Cargo-XML Standards

14th Feb 2013
Cargo Business Process & Standards
Agenda

1. IATA Cargo-EDI Strategy
2. Cargo-XML (CXML) Task Force
3. CXML Messages Status
4. Why CXML?
   a. Features Comparison – CXML and CIMP
   b. CXML Benefits
5. CXML Recommendation Paper
6. CXML Scorecards
7. CXML Manual and Toolkit 1st Edition
8. CXML Plans for 2013
What is Industry Cargo-EDI Strategy?
Industry Cargo-EDI Strategy

- The Cargo Committee (CC) endorsed XML as the strategic direction for air cargo industry electronic messaging.
- The Cargo Services (CSC) and Agency Conferences (CAC) endorsed Cargo XML as the alternative to Cargo-IMP.
- The sunset of Cargo-IMP Manual is foreseen end of 2014:
  - New upgrades only in equivalent Cargo-XML Message.
- The Cargo-XML Manual is maintained.
Who develop the CXML messages? (Cargo-XML Task Force)
Cargo-XML Task Force (1/5)

Objectives:

- The objective of the Cargo-XML Task Force (CXMLTF) is to recommend the XML requirements for new messages and existing core Cargo Interchange Message Procedures (CIMP) messages.

- In order to develop cross-border and multi-modal standards Task Force recommends the business data elements based on the UN/CEFACT Standards.
Cargo-XML Task Force (2/5)

**Members:**
- CXMLTF comprises a variety of stakeholders including:
  1. Shippers
  2. Freight Forwarders
  3. Carriers
  4. Ground Handling Agents
  5. Customs Broker/Agent
  6. International and National Organizations
  7. IT Service Providers (as Observers)

- Membership of the Task Force includes a maximum of 25
- CXMLTF web presence at: [www.iata.org/Cargo-XML](http://www.iata.org/Cargo-XML)
Cargo-XML Task Force (3/5)

Member Airlines

Other Members
Cargo-XML Task Force (4/5)

IT Service Providers attend CXMLTF Meetings/Conf Calls as observers
Cargo-XML Task Force (5/5)

Governance:

- Dangerous Goods Board (DGB)
- Live Animals and Perishables Board (LAPB)
- ULD Panel (ULDP)
- Airmall Panel (AMP)
- Cargo Business Processes Panel (CBPP)
- IATA/FIATA Consultative Council (IFCC)
- IATA/FIATA Customs Working Group (IFCWG)
- Dangerous Goods Training Task Force (DGTTF)
- Time and Temperature Task Force (TTF)
- ULD Technical Advisory Panel (ULDTAP)
- ULD Operational Advisory Group (ULDOAG)
- Cargo Data Interchange Task Force (CDITF)

IATA Airlines members only
IATA Airlines members and other industry supply chain stakeholders
What is the status of CXML messages?
Status of CXML Messages

- It contains following 14 Cargo-XML Messages

<table>
<thead>
<tr>
<th>Transport Messages</th>
<th>Acronym</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML Waybill</td>
<td>XFWB</td>
</tr>
<tr>
<td>XML House Waybill</td>
<td>XFZB</td>
</tr>
<tr>
<td>XML House Manifest</td>
<td>XFHL</td>
</tr>
<tr>
<td>XML Flight Manifest</td>
<td>XFFM</td>
</tr>
<tr>
<td>XML Freight Booked List</td>
<td>XFBBL</td>
</tr>
<tr>
<td>XML Status Message</td>
<td>XFSU</td>
</tr>
<tr>
<td>XML Response Message</td>
<td>XFNMT</td>
</tr>
<tr>
<td>XML Booking Message</td>
<td>XFFRM</td>
</tr>
<tr>
<td>XML Custom Status Notification</td>
<td>XCSN</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Commercial Messages</th>
<th>Acronym</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML Shippers Declaration for Dangerous Goods</td>
<td>XSDG</td>
</tr>
<tr>
<td>XML Invoice</td>
<td>XINV</td>
</tr>
<tr>
<td>XML Packing List</td>
<td>XPCL</td>
</tr>
<tr>
<td>XML Certificate of Origin</td>
<td>XCOO</td>
</tr>
<tr>
<td>XML Shippers Letter of Instruction</td>
<td>XSLI</td>
</tr>
</tbody>
</table>

Note: IATA also developed CITES permit and Transit Declaration in conjunction with respective organizations i.e. Convention on International Trade in Endangered Species (CITES) and World Customs Organization (WCO)

For further details about Cargo-XML standards. Please visit  [http://www.iata.org/cxmltf](http://www.iata.org/cxmltf)
Are there any benefits of CXML? (Why CXML?)
# CIMP vs CXML

<table>
<thead>
<tr>
<th>Features</th>
<th>CIMP</th>
<th>CXML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Character Set</td>
<td>Limited (ASCII 7 bit)</td>
<td>Extended (UTF-8)</td>
</tr>
<tr>
<td>Size</td>
<td>Limited</td>
<td>Extended</td>
</tr>
<tr>
<td>Field/Line</td>
<td>65 characters</td>
<td>unlimited</td>
</tr>
<tr>
<td>Message</td>
<td>3500 characters</td>
<td>unlimited</td>
</tr>
<tr>
<td>Occurrences</td>
<td>Limited</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Message Structure</td>
<td>Constraints</td>
<td>Flexible</td>
</tr>
<tr>
<td>Data Type</td>
<td>Limited</td>
<td>Extended</td>
</tr>
<tr>
<td>Communication Medium</td>
<td>Private Network</td>
<td>Public - Internet based</td>
</tr>
<tr>
<td>Platform Dependent</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Data Quality</td>
<td>Modest</td>
<td>Improved</td>
</tr>
<tr>
<td>Error Handling</td>
<td>Cumbersome</td>
<td>Improved</td>
</tr>
<tr>
<td>Data Validation</td>
<td>No</td>
<td>Yes (XSD)</td>
</tr>
<tr>
<td>UN/CEFACT Standards</td>
<td>No Compatibility</td>
<td>Compatible</td>
</tr>
<tr>
<td>Multimodal</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Cross-border</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
CXML Benefits

- Reduced cost of development, transmission, maintenance and support
- Quicker response to the changing requirements
- Extended facilitation in implementing e-AWB, e-freight and Advance Electronic Information
- Broader participation in e-commerce by small and medium size businesses
- Improved availability of required business information for all parties involved
- Facilitate direct exchange of data
- Ease of implementation
- Universally used and accepted standard
- Compatible with other industry standards e.g. World Customs Organization (WCO), International Standards Organization (ISO) etc.
What is the Industry Recommendation on CXML? (CXML Recommendation Paper)
CXML Recommendation Paper

- It is recommended to use standard IATA Cargo-XML to exchange electronic information along the air freight supply chain as the alternative to IATA Standard Cargo-IMP
- It is recommended to use standard IATA Cargo-XML as it facilitates the implementation and adoption of the e-Cargo initiatives such as the electronic Air Waybill (e-AWB) or e-freight

For further details about Cargo-XML standards. Please visit http://www.iata.org/cxmltf
Who is using IATA CXML? (CXML Scorecards)
CXML Scorecards

- IATA is maintaining CXML scorecards for the different industry groups including CC / CSC / CBPP / CXMLTF / CDITF / e-Cargo VAG
- These scorecards are available at www.iata.org/cargo-xml
Where are the CXML messages published?
(CXML Manual - 1st Edition)

www.iata.org/cargoxml-toolkit
CXML Manual & Toolkit 1st Edition (1/8)

Features:

- Prominent features include:

  Feature #1 – Introduction: Introduction, Approach, Governance Process etc.
  Feature #2 – Business Rules: Business Data, Description, Equivalent CXML Element, Data Type etc.
  Feature #3 – Mapping: Mapping between CXML and CIMP data element (as in Excel Sheets)
  Feature #4 – CXML Schemas: Actual Schemas for the CXML Messages
  Feature #5 – Support/FAQS: FAQs section
  Feature #6 – User Capabilities: User Capabilities for CIMP and CXML Messages
  Feature #7 – Layouts and Examples: Layouts and Examples
  Feature #8 – Updates: Updated CXML Messages and Schemas
  Feature #9 – Supporting Documents: CXML Recommendation Paper, OCI Table etc.
Graphical User Interface:
Graphical User Interface:

**WAYBILL HEADER**

<table>
<thead>
<tr>
<th>Mandatory</th>
<th>Occurrence: 1:1</th>
</tr>
</thead>
</table>

**Waybill Number**

- **M** Mandatory
- **Occurrence: 1:1**
- **Data Type: T**

**Description:** A serial number provided by the issuing carrier to identify the IATA airline code number followed by a hyphen followed by a serial number in the extreme right position.

**Example/Note:** 057-12345675 where issuing carrier's three-digit IATA code is 123 and serial number is 45675.

**UNTDED:** -  
**WCO:** -

**CIMP Ref.: 2.1.1 / 2.1.3**  
**AWB Box 1A / 1B**

**CIMP Character Representation:** nnn-n[8]
Graphical User Interface:

Preface

About
This manual is developed in accordance with Cargo Services Conference (CSC) Resolution 670 and CSC Recommended Practice 1675. The Cargo-XML standards included in this manual are under the jurisdiction of the CSC.


Any comments concerning the contents of this manual and toolkit should be addressed to: cargoxml@iata.org

Industry demand for Electronic Data Interchange

Electronic Data Interchange (EDI) is the backbone of today’s air freight supply chain communication. An increasing number of stakeholders in the air cargo industry are adopting electronic means to exchange data. It has become almost impossible to move a shipment from one country to another without exchanging information electronically.

Today, the air cargo industry uses IATA Cargo-IMP messages to exchange information electronically. However, these exchanges are generally limited to the airlines, including their ground handling agents, and some big freight forwarders. Considerable financial investment and a huge infrastructure are required to get equipped with Cargo-IMP messages. The ongoing maintenance of Cargo-IMP is also costly.

EDI played a significant role when Custom Authorities in different parts of the world tightened the security of goods entering or leaving their countries. The measures they implemented are based on the analysis of advanced electronic information they received from Carriers and/or Freight Forwarders. It became apparent that Cargo-IMP messages were limited in scope and by technology to meet the growing requirements of Customs Authorities. Also only a few Customs Authorities could accept information in the Cargo-IMP format. Therefore there was an urgent need to replace Cargo-IMP with modern technology.

XML-The Way Forward

The eXtensible Markup Language (XML) was found to be the preferred new standard that allows web-based exchange of information over the internet.
Graphical User Interface:

List of CargolMP PDFs (31st Edition)

<table>
<thead>
<tr>
<th>Complete CIMP PDF</th>
<th>CIMP Messages Referenced in CXML</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete PDF</td>
<td>CSN  FBL  FFM  FFR  FHL  FNA  FSU  FWB  FZB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CIMP Grids Referenced in CXML</th>
<th>Other CIMP Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code List  Data Element  User Capability</td>
<td>CAC  CIR  CSI  DCM  FAC  FAD  FAI  FAR  FAS  FBR  FBV  FCA  FCB  FCC</td>
</tr>
<tr>
<td></td>
<td>FCI  FCR  FCV  FDA  FDD  FFA  FFT  FMA  FMB  FMC  FMR  FMX  FOA  FOR</td>
</tr>
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<td>FPA  FPM  FPR  FPU  FQA  FQR  FRA  FRP  FRR  FSA  FSB  FSL  FSR  FTA</td>
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<tr>
<td></td>
<td>FTR  FUA  FUM  FUR  FVA  FVR  FWC  FWR  FXR  FYT  FZA  FZC  FZD  FZE</td>
</tr>
<tr>
<td></td>
<td>MAM  MLD  SBA  SBR  SCI  SPA  SPR  SPX  SSU  STA  STM  STR</td>
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</tbody>
</table>
Graphical User Interface:

List of CXML Downloadable Files

<table>
<thead>
<tr>
<th>Schemas</th>
<th>Surveys Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>CXML-XCOO-3.zip</td>
<td>Results-Airline-CargoMessagingSurvey-ver0.3.ppt</td>
</tr>
<tr>
<td>CXML-XCSN-1.zip</td>
<td>Results-GHA-CargoMessagingSurvey-ver0.3.ppt</td>
</tr>
<tr>
<td>CXML-XFBF-2.zip</td>
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<tr>
<td>CXML-XFFM-2.zip</td>
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</tr>
<tr>
<td>CXML-XFFR-1.jar</td>
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<tr>
<td>CXML-XFHL-2.zip</td>
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<td>CXML-XSDG-3.zip</td>
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<td>CXML-XSLL-2.zip</td>
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</tbody>
</table>
Graphical User Interface:

Frequently Asked Questions

Following the introduction of IATA Cargo-XML standards, industry is determined to adopt these new standards. In response to industry queries, following questions are compiled to assist messages.

- **Question 1**  What is XML?
- **Question 2**  What is the function of XML Message?
- **Question 3**  Who is the target user for implementing the IATA Cargo-XML Standards?
- **Question 4**  What are the major benefits of IATA Cargo-XML Standards?
- **Question 5**  What are the major drawbacks of Cargo-IMP* technology?
- **Question 6**  Are Cargo-XML standards proven?
- **Question 7**  Does the implementation of Cargo-XML standards require changing the Cargo Management System?
- **Question 8**  How can I adopt IATA Cargo-XML standards if I am using a third party system?
- **Question 9**  How can I adopt IATA Cargo-XML standards if I am using an in-house (self-developed) system?
- **Question 10** What is your approach on Cargo-XML contents backward compatibility with Cargo-IMP* Messages?
- **Question 11** Does Cargo-XML specification include reference to Cargo-IMP Manual?
- **Question 12** Cargo-XML Message specification refers to the UN/CEFACT Recommendations and code lists. Is this information free? How can I access that?
Delivery:

- 1st Edition was published in Dec 2012 and effective from 01 Jan 2013
- CXML Messages have been frozen for one year
- Content updates are allowed during the course of a year
What’s next on CXML standards? (Plans for 2013?)
Plans for 2013

- Publish 2nd Edition of CXML Manual and Toolkit including
  - Comprehensive Mapping between CXML ↔ CIMP
  - Version Control
  - Change History
  - User Capability Section
  - Interactive Code Lists
- Maintenance of existing CXML messages
- Development of New CXML Messages (i.e. Generic Request Message, e-Health Cert.)
- Introduce CXML implementation rules and guidelines
- Provide support to industry for CXML implementations
- Promote CXML standards
Thankyou

For further information please contact us at cargoxml@iata.org