Related Documents

See the following API Developer Notes for information that can be used in conjunction with the *Low Fare Air Shopping* document.

Document	Description
Availability on the Apollo and Galileo CRSs	Explains how availability works on the Apollo and Galileo CRSs.
Creating a PNR	Explains how to create a PNR or Booking File for Air.
Using Fare Quote Super Best Buy on the Apollo CRS	Explains how FareQuoteSuperBB_# functions on the Apollo CRS.
Using Fare Quote Super Best Buy on the Galileo CRS	Explains how FareQuoteSuperBB_# functions on the Galileo CRS.