

Babylon Booking XML Out Air Search Response Price Calculation

1- Introduction

This is a supplementary document to Babylon XML Out which describes the pricing structure of the response and how to get consistent price sum-up of the fares returned for each price component.

2- The adjustments

Two operations must be performed on the price at the client end (the XML consumer end):

- a. Add the processing charges to base fare
- b. Add the Supplier Fee as a standalone item

Next the focus is on the XML elements which appears inside the Tree:

```
<FareSearchResponse>  
  <AirlineList>  
    <Flight Index="?">
```

You will see structures like this always in the response:

```
<TotalAmt>592.30</TotalAmt>  
<TotalTaxnFee>289.55</TotalTaxnFee>  
<AdultBaseFare>101.30</AdultBaseFare>  
<AdultTax>86.05</AdultTax>  
<ChildBaseFare>81.51</ChildBaseFare>  
<ChildTax>86.05</ChildTax>  
<InfantBaseFare>11.64</InfantBaseFare>  
<InfantTax>10.40</InfantTax>
```

Response can also have the following element:

```
<OtherCharges>  
  <Adult>7.00</Adult>  
  <Child>7.00</Child>  
  <Infant>7.00</Infant>  
</OtherCharges>
```

And:

```
<AutoCharges grandTotal="7.00">  
  <Charge name="Supplier Fee" operator="+" isSupplierFee="True" ApplyOn="BaseFare">  
    <Adult>7.00</Adult>  
    <Child/>  
    <Infant/>  
    <Total>7.00</Total>  
  </Charge>  
</AutoCharges>
```

a. Add the processing charges to base fare

If the element <OtherCharges> is presented with non Zero values for Adult/Child/Infant, then the total price includes a processing fees **which is not correctly presented in: <TotalTaxnFee>**

The corrected value of <TotalTaxnFee> will be

```
<TotalTaxnFee> =
  NumOfAdult x (<AdultTax> + <OtherCharges><Adult>) +
  NumOfChild x (<ChildTax> + <OtherCharges><Child>) +
  NumOfInfant x (<InfantTax> + <OtherCharges><Infant>)
```

Where the <*Tax> part will accumulate to the total tax and the other is processing charges (fees at Babylon level) and those are suggested to be presented to the end user as a standalone item -or- better to be added to the base fare, the reason is: sometimes the <OtherCharges> have negative amounts, like the following:

```
<OtherCharges>
  <Adult>-14.76</Adult>
  <Child>0</Child>
  <Infant>0</Infant>
</OtherCharges>
```

These are discounts (provided solely by Babylon) and when they are negative, they can be “added” to the base fare to give a reduced base fare special only at Babylon.

After all it is up to the XML client to display the <OtherCharges> as extra fees when positive or as discounts when negative -or- merge them into the base fare which is what we recommend.

b. Add the Supplier Fee as a standalone item

Supplier fees are fees Babylon needs to pay to its supplier on some Airlines, it is added as another element in the response and the XML agent can display it to its end user as a supplier fee or can embed it in the base fare, we suggest to display it as a separated price item.

If the <AutoCharges> element is presented with non Zero amounts in the following child element:

```
<Charge name="Supplier Fee" operator="+" isSupplierFee="True" ApplyOn="BaseFare">
  <Adult>7.00</Adult>
  <Child/>
  <Infant/>
  <Total>7.00</Total>
</Charge>
```

Then the value in <TotalTaxnFee> will be reported correctly and include the sum of all taxes + the Supplier Fee (<AutoCharges>) all inclusive.

The charges for each PAX type can be added together to form a supplier fee price item, like:

```
{Total Taxes} =
  NumOfAdult x (<AdultTax>) +
  NumOfChild x (<ChildTax>) +
  NumOfInfant x (<InfantTax>)
```

```
{Total Supplier Fee} =
  NumOfAdult x (<AutoCharges><Charge name="Supplier Fee"><Adult>) +
  NumOfChild x (<AutoCharges><Charge name="Supplier Fee"><Child>) +
  NumOfInfant x (<AutoCharges><Charge name="Supplier Fee"><Infant>)
```

And in this case, the following is True (if <OtherCharges> is Zero):

$\langle \text{TotalTaxnFee} \rangle = \{ \text{Total Taxes} \} + \{ \text{Total Supplier Fee} \}$

If <OtherCharges> is not Zero, the previous equality will not be True and the calculations in point (a.) applies to **<TotalTaxnFee>**, this is why the Supplier Fees are suggested to be presented as a separated price line item.

In all cases: <TotalAmt> is the amount the agent will be charged with and is correct and has all the internal price items included.

3- Equations

$$\begin{aligned} \{ \text{Total Amount} \} = & \\ & \text{NumOfAdult} \times (\langle \text{AdultBaseFare} \rangle + \\ & \quad \langle \text{AdultTax} \rangle + \\ & \quad \langle \text{OtherCharges} \rangle \langle \text{Adult} \rangle + \\ & \quad \langle \text{AutoCharges} \rangle \langle \text{Charge name="Supplier Fee"} \rangle \langle \text{Adult} \rangle) \\ & + \\ & \text{NumOfChild} \times (\langle \text{ChildBaseFare} \rangle + \\ & \quad \langle \text{ChildTax} \rangle + \\ & \quad \langle \text{OtherCharges} \rangle \langle \text{Child} \rangle + \\ & \quad \langle \text{AutoCharges} \rangle \langle \text{Charge name="Supplier Fee"} \rangle \langle \text{Child} \rangle) \\ & + \\ & \text{NumOfInfant} \times (\langle \text{InfantBaseFare} \rangle + \\ & \quad \langle \text{InfantTax} \rangle + \\ & \quad \langle \text{OtherCharges} \rangle \langle \text{Infant} \rangle + \\ & \quad \langle \text{AutoCharges} \rangle \langle \text{Charge name="Supplier Fee"} \rangle \langle \text{Infant} \rangle) \end{aligned}$$

As an Agent, you can choose (for each PAX type) to include <OtherCharges> in base fare or display it separately, the same applies for <AutoCharges>