IS-XML Structure and Interface Specification for Maintenance, Repair and Overhaul service providers

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1. **Introduction**

The Integrated Settlement (IS) platform aims to simplify billing, and remove paper from the entire process, delivering tangible financial benefits to the industry. “IS” is based on the principles of completely paperless billing, invoicing, and settlement.

1.1. **Purpose of this Document**

The purpose of this document is to provide details about the IS-XML Structure and Interface Specification to be used by Maintenance, Repair and Overhaul service providers (MROs) to participate in IS.

This document describes the interface file formats and explanation of the various record structures including the validation checks that would be carried out on them.

The intended audience of this document includes:

- **User’s IT Department**
  To understand the impact of the changes to the Billing and Settlement process due to IS

- **Financial System Providers**
  To understand the interfacing requirements for billing Miscellaneous invoices and to carry out automated posting and reconciliation

- **Finance Department of the Participants**
  To understand and assess the impact of potential changes to the existing business processes

This document is not a User Guide. Hence it does not contain details of how the User will interact with the online interface provided by IS. The User Guide document is available on the IS website ([www.iata.org/sis](http://www.iata.org/sis)).
2. **Miscellaneous Billings – Impact of IS on Financial Accounting**

2.1. **Overview**

The IS-XML Invoice Standard is based on the existing IATA Aviation Invoice standard and enhanced to meet the requirements of SIS.

Refer to the following documents used to define IS-XML:
- IATA_IS-XML_Standard_Base_Datatypes_V3.4.xsd: defines the basic data types used in the schema.
- IATA_IS-XML_Standard_Custom_Dictionary_V3.4.xsd: Some elements of the standard are partly open ended, partly dictionary defined. The part that is dictionary defined is documented in the standard dictionary. In the custom dictionary, an implementer can document the additional values that his organization wants to use for these fields.
- IATA_IS-XML_Invoice_Standard_V3.4.xsd: the schema for the IS-XML Invoice Standard itself.

*These schemas have been published on the IS website.*

Today, Miscellaneous Billings is mainly a paper based process. There is no mechanism to exchange the invoice information in an electronic format. As part of IS, the various types of Miscellaneous Invoices were analyzed and categorized into different groups. The data requirement of each type of Miscellaneous invoice was defined. The existing IATA Aviation Invoice XML standard was extended to support the electronic exchange of different types of Miscellaneous Invoices.

This section describes the Miscellaneous Invoice types relevant to MROs that will be supported by IS.

2.2. **Invoice Types Overview**

The Miscellaneous invoices have been combined into “Charge Codes” which are further grouped under the appropriate “Charge Category”.

**Charge Category:**
- Distinguishes the broad category of services being billed on an invoice.
- Used by the recipient to decide which IT system or department needs to receive the invoice (work flow)
- For e.g.: Engineering

**Charge Code:**
- Specifies the nature of the service charged within a Charge Category
- For e.g.: *MRO Maintenance, MRO repairs and Overhauls* services within Charge Category *Engineering*

A Miscellaneous Invoice in IS can have only one Charge Category but one or more Charge Codes associated with the specific Charge Category.
The combination of Charge Category and Charge Code will determine the fields to be used for account posting and reconciliation. The following sections give a

- Description of the Charge Category (the charge category relevant to MROs is Engineering. For other charge categories, refer to the Integrated Settlement Participation Guide)
- Charge Codes under each Category (only the charge codes relevant to MROs. For other charge codes refer to the Integrated Settlement Participation Guide)
- Description of Charge Code
- Mandatory & Recommended Fields for the combination of Charge Category & Charge Code. These fields are required over and above the other Mandatory and Legal Fields defined in the IS-XML Specification. The listing of these fields is given below: These are referred to as “Generic Fields” in the IS-XML Specification

TransmissionHeader
  TransmissionDateTime
  Version
  BillingCategory
Invoice
  InvoiceHeader
    InvoiceNumber
    InvoiceDate
    InvoiceType
  ChargeCategory
  SellerOrganization
    OrganizationID
    LocationID***
    ContactName***
    ContactDetails***
      ContactType***
      ContactValue***
      Description***
  BuyerOrganization
    OrganizationID
    LocationID***
    ContactName***
    ContactDetails***
      ContactType***
      ContactValue***
      Description***
PaymentTerms
  CurrencyCode
  SettlementMethod
ISDetails
  DigitalSignatureFlag
Attachment
  AttachmentIndicatorOriginal
LineItem
  LineItemNumber
  ChargeCode
  Description
  StartDate
  EndDate
  Quantity @UOMCode
** If the Invoice reference data is to be taken from a Location ID defined in the Member Profile, then this field should be populated. This is not required if the reference data is derived from the ‘Main’ Location ID.

*** These fields are optional and may be provided if there is a need to state the contact name and details of the Billing/Billed Entity. Note these fields are not a part of the Location ID definition and hence will have to be provided even if the Location ID has been stated.

### Mandatory and Recommended Fields based on Charge Category-Charge Code combination

** Mandatory fields ** based on Charge Category-Charge Code combination are those which are required on an invoice to enable automatic reconciliation for the Billed Entity. The invoice will fail validation if these Mandatory values are not provided. These fields are listed in the next section. This facility is provided to allow Users sufficient time to enhance their financial systems to provide the relevant data. The e-Invoicing Standards Working Group will review this process from time to time and decide when such a practice should be discontinued.

The following default values (or **Substitutions**) are currently permitted:

<table>
<thead>
<tr>
<th>Mandatory field</th>
<th>Substitutes allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>If a Mandatory field is such that an Alphabetic or Alphanumeric set of characters are expected (For e.g. Aircraft Registration Number)</td>
<td>Numeric value zero ‘0’ can be used as a substitute</td>
</tr>
<tr>
<td>If a Mandatory field is such that a Date value is expected (For e.g. Flight Date)</td>
<td>Default date 01/01/2000 can be used as a substitute</td>
</tr>
<tr>
<td>If a Mandatory field is such that a Numeric value is expected (For e.g. Passenger Count)</td>
<td>Numeric value zero ‘0’ can be used as a substitute</td>
</tr>
</tbody>
</table>

The fields which allows for substitutions are listed in the IS-XML Specification. Note: Substitutions are only allowed for Mandatory fields at the LineItemDetails level. Substitution will be removed in IS future release (The final date will be decided by the e-invoicing working group in May 2013 and communicated to the industry with six months notice).

** Recommended fields ** based on Charge Category-Charge Code combination are those which add to the data in the Mandatory fields, and enable further allocation to sub-accounts, or cross-referencing with Approval Systems. An invoice that contains these items is more likely to be processed automatically by the receiving airline without manual intervention. Invoices that are submitted without data for the Recommended fields will not fail validation unless if there are any other error in the Invoice.
Recommended fields will become Mandatory over a period of time as determined by the e-Invoicing Standards Working Group. However there are certain fields that are marked as ‘Recommended Always' which will always remain as recommended forever.

The master Engineering table for Charge Category & Charge Codes should be defined as stated in table below.

<table>
<thead>
<tr>
<th>Charge Category</th>
<th>Charge Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>Handling LM</td>
</tr>
<tr>
<td></td>
<td>Lease</td>
</tr>
<tr>
<td></td>
<td>Loans</td>
</tr>
<tr>
<td></td>
<td>Misc</td>
</tr>
<tr>
<td></td>
<td>MRO Maintenance</td>
</tr>
<tr>
<td></td>
<td>MRO Repairs and Overhaul</td>
</tr>
<tr>
<td></td>
<td>Pool</td>
</tr>
<tr>
<td></td>
<td>Sales and Purchase</td>
</tr>
<tr>
<td></td>
<td>Ramp Handling</td>
</tr>
</tbody>
</table>

2.2.1. VAT related Misc invoices:

Please note that in case of VAT invoice the field tax category must be filled with one of the following information: Standard / Zero / Higher / Lower / Exempt / OutofScope/ Reverse Charge.

2.2.2. Charge Category – Engineering

Charges due to services provided for handling/ servicing of aircraft will be invoiced under this category.

The charge code relevant to MROs in this category are:

2.2.2.1. Charge Code: MRO Maintenance

Engineering heavy maintenance for airframes, provided at a main service base while the aircraft is not operating a schedule – also known as base maintenance or hangar maintenance. Includes any hangar or other costs directly associated with the heavy maintenance services provided.

Fields required:

Mandatory Fields:

- Aircraft Registration Number
- Location Code (Airport/ Location where service was provided)

Recommended Fields:

- PO Number (Purchase Order Number)
- PO Line Item Number (The line item in the Purchase Order to which the charge in the invoice corresponds)

2.2.2.2. Charge Code: MRO Repairs and Overhaul

Charges for the maintenance, repair or servicing of aircraft engines, rotables and other repairable parts. Includes both component maintenance and engine maintenance.
Fields required:

Mandatory Fields:
- Location Code (Airport/ Location where service was provided)
- Part Number (Number of the Part supplied. For a controlled part, the individual serial number should be used. For other parts, the manufacturer or supplier part number should be used. For consumables the manufacturer or supplier part number should be used. Where no part number is available for consumables, write ‘Unknown’)

Recommended Fields:
- Aircraft Registration Number
- PO Number (Purchase Order Number)
- PO Line Item Number (The line item in the Purchase Order to which the charge in the invoice corresponds)

Note: There could be addition of new fields in the future. Hence, all are advised to make their systems flexible to be able to incorporate these changes.
2.2.3. **IS-XML**

The structure of the IS-XML file is as shown below:

**Transmission Header**
The Transmission header element contains header level data that describes the transmission. There is only one instance of this element for each transmission.

**Invoice**
The Invoice element is the main component business wise of a transmission. There can be multiple invoice elements for each transmission. The Invoice element contains four main elements:

- **Invoice Header**
  - Provide header information about the invoice

- **Line Item**
  - In one invoice several types of services and products can be invoiced (one per line item)
  - Each Invoice element contains one (at least) or more line item elements.
  - The line item provides a summary-level data for line item detail elements.

- **Line Item Detail**
  - The detail information is quite specific of the type of product and service being invoiced.
  - It contains detailed data about each line item element.
  - The line item detail information provides the customer with all information needed to reconcile the amount being invoiced in each line item. This is very much what can be found in the supporting documents in the paper world.

- **Invoice Summary**
  - It provides summary information for each invoice.
Transmission Summary Element

This element will be used by the recipient of the electronic message to make some validation and ensure that the data has not been damaged during its creation or transfer. It contains totals for the overall transmission.

Refer to Chapter 2 – Section 2.1 for details of the IS-XML Record Structure

The IS-XML file can be provided on a daily basis to IS. There is no restriction on the number of IS-XML files that can be submitted in a day. The output IS-XML file will be generated on a weekly basis.

Note:
1. It is recommended that, where possible, the User standardizes on the IS-XML for all of electronic invoices. This includes suppliers and any other e-invoicing companies.
2. It is recommended that User’s system is developed so that all fields in the standard are available to be used. While the fields may not be considered mandatory, or even optional, today for a given charge category/code it is possible that:
   a. As a billed participant, you might receive data in one of the fields that isn’t currently optional or mandatory for that given charge Category/Code; or
   b. A field may be made optional or mandatory for that given Charge Category/Code
2.3. **Note on AddOnCharges and Tax Information**

2.3.1. **AddOnCharges**

AddOnCharges are additional charges or deductions that can be applied to a service provided on an Invoice. This charge can be applied on the Line Item details level (applicable for individual sub-service provided within a Charge code) and/or at the Line Item Level (applicable for all sub-services within a Charge Code) and/or at the Invoice Level (applicable for all Charge Codes listed on an invoice).

Listed below are few examples which illustrate how the AddOnCharges need to be defined in the IS-XML file. The same is also applicable for capturing the details on IS-WEB.

The following should be ensured while providing the AddOnCharge detail:

1. Nodes should be mutually exclusive. This means that if an 'AddOnCharges' node has been provided at the Line Detail level, the details SHOULD NOT be repeated at the Line Item level or Invoice Summary level.
2. The details of the AddOnCharge applied at the Line Item Detail level should be provided in an 'AddOnCharges' node at the Line Item Detail level only.
3. The details of the AddOnCharge applied at the Line Item level should be provided in a 'AddOnCharges' node at the Line Item level only.
4. The 'AddOnChargeAmount' of all 'AddOnCharges' nodes at the Line Item Detail level and the 'AddOnChargeAmount' of all 'AddOnCharges' nodes at that Line Item level should be summed up and added to the field 'TotalAddOnChargeAmount' of that Line Item level.
5. The details of the AddOnCharge applied at the Invoice level should be provided in a 'AddOnCharges' node at the Invoice level only.
6. The summation of the value of the field 'TotalAddOnChargeAmount' at all Line Item levels and 'AddOnChargeAmount' at the Invoice level should be added to the field 'TotalAddOnChargeAmount' at the Invoice Summary level.

**Example 1: Engineering MRO-Repairs & Overhaul (Additional charges at the line item detail level and invoice level)**

Charge Category: Engineering  
Charge Code: MRO-Repairs&Overhaul

<table>
<thead>
<tr>
<th>Line #</th>
<th>Description</th>
<th>Charge Amount</th>
<th>Additional Charge</th>
<th>Net Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fixed Labor Charge</td>
<td>$600.00</td>
<td></td>
<td>$600.00</td>
</tr>
<tr>
<td>2</td>
<td>Material Consumption</td>
<td>$300.00</td>
<td>$100.00</td>
<td>$400.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$900.00</td>
<td></td>
<td>$1000.00</td>
</tr>
<tr>
<td>Invoice Discount (5% discount on Charge Amount)</td>
<td>-$45.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Invoice Total</td>
<td></td>
<td></td>
<td></td>
<td>$955.00</td>
</tr>
</tbody>
</table>

- Line Item detail #1: Fixed Labor Charge without any additional charge
- Line Item detail #2: Material Consumption. This is made up of two detail items. An additional handling fee is applicable on the details of line item #2.
- 5% discount on the Total Charge Amount applicable at the invoice level.

**Breakdown information on IS-XML:**

**Line item detail level:**  
There will be one AddOnCharges node in the line item detail level: (There is no base amount and percentage stated as this is a flat fee.)
Line Item Detail #2
AddOnCharges
  AddOnChargeName: Handling Fee
  AddOnChargeAmount: 100.00

**Line item level:**
There will be no AddOnCharges node in the line item level to show the Handling Fee applied at the detail level.
The field ‘TotalAddOnChargeAmount’ = $100.00 i.e. Summation of the Additional Charge at the line item level ($0.00 as there are no additional charge at this level) and the Handling Fee ($100.00) at the line item detail level.

**Invoice Summary Level:**
There will be one AddOnCharges node to show the discount applicable on the invoice:
AddOnCharges
  AddOnChargeName: Discount
  AddOnChargePercentage: -5%
  AddOnChargeableAmount: 900.00
  AddOnChargeAmount: -45.00

The field ‘TotalAddOnChargeAmount’ in the invoice summary level = $ 55.00 ($100 - $45)

**Example 2: Engineering MRO-Repairs & Overhaul (Additional charges at the line item and invoice level)**

Charge Category: Engineering
Charge Code: MRO-Repairs&Overhaul

<table>
<thead>
<tr>
<th>Line #</th>
<th>Description</th>
<th>Charge Amount</th>
<th>Additional Charge</th>
<th>Net Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fixed Labor Charge</td>
<td>$600.00</td>
<td></td>
<td>600.00</td>
</tr>
<tr>
<td>2</td>
<td>Material Consumption</td>
<td>$300.00</td>
<td></td>
<td>300.00</td>
</tr>
<tr>
<td></td>
<td>Line Total</td>
<td>$900.00</td>
<td>$100.00 Handling Fee</td>
<td>1000.00</td>
</tr>
<tr>
<td></td>
<td>Invoice Discount (5% on the Total Amount)</td>
<td></td>
<td></td>
<td>-50.00</td>
</tr>
<tr>
<td></td>
<td>Invoice Total</td>
<td></td>
<td></td>
<td>950.00</td>
</tr>
</tbody>
</table>

- Line Item Detail #1: Fixed Labor Charge with no Additional Charge
- Line Item Detail # 2: Material Consumption with no Additional Charge
- Handling Fee of $100.00 at the Line Item level
- 5% discount applicable at the invoice level.

**Breakdown information on IS-XML:**

**Line Item Details level:**
There will be one AddOnCharges nodes in the line item details level:
(There is no base amount and percentage stated as this is a flat fee.)

**Line Item Level**
AddOnCharges
  AddOnChargeName: Handling Fee
  AddOnChargeAmount: 100.00

The field ‘TotalAddOnChargeAmount’ = $ 100.00

**Invoice Summary Level:**
There will be one AddOnCharges node to show the discount applicable on the invoice:
AddOnCharges
AddOnChargeName: Discount
AddOnChargePercentage: -5%
AddOnChargeableAmount: 1000.00
AddOnChargeAmount: -50.00

The field ‘TotalAddOnChargeAmount’ in the invoice summary level = $ 50.00 ($100 from Line Item level - $50 from Invoice Level)

Example 3: Engineering MRO Repairs & Overhaul (Additional charges at the line item details, line item and invoice level)

Charge Category: Engineering
Charge Code: MRO Repairs & Overhaul

<table>
<thead>
<tr>
<th>Line #</th>
<th>Description</th>
<th>Charge Amount</th>
<th>Additional Charge</th>
<th>Net Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fixed Labor Charge</td>
<td>$600.00</td>
<td>10% discount (-$60.00)</td>
<td>540.00</td>
</tr>
<tr>
<td>2</td>
<td>Material Consumption</td>
<td>$300.00</td>
<td>-$15.00 discount</td>
<td>285.00</td>
</tr>
<tr>
<td>Line Total</td>
<td></td>
<td>$100.00 Handling Fee</td>
<td>$100.00 Handling Fee</td>
<td>925.00</td>
</tr>
</tbody>
</table>

Invoice Discount (10% on the Total Amount) -92.50
Invoice Total 832.50

- Line Item Detail #1: Fixed Labor Charge with 10% Discount
- Line Item Detail #2: Material Consumption with a discount of $15
- Handling Fee of $100.00 at the Line Item level
- 5% discount applicable at the invoice level.

Breakdown information on IS-XML:

Line Item Details level:
There will be two AddOnCharges nodes in the line item details level:

LineItemDetail #1
AddOnCharges
AddOnChargeName: Discount
AddOnChargePercentage: -10%
AddOnChargeableAmount: 600.00
AddOnChargeAmount: -60.00

LineItemDetail #2
(There is no base amount and percentage stated as this is a flat fee.)
AddOnCharges
AddOnChargeName: Discount
AddOnChargeAmount: -15.00

Line Item Level
AddOnCharges
AddOnChargeName: Handling Fee
AddOnChargeAmount: 100.00
The field ‘TotalAddOnChargeAmount’ = $ 25.00 ($100 of Line Item - $60 of LineItemDetail1 - $15 of LineItemDetails2)

**Invoice Summary Level:**
There will be one AddOnCharges node to show the discount applicable on the invoice:

AddOnCharges
  AddOnChargeName: Discount
  AddOnChargePercentage: -10%
  AddOnChargeableAmount: 925.00
  AddOnChargeAmount: -92.50

The field ‘TotalAddOnChargeAmount’ in the invoice summary level = $ 67.50 ($100 from Line Itme level - $60 from Line Item Details1 - $15 from Line Item Details1 - $92.50 from Invoice Level)

### 2.3.2. **Tax/ VAT Information**

Tax/ VAT can also be applicable on multiple levels. Hence Tax/ VAT can be applied on the Line Item details level (applicable for individual sub-service provided within a Charge code) and/or at the Line Item Level (applicable for all sub-services within a Charge Code) and/or at the Invoice Level (applicable for all Charge Codes listed on an invoice).

The following should be ensured while providing the Tax/ VAT detail:
1. Nodes should be mutually exclusive. This means that if a 'Tax' node has been provided at the Line Item Detail level, the details SHOULD NOT be repeated at the Line Item level or Invoice Summary level.
2. The details of the VAT/ Tax applied at the Line Item Detail level should be provided in a 'Tax' node at the Line Item Detail level only.
3. The details of the VAT/ Tax applied at the Line Item level should be provided in a 'Tax' node at the Line Item level only.
4. Where TaxType=Tax, the ‘TaxAmount’ of all ‘Tax’ nodes at the Line Item Detail level and the ‘TaxAmount’ of all ‘Tax’ nodes at that Line Item level should be summed up and added to the field ‘TotalTaxAmount’ of that Line Item level.
5. Where TaxType=VAT, the ‘TaxAmount’ of all ‘Tax’ nodes at the Line Item Detail level and the ‘TaxAmount’ of all ‘Tax’ nodes at that Line Item level should be summed up and added to the field ‘TotalVATAmount’ of that Line Item level.
6. The details of the VAT/ Tax applied at the Invoice level should be provided in a ‘Tax’ node at the Invoice level only.
7. The summation of the value of the field ‘TotalTaxAmount’ at all Line Item levels and ‘TaxAmount’ (Tax nodes where TaxType=Tax) at the Invoice level should be added to the field ‘TotalTaxAmount’ at the Invoice Summary level.
8. The summation of the value of the field ‘TotalVATAmount’ at all Line Item levels and ‘TaxAmount’ (Tax nodes where TaxType=VAT) at the Invoice level should be added to the field ‘TotalVATAmount’ at the Invoice Summary level.

Listed below are few examples which illustrate how the VAT/ Tax need to be defined in the IS-XML file. The same is also applicable for capturing the details on IS-WEB. Please note that the example below shows VAT but the same process has to be used for Tax.

**Example 1: VAT applicable at the Line Item Detail Level only**

**Assumptions:**
- Line Item Detail Charge Amount = $ 1000
- VAT @ 10% applicable only on the Line Item Detail level Charge Amount

**How to provide the VAT amount in input file**
• Detail of this VAT should be stated in the Tax Node (indicating TaxType = VAT) at the Line Item Detail level ONLY as shown below.

Tax
  TaxType: VAT
  TaxSubType: VAT
  TaxText: VAT @10%
  TaxPercent: 10
  TaxableAmount: 1000.00
  TaxAmount @Name: 100.00 (Attribute ‘Name’ is NOT used for Miscellaneous Billing Category)

• The ‘Tax’ Nodes present at the Line Item and Invoice Summary levels will not repeat the VAT breakdown details provided at the Line Item Details level. In case any amount of the invoice is exempt from VAT, these will be provided in the ‘Tax’ node at the Invoice Summary level.

• The calculated ‘TaxAmount’ ($100) should be added to the field ‘TotalVATAmount’ which is present at the Line Item Level. Hence the value of this field ‘TotalVATAmount’ is ‘100.00’.

• The amount in the ‘TotalVATAmount’ field at the Line Item level should be added to the field ‘TotalVATAmount’ which is present at the Invoice Summary Level. Hence the value of this field ‘TotalVATAmount’ is ‘100.00’.

**Example 2: VAT applicable at the Line Item Detail Level and Line Item Level only**

**Assumptions:**
• Line Item Charge Amount = $5000.00
• Line Item Detail Charge Amount = $1000
• VAT @ 5% applicable on the Line Item level Charge Amount
• VAT @ 10% applicable on the Line Item Detail level Charge Amount

**How to provide the VAT amount in input file**
• Detail of the Line Item level VAT should be stated in the Tax Node (indicating TaxType = VAT) at the Line Item level ONLY as shown below.

Tax
  TaxType: VAT
  TaxSubType: VAT
  TaxText: VAT @ 5%
  TaxPercent: 5
  TaxableAmount: 5000.00
  TaxAmount @Name: 250.00

• Detail of the Line Item Detail level VAT should be stated in the Tax Node (indicating TaxType = VAT) at the Line Item Detail level ONLY as shown below.

Tax
  TaxType: VAT
  TaxSubType: VAT
  TaxText: VAT @10%
  TaxPercent: 10
  TaxableAmount: 1000.00
  TaxAmount @Name: 100.00

• The calculated ‘TaxAmount’ ($100) at the Line Item Detail level and the ‘TaxAmount’ ($250) at the Line Item Level should be added to the field
‘TotalVATAmount’ which is present at the Line Item Level. Hence the value of this field ‘TotalVATAmount’ is ‘350.00’.

- The tax details provided at the Line Item Detail as well as the Line Item level will not be repeated at the Invoice Summary level. In case any amount of the invoice is exempt from VAT, these will be provided in the ‘Tax’ node at the Invoice Summary level.

- The amount in the ‘TotalVATAmount’ field at the Line Item level should be added to the field ‘TotalVATAmount’ which is present at the Invoice Summary Level. Hence the value of this field ‘TotalVATAmount’ is ‘350.00’.

**Example 3: VAT applicable at the Invoice Level, Line Item Detail Level and Line Item Level**

**Assumptions:**
- Invoice Total Line Item Amount = $5000.00
- Line Item Charge Amount = $5000.00
- Line Item Detail Charge Amount = $1000
- VAT @ 3% applicable on the Invoice level Total Line Item Amount
- VAT @ 5% applicable on the Line Item level Charge Amount
- VAT @ 10% applicable on the Line Item Detail level Charge Amount

**How to provide the VAT amount in input file**

- Detail of the Invoice level VAT should be stated in the Tax Node (indicating TaxType = VAT) at the Invoice Summary level ONLY as shown below.

```
Tax
  TaxType: VAT
  TaxSubType: VAT
  TaxText: VAT @ 3%
  TaxPercent: 3
  TaxableAmount: 5000.00
  TaxAmount @Name: 150.00
```

- Detail of the Line Item level VAT should be stated in the Tax Node (indicating TaxType = VAT) at the Line Item level ONLY as shown below.

```
Tax
  TaxType: VAT
  TaxSubType: VAT
  TaxText: VAT @ 5%
  TaxPercent: 5
  TaxableAmount: 5000.00
  TaxAmount @Name: 250.00
```

- Detail of the Line Item Detail level VAT should be stated in the Tax Node (indicating TaxType = VAT) at the Line Item Detail level ONLY as shown below.

```
Tax
  TaxType: VAT
  TaxSubType: VAT
  TaxText: VAT @10%
  TaxPercent: 10
  TaxableAmount: 1000.00
  TaxAmount @Name: 100.00
```

- The calculated ‘TaxAmount’ ($100) at the Line Item Detail level and the ‘TaxAmount’ ($250) at the Line Item Level should be added to the field 'TotalVATAmount' which is present at the Line Item Level. Hence the value of this field ‘TotalVATAmount’ is ‘350.00’.
‘TotalVATAmount’ which is present at the Line Item Level. Hence the value of this field ‘TotalVATAmount’ is ‘350.00’.

- The amount in the ‘TotalVATAmount’ field at the Line Item level and the calculated ‘TaxAmount’ at the Invoice level should be added to the field ‘TotalVATAmount’ which is present at the Invoice Summary Level. Hence the value of this field ‘TotalVATAmount’ is ‘500.00’.

**VAT EXEMPT AMOUNT:**

Amount on which VAT has not been applied should be stated at the invoice level as ‘VAT Exempt’ amount.

**Display of VAT on PDF:**

VAT applied at all levels will be grouped by the following fields and shown on the PDF:
- VAT Sub Type
- VAT Category
- VAT Percent
- VAT Text

**Display of Tax and AddOnCharge on PDF:**

- Note that Tax and AddOnCharges will NOT be grouped and shown on PDF invoice.
- Each Tax/ AddOnCharges node applied at the Line Item and Invoice Levels will be shown as a separate row on the PDF invoice.
- The details of the Tax and AddOnCharges applied at the Line Item Detail level will be shown in the Detail Listing report.
- However, only the summed up amount of all related Line Item Details for a Line Item will be shown as a separate single row on the PDF invoice.

This is explained with the help of an example below:

**Assumptions:**

In an invoice there is one line item and this line item has two line item details. The amounts and the various AddOnCharges and VAT that are applicable on this invoice at various levels are as stated below.

**Line Item Detail Level:**

- Line Item Detail # 1 Charge Amount = $3000
- AddOn Charge @ 5% applicable on Line Item Detail # 1 Charge Amount = $150
- VAT @ 10% applicable on both the Line Item Detail level Charge Amount = 10% on 3150 = $315
- Line Item Detail # 1 Net Amount = $3465
  
- Line Item Detail # 2 Charge Amount = $2000
- AddOn Charge @ 10% applicable on Line Item Detail # 2 Charge Amount = $200
- VAT @ 10% applicable on both the Line Item Detail level Charge Amount = 10% on 2200 = $220
- Line Item Detail # 1 Net Amount = $2420

**Line Item Level:** The amounts at the Line Item details are summed up and shown in the Line Item level along-with the AddOnCharge and VAT applicable at the Line Item Level

- Line Item Charge Amount = $5000
• AddOn Charge @ 5% applicable on Line Item Charge Amount = $250
• TotalAddOnChargeAmount = 250+150+200 = $600
• VAT @ 10% applicable on the Line Item level Charge Amount + AddOn Charge Amount = 10% on $5250 = $525
• TotalVATAmount = 525+315+220 = $ 1060
• Line Item Net Amount = $ 6660

**Invoice Level:** The amounts at the Line Item are summed up and shown in the Invoice Level along-with the AddOnCharge and VAT applicable at the Invoice Level
• Invoice Total Line Item Amount = $6660
• VAT @ 5% applicable on the Invoice level Line Item Amount = 5% on $6660 = $333
• Invoice Total Amount = $6993

The above is represented as shown in the PDF below. You will note that the VAT has been grouped and shown while the AddOnCharges have been shown as they were applicable. The breakdown of the AddOnCharge applied at the Line Item Detail level has not been shown in this PDF; only the amount has been shown. The breakdown will be provided in the Detail Listing report.
### Invoice Details

**Billing Entity:** Cyprus Airways Public Ltd  
**Billed Entity:** KLM Royal Dutch Airlines  

#### Header Notes:

- **Invoice #:** MI12307880  
- **Date:** 25-Jun-2009  
- **Tax/VAT Registration #:**  
  - Cyprus Airways Public Ltd
  - KLM Royal Dutch Airlines

#### VAT Breakdown

<table>
<thead>
<tr>
<th>Label</th>
<th>VAT Test</th>
<th>Base Amount</th>
<th>VAT Rate</th>
<th>VAT Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAT</td>
<td>VAT @ 5%</td>
<td>6600.00</td>
<td>5%</td>
<td>330.00</td>
</tr>
<tr>
<td>VAT</td>
<td>VAT @ 10%</td>
<td>10600.00</td>
<td>10%</td>
<td>1060.00</td>
</tr>
</tbody>
</table>

#### Additional Amount Breakdown

<table>
<thead>
<tr>
<th>Level</th>
<th>Additional Amount Name</th>
<th>Chargeable Amount</th>
<th>Charge Rate</th>
<th>Additional Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 1</td>
<td>Handling Charges</td>
<td>5000.00</td>
<td>5%</td>
<td>250.00</td>
</tr>
</tbody>
</table>

**DO NOT PAY. SETTLEMENT THROUGH CLEARING HOUSE.**
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATA</td>
<td>(Air Transport Association) – The trade group for U.S.-based airlines.</td>
</tr>
<tr>
<td>Audit trail</td>
<td>A chronological sequence of audit records.</td>
</tr>
<tr>
<td>Billed Entity</td>
<td>The Billed Airline or Supplier</td>
</tr>
<tr>
<td>Billing Category</td>
<td>The Category of the Integrated Billing Invoice. The billing category for MROs is Miscellaneous</td>
</tr>
<tr>
<td>Billing Date</td>
<td>The Billing Date field refers to the month period of settlement. This field is referred extensively in RAM chapter A13 in case of Miscellaneous billings.</td>
</tr>
<tr>
<td>Billing Entity</td>
<td>The Billed Airline or Supplier</td>
</tr>
<tr>
<td>Billing Entity Code</td>
<td>The Numeric code of the Billed airline or the Alpha numeric code of the Supplier</td>
</tr>
<tr>
<td>Billing Period</td>
<td>Billing Period refers to the Period of the Clearance Month used for billing. As the current Integrated settlement is on a weekly basis, there are 4 periods in a month. The billing period is represented as 01, 02, 03 and 04.</td>
</tr>
<tr>
<td>Billing Record Database</td>
<td>This is the data store within IS which will maintain the Invoice data provided by IS Participants in IS-Format. The data is kept in the system till the time the transactions are expired.</td>
</tr>
<tr>
<td>Central File Repository</td>
<td>Central File Repository is the data store within IS which maintains the input and output files including the Supporting documents for the billing transactions.</td>
</tr>
<tr>
<td>Charge Category</td>
<td>The major types of Miscellaneous Invoice billed between carriers</td>
</tr>
<tr>
<td>Charge Code</td>
<td>The sub group within the Charge Category which identifies the different reasons for the Miscellaneous Invoice claim.</td>
</tr>
<tr>
<td>Clearance Month</td>
<td>It represents the month of Integrated Billing.</td>
</tr>
<tr>
<td>CSV File</td>
<td>Comma separated file</td>
</tr>
<tr>
<td>Detailed Validation</td>
<td>This is the second phase of the IS-Validation process in which the billing data is loaded in the Billing Record Database and each and every data element in the billing data is validated.</td>
</tr>
<tr>
<td>Digital Signature</td>
<td>Digital Signature is a mathematical scheme for demonstrating the authenticity of a digital message or document. A valid digital signature gives a recipient reason to believe that the message was created by a known sender, and that it was not altered in transit</td>
</tr>
<tr>
<td>DS</td>
<td>Digital Signature</td>
</tr>
<tr>
<td>E-Archiving</td>
<td>E-archiving is an optional service provided by SIS. This service allows Participants to store digitally signed invoices in an external Legal archive for a longer period as required by the local regulations.</td>
</tr>
<tr>
<td>EST</td>
<td><strong>Eastern Standard Time</strong></td>
</tr>
<tr>
<td>F12</td>
<td>The file that a carrier uploads to the clearinghouse on a weekly basis to complete settlement. This file does not contain all billing data; rather it contains the totals of each invoice being cleared.</td>
</tr>
<tr>
<td>File Naming Convention</td>
<td>Rules followed for construction of the file name</td>
</tr>
<tr>
<td>GL</td>
<td>General Ledger</td>
</tr>
<tr>
<td>HTML files</td>
<td>Files in Hypertext markup language. HTML is a structured file format used in websites, which includes tags.</td>
</tr>
<tr>
<td>ICH Period Closure Day</td>
<td>This is the time by which ICH Members should submit their Web F12 claims file to the ICH-WEB to be considered for settlement.</td>
</tr>
<tr>
<td>Index File</td>
<td>An index file contains the mapping information of the various supporting documents and its corresponding Batch Key. There</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| IS                       | Integrated Settlement  
Integrated Settlement is the name for the collection of systems which provide the functionality behind Simplified Integrated Settlement. |
| IS Calendar              | The Calendar used by IS to trigger various automated processes. It also has deadlines for some of the processes impacting the end-users of SIS. |
| IS Calendar Billing Output Generation Date | This is the date and time stamp by which IS will generate the billing output files and keep it ready for download,                              |
| IS Format                | IS Format is a generic term used to define Invoice data provided to IS in either automated formats like IS-XML or manually over IS-WEB               |
| IS WEB                   | IS WEB is the online user interface of the IS System. It allows users to capture data, pull out reports, as well as configure the Member profile information. |
| IS XML                   | IS XML is the new interface file format defined for MISC. This file format is based on the existing IATA Aviation Invoice Standard.                  |
| JPEG Image files         | Image files in JPEG (Joint Photographic Experts Group) format.                                                                             |
| Late Submission          | Invoices submitted after the IS Submission Deadline but within the Late Submission Acceptance Window to be considered for settlement in the previously close period |
| Late Submission Acceptance Window | Time window in which Late Submission can be submitted.                                                                                  |
| Location Code            | Code of the Member’s location.                                                                                                             |
| Location IDs             | User defined code that uniquely identifies the Member’s location in the Member Profile.                                                   |
| Member Profile           | Centralized functionality that enables the participants to:  
1. Create and Manage Users of IS  
2. Configure the various processes within SIS  
3. Set default values to be used at the time of processing  
4.                                                                 |
| Participant              | An Airline or a Non Airline Entity who is a signatory or a potential signatory to IS Services.                                              |
| Payables                 | Billing received from other Integrated partners for a billing period is referred to as Payables                                             |
| PDF                      | Portable Document Format                                                                                                                  |
| Prime Billing            | First time billing or billings of original documents (like coupons, air waybills) are referred to as Prime Billings                           |
| Processing Dashboard     | Module in IS for:  
• Viewing processing details  
• Submitting of invoices/ files for late processing  
• Increment the period of the invoices |
<p>| Protest                  | Protest is the action taken by a billed entity against an erroneous billing done by a billing entity before the amount in error is settled by the Clearing House. |
| RAM                      | Revenue Accounting Manual                                                                                                                 |
| Receivables              | Invoices billed to other Integrated partners is referred to as Receivables                                                               |
| Reference Data           | Reference data relates to the basic legal information of the Billing and Billed entity. This includes details like the Company Legal Name, Tax Registration ID, Address details etc. |
| Sanity Check             | This is the first phase of IS-Validation, where a file is checked                                                                        |</p>
<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>Settlement Method Indicator</td>
<td>The field Settlement Method Indicator in the Invoice data drives the Settlement process of the Invoice.</td>
</tr>
<tr>
<td>Submissions Open Date</td>
<td>The date and time from which IS starts accepting Billing Files for a particular Clearance period</td>
</tr>
<tr>
<td>Supporting Attachments</td>
<td>The additional documentation provided to support Integrated billing claim. The Supporting Attachments needs to be provided in electronic format</td>
</tr>
<tr>
<td>Supporting Attachments Linking Deadline</td>
<td>The date and time stamp by which the system will stop manual and automated linking of supporting documents for the clearance period</td>
</tr>
<tr>
<td>TIFF Image files</td>
<td>Tagged <strong>Image File</strong> Format (TIFF) is a file format for storing images.</td>
</tr>
<tr>
<td>Time Stamp</td>
<td>Sequence of characters, denoting the date and/or time at which a certain event occurred</td>
</tr>
<tr>
<td>VAT</td>
<td>Value added tax</td>
</tr>
</tbody>
</table>