



# Electronic Staple Functional Specifications <IATA Cargo> <IDFS> <03/06/2009>

## DOCUMENT CONTROL & DISTRIBUTION

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### Distribution List

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# 1 Introduction

## 1.1 Objective

In a paper world the cargo shipment is accompanied with an air waybill, a house manifest and a pouch that contains numerous paper documents such as the invoice, the packing list, the certificate of origin, the house waybills, etc. All of these documents can be physically stapled together.

As part of the IATA e-freight project, this specification is intended to describe the relationship between the different electronic messages that replace the paper documents and how these messages can be electronically stapled together in the scope of e-freight.

This document is intended to be used by technical IT experts (from carrier, customs, forwarders... and service providers) who are willing to re-create in their IT system the concept of a pouch, allowing end users (carriers, customs, forwarders...) to retrieve from the system all the electronic documents that accompany the shipments.

Authorization management would have to be handled carefully to ensure that users have only accessed to the documents they are allowed to access.

## 1.2 Background

As the IATA e-freight volume grows and more documents are introduced in the scope of the project, the stakeholders involved need the relationship between the messages to be clearly described.

The e-freight Central Action Group (e-CAG) decided some time ago that a specification should describe how the messages are electronically linked (stapled) together to ensure that an electronic pouch is established allowing the retrieval of the messages that relate to an e-freight shipment.

## 1.3 Documents in scope of this paper

This specification addresses the following documents in scope of the e-freight project that have an electronic standard message already developed:

- Flight Manifest (CIMP-FFM),
- Air Waybill (CIMP-FWB),
- Shipper's Declaration for Dangerous Goods (CIMP-FDD or XML-SDDG).
- House Manifest (CIMP-FHL),
- House Waybill (CIMP-FZB),
- Invoice (XML),
- Packing List (XML),
- Certificate of Origin (XML),

In essence, the Flight Manifest is a list of all the Air Waybills that are loaded onto a specific flight.

The Shipper's Declaration or Dangerous Goods is associated to the Air Waybill.

In a consolidation scenario, the House Manifest is a list of House Waybills that are associated to an Air Waybill and that Air Waybill is considered a Master Air Waybill for the consolidation. In such situations, the Invoice, Packing List and Certificate of Origin are associated to the House Waybills.

In a non-consolidated scenario, i.e. direct shipment, the Invoice, Packing List and Certificate of Origin are directly associated to the Air Waybill.

Customs messages will only be included for the sake of clarity but the detailed description (at field level) will not be included as Customs messages are very often specific and dependent upon local legislation.

Although there is no actual "Status" document, it is important to note that in an e-freight environment the Air Waybill cannot be replaced by the Air Waybill Data (FWB) message alone. The FWB from the consignor requires an associated Status Update (FSU) message from the carrier with a status code (RCS) indicating that the freight is "ready for carriage".

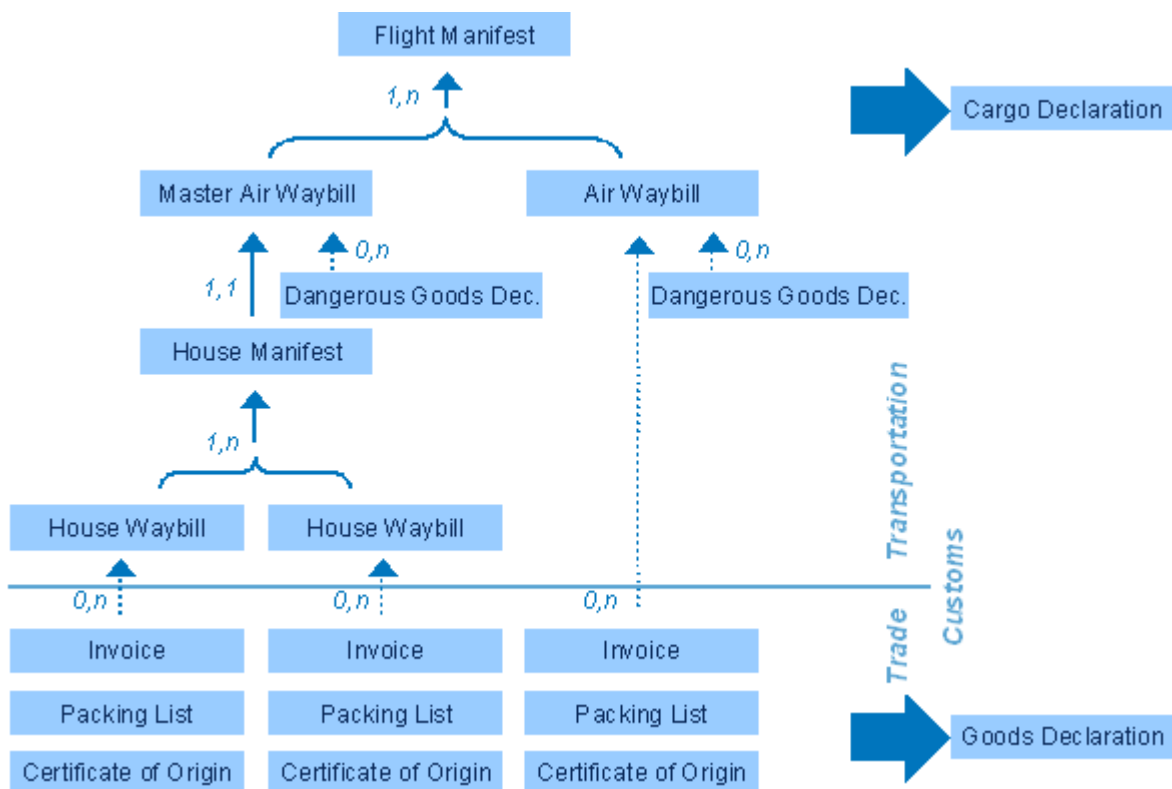
At the end of this document the standard file name of images of documents such as invoice linked to a pouch will also be described.

## 1.4 Structure of the documents & messages

### 1.4.1 Structure of the Documents

The below diagram describes the relational structure of the paper documents included in the scope of IATA e-freight.

Note: the dotted arrows describe the messages that are optional depending on the type of cargo (general vs. special) or type of shipments (international vs. domestic).



The transportation documents would all contain a reference to the Air Waybill number

The trade documents would also contain a reference to the Air Waybill number when no consolidation takes place. Otherwise, in a consolidated scenario, they may only contain a reference to the House Waybill number.

**Note:**

0,n means that there may be no associated documents but possibly more, i.e. zero to many

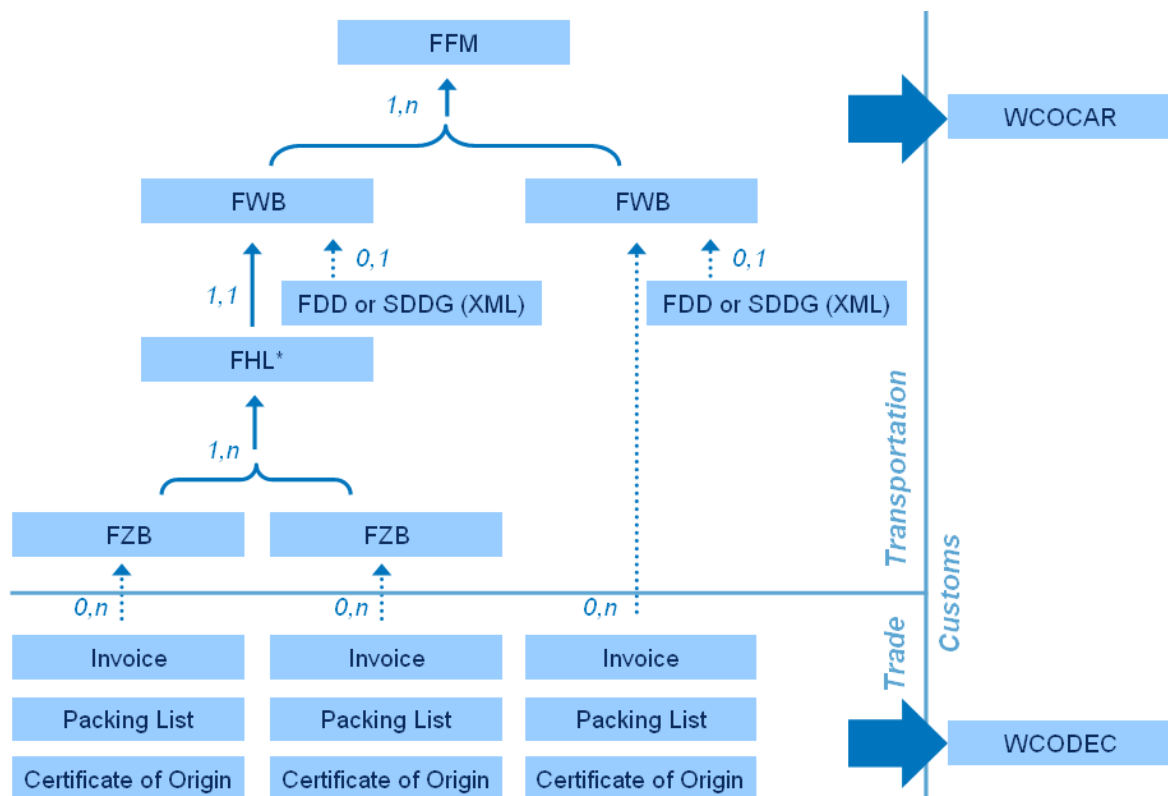
1,1 means that there must be only 1 associated document, i.e. one to one

1, n means that there must be at least 1 associated document but possibly more, i.e. one to many

### 1.4.2 Structure of the Messages

The below diagram describes the relational structure of the electronic messages included in the scope of IATA e-freight.

Note: the dotted arrows describe the messages that are optional depending on the type of cargo (general vs. special) or type shipments (international vs. domestic).



The transportation messages would all contain a reference to the Air Waybill number. The trade messages would also contain a reference to the Air Waybill number when no consolidation takes place. Otherwise, in a consolidated scenario, they may only contain a reference to the House Waybill number.

There are also other message standards for transport, e.g. Cargo-FACT IFTMIN, besides CIMP and the Customs messages are typically EDIFACT. Like our trade messages, XML formats are also becoming available for transport and Customs,

Note:

- 0, n means that there may be no associated messages but possibly more, i.e. zero to many
- 1, 1 means that there must be only 1 associated message, i.e. one to one
- 1, n means that there must be at least 1 associated message but possibly more, i.e. one to many

\* The 1,1 relationship between FHL & FWB assumes the FHL is composed as the “checklist” category. Multiple FHL “detail” messages may also be sent, e.g. for US Customs reporting purposes, and the relationship would be 1,n.

## 2 Message relationship - Details

The section identifies the fields in each of the messages that enable linking the messages together, i.e. electronic staple.

The transport document identification, e.g. Air Waybill Identification and/or House Waybill Identification is the electronic link (staple) between the messages.

For example, in a consolidation scenario, the trade messages (Invoice, Packing List & Certificate of Origin) would include the House Waybill Identification while the transportation messages (House Waybill, House Manifest, Shipper’s Declaration for Dangerous Goods, Air Waybill Data & Airline Flight Manifest) would include the Air Waybill Identification,

In a direct shipment scenario, there would be no House Waybill involved so the trade messages and the transportation messages would include the Air Waybill Identification.

### 2.1 Airline Flight Manifest (FFM)

#### Electronic Staple – Transportation References:

- ➔ FFM includes the Air Waybill identification
- ➔ CIMP reference: 4.1 AWB Identification

#### Electronic Staple – Trade References:

- ➔ FFM can include the invoice, packing list, certificate of origin identifiers
- ➔ CIMP reference: 9. Other Customs Information; 9.7 Customs Information Identifier (Certificate Number C, Dangerous Goods D, Packing List Number P, Invoice Number V); 9.9 Supplementary Customs Information (where the actual reference number is included)

Note: reference 17 “Other Customs Information” can also include references for this purpose for ULD loaded cargo.

### 2.2 Air Waybill Data (FWB)

#### Electronic Staple – Transportation References:

- ➔ FWB includes the Air Waybill identification
- ➔ CIMP reference: 2.1 AWB Identification

Note 1: in FWB there is an indicator that it is a consolidation (CIMP reference 12.12 Consolidation).

#### Electronic Staple – Trade References:

- ➔ FWB can include the invoice, packing list, certificate of origin identifiers

- CIMP reference: 29. Other Customs Information; 29.7 Customs Information Identifier (Certificate Number C, Packing List Number P, Dangerous Goods D, Invoice Number V); 29.9 Supplementary Customs Information (where the actual reference number is included)

## **2.3 Shipper's Dec. for Dangerous Goods (FDD or SDDG in XML)**

### Electronic Staple – Transportation References:

- FDD includes the Air Waybill identification
- CIMP reference: 2.3 AWB Identification
- SDDG in XML can include the Air Waybill identification
- XML reference: Reference Documents identification (Document Reference Number, Document Type and Document Name)

### Electronic Staple – Trade References:

- SDDG in XML can include the invoice, packing list, certificate of origin identifiers or the identification of any other document
- XML reference: Reference Documents identification (Document Reference Number, Document Type and Document Name)

## **2.4 House Manifest (FHL)**

### Electronic Staple – Transportation References:

- FHL includes the Master Air Waybill identification and House Waybill identification
- CIMP reference: 2.3 Master AWB Identification
- CIMP reference: 3.3 HWB Serial Number

### Electronic Staple – Trade References:

- FHL can include the invoice, packing list, certificate of origin identifiers
- CIMP reference: 6. Other Customs Information; 6.7 Customs Information Identifier (Certificate Number C, Packing List Number P, Dangerous Goods D, Invoice Number V); 6.9 Supplementary Customs Information (where the actual reference number is included)

## **2.5 House Waybill (FZB)**

### Electronic Staple – Transportation References:

- FZB includes the Master Air Waybill identification and House Waybill identification
- CIMP reference: 2.2 MWB Identification
- CIMP reference: 2.3 HWB Identification

### Electronic Staple – Trade References:

- FZB can include the invoice, packing list, certificate of origin identifiers
- CIMP reference: 25. Other Customs Information; 25.7 Customs Information Identifier (Certificate Number C, Packing List Number P, Dangerous Goods D, Invoice Number V); 25.9 Supplementary Customs Information (where the actual reference number is included)

## **2.6 Invoice**

### Electronic Staple – Transportation References:

- Invoice can include the House Waybill and Air Waybill identifiers

- XML reference: Reference Documents identification (Document Reference Number, Document Issue Date, Document Type and Document Name, Document Line-Item Number)

Electronic Staple – Trade References:

- Invoice can include the Packing List and Certificate of Origin identifiers
- XML reference: Reference Documents identification (Document Reference Number, Document Issue Date, Document Type and Document Name, Document Line-Item Number)

## **2.7 Packing List**

Electronic Staple – Transportation References:

- Packing List can include the House Waybill and Air Waybill identifiers
- XML reference: Reference Documents identification (Document Reference Number, Document Issue Date, Document Type and Document Name, Document Line-Item Number)

Electronic Staple – Trade References:

- Packing List can include the Invoice and Certificate of Origin identifiers
- XML reference: Reference Documents identification (Document Reference Number, Document Issue Date, Document Type and Document Name, Document Line-Item Number)

## **2.8 Certificate of Origin**

Electronic Staple – Transportation References:

- Certificate of Origin can include the House Waybill and Air Waybill identifiers
- XML reference: Reference Documents identification (Document Reference Number, Document Issue Date, Document Type and Document Name)

Electronic Staple – Trade References:

- Certificate of Origin can include the Invoice and Packing List identifiers
- XML reference: Reference Documents identification (Document Reference Number, Document Issue Date, Document Type and Document Name)

# **3 Images relationship – Details**

In order to link the images (e.g. TIF, PDF) of paper documents (invoice) to the electronic messages (e.g. house waybill and air waybill) to create an e-Pouch it is required to have a standard file naming convention for those images.

## **3.1 Document Types:**

The standard code identifying the document type will come from the existing standard IATA Customs Information Identifiers.

Invoice Number: V

Certificate Number: C

Dangerous Goods: D

Packing List: P

Some additional ones may have to be created.

### 3.2 File Name

All the data elements that will comprise the file name shall be separated by an hyphen (-).

#### 1. Airline code number

- Format: NNN
- Example: 777

#### 2. AWB serial number

- Format: NNNNNNNN
- Example: 12345675

Note 2: To ensure that the AWB number is entered correctly the system should validate the MOD7 check digit which is the last digit of the serial number.

#### 3. HWB number:

- Format: M[1...12]
- Example: ABCD12345678

#### 5. Document type:

- Format: AA
- Example: V

#### 6. Document number:

- Format: AAAAAAAAAAAAAAAAAA
- Example: V

### 3.3 File size

The maximum size per file shall no exceed 3MB. Note that the file can be compressed (e.g. ZIP file).

### 3.4 File sender and recipient identifiers

To minimize the filename length, system ids of the sender and of the recipient are not included.

To identify the sender and recipient of the transmitted document the communication protocol shall be used:

1. FTP

- Login id and PUT in directory

2. SMTP

- Sender and recipient addresses

### 3.5 Example

For example an invoice (5644233) in PDF format is linked to a house waybill (ABCD12345678) that is included into a master air waybill (12345675) coming from one airline (777).

The file name will be: 777-12345675- ABCD12345678-V-5644233.PDF

For example an invoice (5644233) in PDF format is linked to an air waybill (12345675) coming from one airline (777).

The file name will be: 777-12345675-V-5644233.PDF

For example a shipper's declaration for dangerous goods (2390133) in PDF format is linked to an air waybill (12345675) coming from one airline (777).

The file name will be: 777-12345675-D-2390133.PDF

## 4 Message relationship – Summary

The message relationship can be summarized as follow:

