



**XML Standard  
For  
Electronic Aviation Invoices**  
Version 1.0.0

26 October 2007



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## Acknowledgment

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## DOCUMENT REVISION HISTORY

### Revision Record

Version	Date	Modified Sections / Description
1.0	19 August 2007	Creation based on IATA XML Standard Airport Invoices V1.01.doc

### Standard approved for publication on:

Name	Title	Date
JC Rossand	Assitant Manager E-Invoicing Services, IATA	9. October 2007
AITF	Airport Invoice Task Force	9. October 2007

## 1. Introduction

Purpose of the the Aviation Invoice Standard is to promote the standardization of charges and billing data exchange between the airlines and their main suppliers. Such standardization will deliver tangible cost savings and drive efficiency in the Accounts Receivable/Payable processes of the business partners.

IATA leads an Airport Invoice Task Force (AITF), comprised of Airlines and Airports, and an Air Navigation Task Force (ANSITF), comprised of Airlines and Air Navigation Service Providers, to develop and maintain the invoice data standards and commonly associated terms, definitions and codes.

The Aviation Invoice Standard shall be maintained by AITF, ANSITF and IATA.

The IATA Aviation Invoice Standard comprises of the following documents:

1. IATA\_Aviation\_Invoice\_Standard\_v1.0.0.pdf (the present document)
2. IATA\_Aviation\_Invoice\_XML\_V1.0.0\_with\_Changes\_AirportInvoicev1.01.pdf: lists and comments all elements of the standard. All changes from the previous Airport Invoice standard (V1.01) are documented as well. This file is provided as Excel file as well to take advantage of the Excel functionalities (IATA\_Aviation\_Invoice\_XML\_V1.0.0\_with\_Changes\_AirportInvoicev1.01.xls)
3. IATA\_Aviation\_Invoice\_Standard\_V1.0.0\_AtAGlance.pdf: Gives a high level overview on the structure of the standard. This file is provided as Excel file as well to take advantage of the Excel functionalities (IATA\_Aviation\_Invoice\_Standard\_V1.0.0\_AtAGlance.xls).
4. IATA\_Aviation\_Invoice\_V1.0.0\_MainChangesFromAirportInvStdV1.01.pdf: Highlights the main differences between Aviation Invoice V1.0.0 and Airport Invoice standard V1.01. This file is provided as Excel file as well to take advantage of the Excel functionalities (IATA\_Aviation\_Invoice\_V1.0.0\_MainChangesFromAirportInvStdV1.01.xls).
5. The schemas (XSD):
  - i. IATA\_Aviation\_Standard\_Base\_Datatypes\_V1.0.0.xsd: defines the basis datatypes used in the schema
  - ii. IATA\_Aviation\_Standard\_Main\_Dictionary\_V1.0.0.xsd: the standard dictionary
  - iii. IATA\_Aviation\_Standard\_Custom\_Dictionary\_V1.0.0.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.
  - iv. IATA\_Aviation\_Invoice\_Standard\_V1.0.0.xsd: the schema for the aviation invoice standard itself
6. IATA\_Aviation\_Invoice\_Standard\_TechDoc\_V1.0.0.zip: Element by element documentation

The Aviation Invoice Standard is the first invoice standard for Air Navigation Services. It is the successor of the Airport Invoice Standard V1.0.1 for the invoicing of Airport Services.



## 2. High level overview on the structure of the aviation invoice standard

The purpose of this document is to give an overview of the aviation invoice standard and better understand its main elements. For this introduction, an airport invoice sample is used.

### 2.1 The paper world: Invoice and supporting documents

Airports are usually sending an invoice with some supporting documents that give some detailed information to better understand and validate the invoice.

The Airport Invoice is made of 3 main elements:

1. The Invoice Header
2. The Invoice Line Items
3. The Invoice Summary

You will find in the below screen an example with some information (non exhaustive) that can be included in each of the 3 main elements listed above.



**\*\* TEST \*\*** **INVOICE** **\*\* DO NOT POST \*\***

BUSINESS SUPPORT CENTRE LIMITED  
 INVOICE TO CASH PROCESS TEAM  
 PO BOX 3000  
 --

CONTACT: Anne Honymoss  
 TELEPHONE: 0141 585 6029  
 FAX: 0141 585 6071

VAT REGN NO. GB 653 09

ABC LIMITED  
 10 HIGH STREET  
 ANYTOWN  
 SOMESHIRE  
 NE1 4EG

ACCOUNT NO. 415  
 TAX POINT/DATE 11/07/2006  
 INVOICE NO. 2063811

Invoice charge incorrect? Please our Disputes helpline on +44(0) 141 570

Header

AIRPORT AIRCRAFT CHARGES			
PERIOD FROM	CHARGED TO	DESCRIPTION	AMOUNT
NOTE: THE CHARGES BELOW ARE VAT-RATED AT ZERO			
01/07/06	05/07/06	AIRCRAFT WEIGHT CHARGE	640.00
01/07/06	04/07/06	REMOTE STAND REBATE	-1,319.20
01/07/06	04/07/06	AIRCRAFT PASSENGER FEE	3,732.40
01/07/06	05/07/06	NOX EMISSION CHARGE	161.00
NOTE: THE CHARGES BELOW ARE VAT-RATED AT 17.5%			
01/07/06	04/07/06	CUTE SYSTEM CHARGE	124.74
01/07/06	04/07/06	CHECK-IN & BAGGAGE CHARGE	926.64

Line items

VALUE ADDED TAX BREAKDOWN:-	VAT RATE	AMOUNT	VAT AMOUNT
	17.50%	1,051.38	183.99
	ZERO	3,214.20	0.00

Summary

PAYMENT IS DUE 20 DAYS FROM THE INVOICE DATE.  
 CREDIT TRANSFERS MAY BE MADE DIRECTLY TO OUR BANK.

BARCLAYS BANK PLC  
 PO BOX 544  
 54 LOMBARD STREET  
 LONDON  
 EC3V 9EX

NETT TOTAL £ 4,265.58  
 VAT @ SEE ABOVE £ 183.99  
 INVOICE TOTAL £ 4,449.57

FOUNDS STERLING

AIRPORT PAYMENT COUNTERFOIL

PLEASE RETURN WITH PAYMENT TO:  
 BUSINESS SUPPORT CENTRE LIMITED, INVOICE TO CASH PROCESS TEAM

ABC LIMITED ACCOUNT 415

INVOICE NO. 2063811 TAX POINT/DATE 11/07/2006 INVOICE TOTAL £ 4,449.57

# IATA Aviation Invoice Standard V1.0.0



The supporting documents provide additional information to help the Airlines to better understand and validate the invoice line items.

You will find in the below screen an example of a supporting document. Line item details provide additional information for the 6 line items of the above invoice example. The line item details can be provided in many different formats.

**\*\* TEST \*\***

INVOICE: 2063811 - DETAIL OF CHARGES

ABC LIMITED

**\*\* DO NOT EDIT \*\***

ACCOUNT NO.

Line item 4 is made of 5 line item details

AIRPORT AIRCRAFT CHARGES											
TIME GMT	FLIGHT NUMBER	AIRCRAFT REGNO.	CHK NO. IN PAX	INT/ DOM	PAX CHARGE	MIN CHG	WEIGHT CHARGE +/-	NOx CHARGE	STAND NO. *=REMOTE		TOTAL AMOUNT
NOTE: THE CHARGES BELOW ARE VAT-RATED AT ZERO											
ARRIVALS											
01/07/06											
04:26	ABC0293	GXVYS	223				128.00	34.80	* 171M		162.80
02/07/06											
04:50	ABC0293	GXVYS	233				128.00	34.80	* 171M		162.80
03/07/06											
04:09	ABC0293	GXVYS	171				128.00	34.80	* 143M		162.80
04/07/06											
04:13	ABC0293	GXEYX	149				128.00	28.30	* 145M		156.30
05/07/06											
04:34	ABC0293	GXEYX	161				128.00	28.30	34M		156.30
TOTAL			937				640.00	161.00			
REMOTE STAND REBATE:-											
@ 1.70 PER ARRIVAL PAX			776								-1,319.20
DEPARTURES											
01/07/06											
10:06	ABC0292	GXVYS	G 194	I	1144.60				* 171M		1,144.60
02/07/06											
10:28	ABC0292	GXVYS	G 158	I	932.20				* 171M		932.20
03/07/06											
11:09	ABC0292	GXVYS	G 108	I	637.20				* 143M		637.20
04/07/06											
09:48	ABC0292	GXEYX	G 134	I	1018.40				34M		1,018.40
TOTAL			594		3732.40						
NOTE: THE CHARGES BELOW ARE VAT-RATED AT 17.5%											
CHECK-IN & BAGGAGE CHARGE:-											
@ 1.56 PER DEP PAX			594	GOLD (G)							926.64
CUTE SYSTEM CHARGE:-											
@ 0.21 PER DEP PAX			594								124.74

NETT TOTAL £ 4,265.58  
POUNDS STERLING



## 2.2 The Main elements of the Airport Invoice XML

When two parties (such as Airports and Airlines) are exchanging electronically a business document (such as an invoice) a transmission is happening between them.

The Airport will create one (or more) invoice in an XML format and then transmit it to the Airline who will receive it and integrate it into its own system.

### 2.2.1 Transmission

The high level view of the transmission is presented on the figure 1.

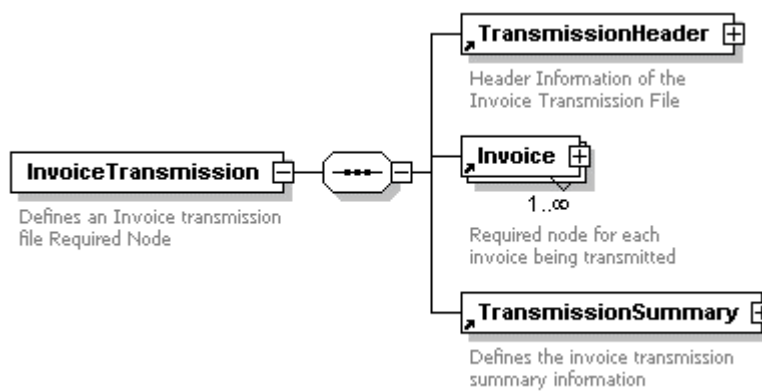


Figure 1.

Each transmission contains three main elements as follows:

1. Transmission Header Element
2. Invoice Element (can be 1 to N invoices)
3. Transmission Summary Element

### 2.2.2 Transmission header element

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

The transmission header contains mainly two kind of information:

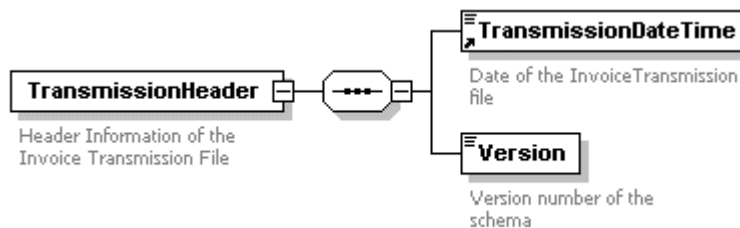


Figure 2

## 1. Transmission Date Time

It contains the creation date and time stamp for the Airport Invoice document (given by the sender system).

## 2. Version

It provides version number of the Airport Invoice Standard transmitted. It will enable parties to understand which XML model version is being used to integrate and translate the invoice into their own system.

Optionally, a TransmissionID allows to uniquely identify a transmission, the IssuingOrganizationID and ReceivingOrganizationID allows to identify who sends and receives the message.

### 2.2.3 Invoice Element

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

The following figure describes the content of the invoice element.

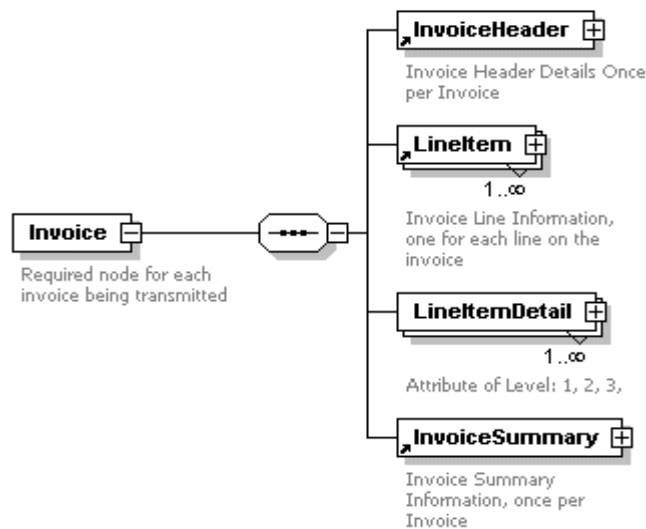


Figure 3.

The Invoice element contains four main elements:

### 1. Invoice Header

- Provide header information about the invoice:
- Invoice Number
- Invoice Date
- Type of the invoice
- Identification of the business entity who provided the product / service
- Identification of the business entity who bought the product / service
- Identification of any other business entity which was involved in the delivery of the product / service, or which is involved in the processing of the invoice (bank...)
- Payment terms and conditions for the invoice
- Attachment element: this element will contain one or more files in different format (such as pdf) and related to the invoice.
- Layout element: This optional part provides a possible layout to display the data of the invoice.

## 2. 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.

The following information is part of the Invoice line item (non exhaustive examples):

- Product / Service description
- Start and end date
- Quantity, Unit of measure,
- Unit price, charge amount
- Tax information

## 3. Line Item Detail

It contains detailed data about each line item element.

The following information is part of the Invoice line item detail (non exhaustive examples):

- Detailed description
- Start and End Dates specific to the “LineItemDetail”
- Tax information
- Detail information useful for the e-reconciliation of the invoice (information on the Aircraft, Flight, Route, Parking, Employee, Area ... the delivered product / service was related to)

Most of the data that are necessary to provide information to the customer for review, attestation and approval of invoiced services are provided at the line item detail level. These data have been grouped:

1. Aircraft – those charges incurred by aircraft activity. E.g. Runway, terminal navigation, and parking charges.
2. Flight – those charges incurred by aircraft activity.
3. Route - those charges in relation to the route followed
4. Parking – those charges incurred by aircraft parking activity.
5. Employee – those charges levied on the airline for airport issued security passes.
6. Area – Airport terminal rental charges and associated utility charges.
7. Desk-Gate – E.g. Check in desk rentals, Shared gate fees.
8. Consumption – Utility charges levied on the airline (e.g., metered electricity and gas).
9. Misc – those charges not part of a defined charge type.

These groups have been identified as sufficient to model airport and ANS charges.

Note on the line item and Line item details: There is a relationship between LineItem and LineItemDetail elements. Within an invoice each LineItem element can contain 0 to N LineItemDetail elements. One instance of this attribute is within LineItem element and another within LineItemDetail element. On this way several instances of LineItemDetail can be “linked” to a specific LineItem element.

## 4. Invoice Summary

It provides summary information for each invoice.

The following information is part of the invoice summary (non exhaustive examples):

- Invoice level tax details
- Total invoice amount
- Control totals for the specific invoice
- Number of Attachments

## 2.2.4 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.

The following information is part of the transmission summary:

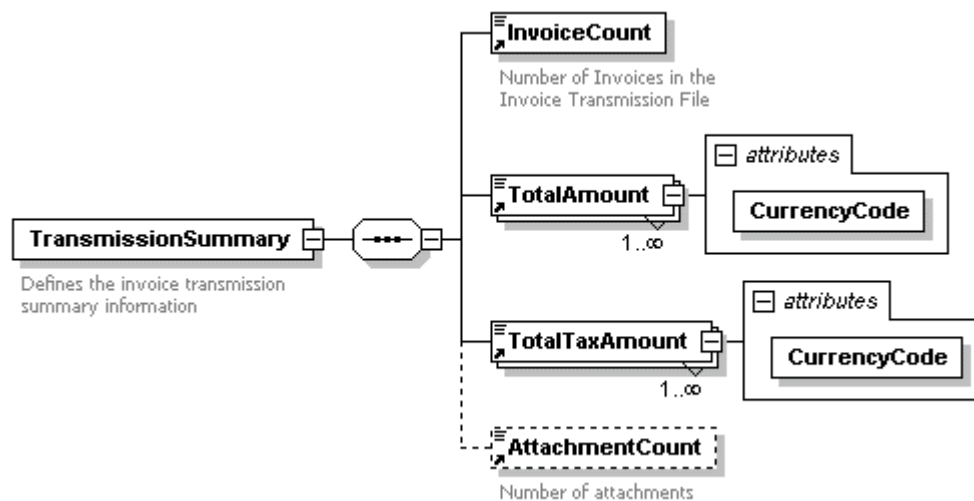


Figure 4.

### 1. Invoice Count

It provides the number of invoices contained at the Invoice Level.

### 2. Total Amount

It provides the total amount of all invoices contained at the Invoice Level including taxes, charges,...

### 3. Total Tax Amount

It provides the total tax amount of all invoices contained at the Invoice Level.

### 4. Attachment Count

It provides the total number of attachments amount of all invoices contained at the Invoice Level.



## 3. Aviation Invoice Standard Overview

As we have seen, the e-invoice defined by the aviation standard covers:

- Header information (biller, buyer, any third party organization involved in either the delivery of the invoiced products and services or in the processing of the invoice)
- Line items: In one invoice several types of services and products can be invoiced (one per line item)
- Line item details: The aviation invoice standard does not only covers the header and line item information (which are quite standard in any invoice) but provides as well the so-called line item detail information. 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. The detail information is quite specific of the type of product and service being invoiced. The version 1.0.0 of the aviation invoice standard covers particularly the details needed to be able to reconcile invoices sent by airport service providers and air navigation service providers.

The following structure gives a bit more details about the aviation invoice standard:

Element Structure					
Level	Structure/Element	Description	Repeat	Req	
1		<b>TransmissionHeader</b>	Header information node in the transmission	1	R
1		<b>Invoice</b>	Node for each invoice in the xml file	1 - unbounded	R
	2	<b>InvoiceHeader</b>	There is one header for each invoice	1	R
	3	<b>SellerOrganization</b>	Entity issuing the invoice	1	R
	3	<b>BuyerOrganization</b>	Entity receiving the invoice	1	R
	3	<b>OtherOrganization</b>	Any organization involved in either the delivery of the invoiced products and services or in the processing of the invoice, including the bank for the payment	0 - unbounded	O
	3	<b>PaymentTerms</b>	Specifies the terms and conditions for the payment	1	R
	3	<b>Attachment</b>	Any attachment to the invoice can be mentioned here	0 - unbounded	O
	3	<b>Layout</b>	Any layout information (how to display the e-invoice) can be specify here	0 - unbounded	O
	2	<b>Linitem</b>	Each invoice can have multiple Lineltems	1 - unbounded	R
	3	<b>Tax</b>	To provide tax information (either applied at line item level or summarized from line item detail level, or distributed from invoice level)	0 - unbounded	O
	2	<b>LinitemDetail</b>	Each Lineltem must have one or more LineltemDetail	1 - unbounded	R
	3	<b>Tax</b>	To provide tax information (either applied at line item detail level or distributed from higher level)	0 - unbounded	O
	3	<b>AircraftDetails</b>	AIRCRAFT elements	0-1	O
	3	<b>FlightDetails</b>	FLIGHT elements	0-1	O
	3	<b>RouteDetails</b>	ROUTE elements	0 - unbounded	O
	3	<b>ParkingDetails</b>	PARKING elements	0-1	O
	3	<b>EmployeeDetails</b>	EMPLOYEE elements	0-1	O
	3	<b>AreaDetails</b>	AREA elements	0-1	O
	3	<b>Desk-GateDetails</b>	DESK & GATE elements	0-1	O
	3	<b>ConsumptionDetails</b>	CONSUMPTION elements	0-1	O
	3	<b>MiscDetails</b>	MISCELLANEOUS elements, that could not be documented in any of the previous group	0-1	O
	2	<b>InvoiceSummary</b>	Invoice summary information	1	R
	3	<b>Tax</b>	To provide tax information (either applied at invoice level or summarized from lower level(s))	0-unbounded	O
1		<b>TransmissionSummary</b>	Summary information for xml file	1	R

Column Req: R: Required / O: Optional

At this stage it is reasonable to read through the appendix 1 and 2 that gives more details about the standard.

## Special Considerations:

- **Date Fields:** All Dates are DateTime, where Time is optional
- **Tax Fields:**
  - The Tax Group can be instantiated at three levels in the XML message: Invoice (in this case it is located in the invoiceSummary), Lineltem, Line Item Detail
  - The Tax Group is repeatable all each of these levels. One tax group is to be used for each type of tax applied (tax type, country based, region based, various rates....)
  - The field TaxLevel allows to identify at what level a tax is applied:
    - Case 1: The Tax Group is located at the line item detail level and TaxLevel="Detail": The Tax is applied at line item detail level. The field TaxAmount gives the amount of the tax being applied.
    - Case 2: The Tax Group is located at the line item level and TaxLevel="Lineltem": The Tax is applied at line item level. The field TaxAmount gives the amount of the tax being applied.
    - Case 3: The Tax Group is located in the InvoiceSummary and TaxLevel="Invoice": The Tax is applied at invoice header level. The field TaxAmount gives the amount of the tax being applied. Please remark that this means that an additional tax is applied on the invoice header: The invoice summary can then contain information that are not available in the rest of the invoice.
    - Case 4a: The Tax Group is located at the line item detail level and TaxLevel="Invoice" or "Lineltem": The Tax is applied at "Invoice" or "Lineltem", and the field TaxAmount gives the amount of Tax supported by this line item detail (the TaxAmount calculated for the higher level is distributed amongst the line item details). This is provided for information only.
    - Case 4b: The Tax Group is located at the line item level and TaxLevel="Invoice": The Tax is applied at "Invoice", and the field TaxAmount gives the amount of Tax supported by this line item (the TaxAmount calculated for the invoice level is distributed amongst the line items). This is provided for information only. This is very similar to case 4a.
    - Case 5a: The Tax Group is located at the invoice level and TaxLevel="Detail" or "Lineltem": The Tax is applied at "Detail" or "Lineltem", and the field TaxAmount gives the sum of the Taxes applied at lower levels (for the same TaxRegistrationID/Country/Subdivision/TaxType). This is provided for information only.
    - Case 5b: The Tax Group is located at the Lineltem level and TaxLevel="Detail": The Tax is applied at "Detail", and the field TaxAmount gives the sum of the Taxes applied at LineltemDetail level (for the same TaxRegistrationID/Country/Subdivision/TaxType). This is provided for information only. This is very similar to case 5a.
    - If no TaxLevel is instantiated then it is assumed to be equal to the level of the TaxGroup in the invoice.



- Aggregated tax information and distributed tax information are optional and for information only. For some countries, it is mandatory to provide a total tax information at invoice level for each tax (identified by TaxRegistrationID/Country/Subdivision/TaxType): This is done following the case 5a.
- Aggregated information can be provided at only some of the higher levels, it does not have to be provided for each of the higher level.
- Distribution information can be provided at only some of the lower levels, it does not have to be provided for each of the lower level.
- The InvoiceSummary/TotalTaxAmount is the sum of Lineltem/Tax/TaxAmount + InvoiceSummary/Tax/TaxAmount (Caution: the TaxAmounts corresponding to a distribution below the level where the tax is applied as well as TaxAmounts corresponding to the sum above the level where the tax is applied are only displayed for information and are not taken into account in TotalTaxAmount.
- The Lineltem tax could be present without LineltemDetail tax if it solely applied at the Lineltem level
- **Extension "Name"**: Identifies the field being provided via a Data extension element (in the absence of a schema element). Rather than pre-guess potential universal structures for everything, 'name-value' pairs (elements with suffix ~Data) are used instead for plausible but not primary information e.g. <MiscData Name="SomeField"> some value </MiscData>. This is true especially where there is:
  1. no evident immediate automation requirement to justify delaying implementation while further analysis takes place (i.e. no existing intermediate or airline system demanding coded / structured data),
  2. the fields are over and above those that universally / commonly appear on any type of invoice, and
  3. any such structure loses any useful value due to the complexity / optionality needed for all-purpose use.

It is likely that over time some of these will instead become adopted as schema defined elements when common automation opportunities are recognised and implemented

See separate dictionary entries PaymentData-Name, InvoiceData-Name etc. for the code values applicable. Where the 'Name' itself is a field with code values, then there will be a separate dictionary element for such a field.

If data fields are present solely for a supplier's own presentation purpose, or are very specific to that organization's charges i.e. with no commonality, then the Name attribute should take a prefix of the Organisation's acronym, the IATA Airport code, or Airline designation code as appropriate. Such elements will not be dictionary defined, and with respect to these prefixed names, the dictionary is open-ended. It would be expected that a supplier making use of this would provide additional documentation to airlines to define what their fields signify.

e.g. An Airport "XXX" have a reduced International passenger rate for the Republic of Ireland which is very much a local consideration for the United Kingdom. The common schema field 'FlightZone' only has values of 'International' or 'Domestic'. Airport "XXX" could therefore use an additional name-value pair for the extra distinction that they make

```
<MiscData Name="XXX_FlightZone"> R </MiscData>
```



Dictionary defined names should be kept within a maximum length of 25 characters to simplify future reuse were any to be adopted as schema defined elements. The actual maximum length of 30 characters defined by the schema for the Name attribute is longer in order to permit supplier prefixes (see Open definition above).

We recommend a prefix consisting into 3 letters. The maximum length for the prefix is 4. Only alphanumeric characters are authorized for the prefix. Alphanumeric characters and hyphens are authorized for the suffix. The separator between prefix and suffix is "\_".

The following Data@Name extensions are available in the Aviation Invoice Standard:

- InvoiceHeader / SellerOrganization / OrganizationData
  - InvoiceHeader / BuyerOrganization / OrganizationData
  - InvoiceHeader / OtherOrganization / OrganizationData
  - InvoiceHeader / PaymentTerms / PaymentData
  - InvoiceHeader / InvoiceData
  - LineItem / Tax / TaxData
  - LineItem / LineItemData
  - LineItemDetail / Tax / TaxData
  - LineItemDetail / MiscDetails / MiscData
  - InvoiceSummary / Tax / TaxData
- **Main Dictionary vs. Custom Dictionary:** The standard provides a main dictionary where the possible values for dictionary based elements are listed. Some of the elements however are partly dictionary based (means that a list of commonly used values exists for this element) and partly open ended (an implementer is entitled to use other values that the one in the list if needed). The main dictionary will provide the list of officially authorized values for an element. Beside the main dictionary, a second dictionary exists (called custom dictionary) where an implementer can maintain other values that are needed for its implementation.

The custom dictionary can be modified by implementers to restrict open-ended and custom extensions to only those expected by the organization sending or receiving invoice transmissions. This practice is recommended to suppliers for use at very least when testing new invoice xml to ensure that dictionary values for open-ended elements / attributes are checked systematically.

- **Note on the low number of mandatory elements:** The IATA Aviation Invoice Standard has been developed with the intention of being used across multiple charge types. Charge types have been categorized under specific charge drivers. While common data elements exist for many different charge types, many of the charges categorized under different charge drivers, will require specific data elements to give transparency to the cost being invoiced. It is therefore very difficult to classify a particular data element as being a required field within this XML standard.
- Example:** Passenger numbers for a passenger driven charge in normal circumstances would be a required field in order to give transparency to any passenger driven cost. By making this field required, many airports that do not charge for a passenger driven cost, would immediately have difficulty satisfying this requirement of the standard.
- All data element fields, for all costs, would therefore have to be optional. It is possible that with a standard with no required fields, many airports will omit data, thereby eliminating any benefit an airport standard DataStream provides.





Certain fields are expected to be included for the different charge basis's, but other fields may be covered by bi-lateral arrangements between suppliers and airports as to what information should be completed for the airport to provide transparency.

- **Note on ChargeCategory and ChargeCode**

	Definition	Where is it used?
<b>ChargeCategory</b>	Supplier-provided coding (as defined in the schema) to distinguish the broad category of services being billed on any one invoice.	Defined at Invoice Level
<b>ChargeCode</b>	Specifies the nature of the service charged	Defined at the Lineltem level, and not necessarily specific to just the one ChargeCategory

Important remark:

ChargeCodes are not specific of ChargeCategory: there's evident overlap between services and providers e.g. Airports can provide approach navigation and ground handling.

An airline recipient would find it easier to process data if the same code is used for the same service. Some codes e.g. meteorology or communication could notionally apply to either ANS or an airport.

Definition of the different charge categories:

ChargeCategory	Description	Issues / Comments	Typical ChargeCodes
<b>Misc</b>	For an airport this could include other sundry charges such as advertising sites, training, commercial filming & photography, lost property, infringement fines, medical services, motor workshops etc. Could appear against any ChargeCategory	Ad-hoc charges raised manually (rather than from a specific business system) using a general-purpose invoice layout may inevitably have the 'Misc' ChargeCategory but could then cover ChargeCodes normally to be found under specific ChargeCategories	Misc
<b>AirNavigation</b>	Used by ANSP		Oceanic EnRoute Overflight Approach Communication Meteorology



ChargeCategory	Description	Issues / Comments	Typical ChargeCodes
<b>Airport</b>	<p>Previously called 'Aircraft' (the label was changed to avoid possible confusion resulting from the use of the standard by airports and ANSPs):Charges resulting from aircraft handling or operations at an airport.</p> <p>A few Charge Codes are specific to the charge category "Airport" (for instance Runway, noise, emission, parking, airbridge...).</p> <p>If a service providers invoices in one invoice items related to charge codes that typically are seen under different charge categories (for instance Approach fees, Runway fees, and ground handling fees) then the charge category Airport could be used because it is the most general. However it is preferable to use a more specific Charge Category when possible.</p>		Runway Noise Emission Parking Airbridge Coaching Passenger Lounge CheckIn Security Policing FireService Baggage Cargo Stand Catering Cleaning Airfield AviationFuel MotorFuel IDPass VehiclePass
<b>GroundHandling</b>	<p>Services provided to an aircraft while it is on the ground, primarily those when parked on stand</p>	<p>Obvious value to recognize straightaway, particularly since some Airports provide ground handling services.</p>	Coaching Passenger Lounge CheckIn Security Baggage Cargo Stand Catering Cleaning
<b>Fuel</b>	<p>Related to fuel delievery</p>	<p>Whilst Fuel has it's own xml standard, Airports may also be supplying fuel themselves to both aircraft and or vehicles</p>	AviationFuel MotorFuel
<b>Passes</b>	<p>Issue of passes / permits</p>		IDPass VehiclePass
<b>Property</b>		<p>Similarly to the AirNavigation/Airport/GroundHandling overlaps it's plausible to imagine some Property invoices including utilities and / or telecom as well as rental</p>	Rents Heating Refuse Rates Insurance Concession RoomHire



ChargeCategory	Description	Issues / Comments	Typical ChargeCodes
<b>Utilities</b>	Related to the availability of utilities		Electricity Water Waste-Sewage Gas
<b>Telecom</b>			LineRental Calls Network Installation Information

Definition of the different charge codes:

ChargeCode	Description	Issues / Comments	ChargeCategory
Misc	Charge that can not be properly classified in any other ChargeCode		Could appear against any ChargeCategory
Oceanic			AirNavigation
EnRoute			AirNavigation
Overflight			AirNavigation
Approach	Often known as Terminal charges in ANS parlance, but also referred to Approach and / or Aerodrome. Often known as Navigation fees from an Airport perspective, typically Control tower handling of an approach (and / or potentially take-off clearance as well)	New value to replace "Terminal" Slight misnomer were anyone to be charging for a distinct clearance fee but that is believed to be rare or non-existent	AirNavigation
Communication			AirNavigation
Meteorology			AirNavigation
Runway	Flight movement charge, typically a Landing fee based off the weight of an aircraft		Airport
Noise	Standalone aircraft noise abatement charge		Airport
Emission	Standalone aircraft emissions levy		Airport
Parking	Charge for the occupancy by an aircraft of a stand at an airport		Airport
Airbridge	also known as Aerobridge, Air Jetty, Jet bridge, Jetway, Loading bridge		Airport
Coaching	Coach or bus transport of passengers between a terminal and an aircraft		Airport, GroundHandling
Passenger	Terminal handling of passengers through to an aircraft		Airport, GroundHandling
Lounge	inc. special facilities for VIP / CIP passengers		Airport, GroundHandling
CheckIn	inc. Common User equipment		Airport, GroundHandling
Security	Screening of passengers and / or baggage charged separately		Airport, GroundHandling
Policing	Police attendance		Airport
FireService	Fire cover or attendance		Airport
Baggage	Transport of bags to / from aircraft		Airport, GroundHandling
Cargo	Loading / unloading of cargo (equally Freight or mail) from an aircraft		Airport, GroundHandling
Stand	Services provided on stand (also known as ramp or apron) e.g. ground power, air		Airport,

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ChargeCode	Description	Issues / Comments	ChargeCategory
	conditioning, stairs, de-icing, pushback tugs, fuel spills etc.		GroundHandling
Catering	Loading / unloading of meals		Airport, GroundHandling
Cleaning	Exterior and / or cabin cleaning / reprovision	Plausible for this to also be used with Property for office cleaning	Airport, GroundHandling
Airfield	Services provided other than those on or moving onto or off stand e.g. lighting, out of hours extension, compass base, leader vans, escorts etc.		Airport
AviationFuel	Fuel supplied to Aircraft		Airport, Fuel
MotorFuel	Fuel supplied to vehicles and other motorised equipment		Airport, Fuel
IDPass	Issue of passes / permits for personnel enabling access or for identification		Airport, Passes
VehiclePass	Issue of passes / permits for vehicles (typically giving airside access)		Airport, Passes
Rents	property / tenancy rental / leases	Presume that other variations of Rent will have a prefix to distinguish from property rents e.g. LineRental under Telecom	Property
Heating			Property
Refuse	rubbish containers and disposal		Property
Rates			Property
Insurance			Property
Concession			Property
RoomHire			Property
Electricity			Utilities
Water			Utilities
Waste-Sewage	inc. sewage / sewerage / effluent removal and disposal	Could also be used under the Airport/GroundHandling category for Aircraft toilet emptying / sewage disposal	Utilities
Gas			Utilities
LineRental	Telephone line or other telephony equipment rental	Best to distinguish from 'Rents' in the Property sense	Telecom
Calls			Telecom
Network			Telecom
Installation	inc. cabling		Telecom
Information	provision of information systems		Telecom



## **Appendix 1 – Business specifications**

IATA\_Aviation\_Invoice\_XML\_V1.0.0\_with\_Changes\_AirportInvoicev1.01.pdf  
IATA\_Aviation\_Invoice\_V1.0.0\_MainChangesFromAirportInvStdV1.01.pdf

## **Appendix 2 – Overview on the IATA Aviation Invoice Standard**

IATA\_Aviation\_Invoice\_Standard\_V1.0.0\_AtAGlance.pdf

## **Appendix 3 – Schema and Data Element Dictionary**

IATA\_Aviation\_Standard\_Base\_Datatypes\_V1.0.0.xsd  
IATA\_Aviation\_Standard\_Main\_Dictionary\_V1.0.0.xsd  
IATA\_Aviation\_Standard\_Custom\_Dictionary\_V1.0.0.xsd  
IATA\_Aviation\_Invoice\_Standard\_V1.0.0.xsd

## **Appendix 4 – Technical documentation**

IATA\_Aviation\_Invoice\_Standard\_TechDoc\_V1.0.0.zip