Cargo-XML Standards

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Dubai, UAE
Air Cargo Business Process
Role of Electronic Messaging in Air Cargo

- Facilitate Air Cargo end to end business processes including Sales, Operations and Finance.

- Fulfill Customs Requirements for Advance Cargo Information (ACI) e.g. US-AMS, EU-ICS, CA-ACI etc.
  
  Note: The Messaging standards are also used in US-ACAS pilots

- Compliance with Security Regulations such as electronic Consignment Security (e-CSD) etc.
Air Cargo Messaging Standards

- Two messaging standards are available in the air cargo industry
  - Cargo-IMP (traditional)
  - Cargo-XML (emerging)

- Developed and Maintained by the specific industry groups
  - Cargo-Data Interchange Task Force (CDITF)
  - Cargo-XML Task Force (CXMLTF)

- Distributed by IATA through the specific publications
  - Cargo-IMP Manual
  - Cargo-XML Manual and Toolkit
Cargo-IMP Standards

- Exist since 1975 - initially used by airlines for cargo interlining
- Initially exchanged using traditional SITA Type B Messaging
- Expanded to big forwarders, GHAs and some Customs Admin
- Hundreds of million of CIMP messages exchanged per year
- Cargo-IMP Manual 34\textsuperscript{th} edition was produced in 2014
- 78 Cargo-IMP Messages are available in the latest edition
Cargo-XML Standards

- Development started in 2010
- Support modern technology and are exchanged over the internet
- Based on the UN/CEFACT standards and compatible with WCO DM
- Multimodal and Cross-border
- Limited adoption by the industry
- Cargo-XML Manual 3rd edition was produced in 2015
- 15 Cargo-XML Messages are available in the latest edition
Industry Cargo-EDI Strategy

- IATA has stopped producing new editions of Cargo-IMP Manual.
- Cargo-IMP Manual 34th is the last & final edition.
- Further developments in the Cargo-XML Messages only.
- Cargo-XML Manual and Toolkit is maintained.

Note: Cargo-IMP Messages can still be used but there will be no new versions.
IATA Recommendation

“Use latest versions of Cargo-IMP or adopt Cargo-XML Standards”
CXMLTF – Approach to recommend new standards

UNECE
United Nations Economic Commission for Europe

ISO
International Organisation for Standardisation / Technical Committee

UNTDED
United Nation Trade Data Element Directory

CCTS
UN/CEFACT Core Component Technical Specification

Cross Border Supply Chain Data Model
UN Layout Key (Recommendation n°1)

Task Force & Vendors Input

UN/CEFACT NDRs
XML Naming and Design Rules

IATA Cargo-XML Messages

Cooperation with Standardization bodies
TBG1, 2, 3, 4, 17

UNECE
UN/EDIFACT
UN/CEFACT
List of Trade Facilitation Recommendations

UN/CEFACT CCL
UN/CEFACT Core Component Library

WCO Revised Kyoto Convention & WCO Data Model
As of Nov 2015, the CXMLTF has developed 15 Cargo-XML Messages endorsed by the IATA Cargo Services Conference (CSC). These are:

<table>
<thead>
<tr>
<th><strong>Transport Messages</strong></th>
<th><strong>Acronym</strong></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>XFBL</td>
</tr>
<tr>
<td>XML Status Message</td>
<td>XFSU</td>
</tr>
<tr>
<td>XML Response Message</td>
<td>XFNM</td>
</tr>
<tr>
<td>XML Booking Message</td>
<td>XFFR</td>
</tr>
<tr>
<td>XML Custom Status Notification</td>
<td>XCSN</td>
</tr>
<tr>
<td>XML Shippers Dec for DG</td>
<td>XSDG</td>
</tr>
<tr>
<td>XML Generic Request Message</td>
<td>XGRQ</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Commercial Messages</strong></th>
<th><strong>Acronym</strong></th>
</tr>
</thead>
<tbody>
<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>
Cargo-XML Messages (2/2)

- XML Rate Information Message is being developed.
- Intended to be used for rates exchange between airlines and partners.
- Rates such as Market/Contract/Spot
## Cargo-IMP vs Cargo-XML

<table>
<thead>
<tr>
<th>Features</th>
<th>Cargo-IMP</th>
<th>Cargo-XML</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Character Set</strong></td>
<td>Limited (ASCII 7 bit)</td>
<td>Extended (UTF-8)</td>
</tr>
<tr>
<td><strong>Size</strong></td>
<td>Limited</td>
<td>Extended</td>
</tr>
<tr>
<td><strong>Field/Line</strong></td>
<td>65 characters</td>
<td>unlimited</td>
</tr>
<tr>
<td><strong>Message</strong></td>
<td>3500 characters</td>
<td>unlimited</td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Airport to Airport</td>
<td>End to end supply chain</td>
</tr>
<tr>
<td><strong>Occurrences</strong></td>
<td>Limited</td>
<td>Unlimited</td>
</tr>
<tr>
<td><strong>Message Structure</strong></td>
<td>Constraints</td>
<td>Flexible</td>
</tr>
<tr>
<td><strong>Data Type</strong></td>
<td>Limited</td>
<td>Extended</td>
</tr>
<tr>
<td><strong>Communication Medium</strong></td>
<td>Traditionally Proprietary (Now Public)</td>
<td>Public - Internet based</td>
</tr>
<tr>
<td><strong>Platform Dependent</strong></td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td><strong>Data Quality</strong></td>
<td>Modest</td>
<td>Improved</td>
</tr>
<tr>
<td><strong>Error Handling</strong></td>
<td>Cumbersome</td>
<td>Improved</td>
</tr>
<tr>
<td><strong>Data Validation</strong></td>
<td>No</td>
<td>Yes (XSD)</td>
</tr>
<tr>
<td><strong>UN/CEFACT Standards</strong></td>
<td>No Compatibility</td>
<td>Compatible</td>
</tr>
<tr>
<td><strong>Multimodal</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Cross-border</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Cargo-XML – Dimensions

Cargo-XML standards are delivered in an innovative way that:

- Improves industry efficiency
- Facilitates industry adoption
- Allows compliance with Regulations
- Facilitates advocacy
Where are the Cargo-XML messages published? (Cargo-XML Manual and Toolkit)

www.iata.org/cargoxml-toolkit

- Published Annually
- 3rd Edition is latest effective 1st January 2015
- Regular web updates
Prominent Features:

- Cargo-XML Scorecard
- Migration Guidelines between Cargo-IMP ↔ Cargo-XML
- Cargo-XML Implementation Strategies – a White Paper
## Cargo-XML Scorecard for CXMLTF

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Transport Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>XFWB</td>
</tr>
<tr>
<td>Air Canada</td>
<td></td>
</tr>
<tr>
<td>Air France/KLM Cargo</td>
<td></td>
</tr>
<tr>
<td>ALHA Group</td>
<td></td>
</tr>
<tr>
<td>American Airlines Cargo</td>
<td></td>
</tr>
<tr>
<td>British Airways/IAG</td>
<td></td>
</tr>
<tr>
<td>Cargolux</td>
<td></td>
</tr>
<tr>
<td>Cathay Pacific Cargo</td>
<td></td>
</tr>
<tr>
<td>DACHSER</td>
<td></td>
</tr>
<tr>
<td>Delta Air Lines</td>
<td></td>
</tr>
<tr>
<td>DHL GF</td>
<td></td>
</tr>
<tr>
<td>Emirates SkyCargo</td>
<td></td>
</tr>
<tr>
<td>HACTL</td>
<td></td>
</tr>
<tr>
<td>INDITEX</td>
<td></td>
</tr>
<tr>
<td>K+N</td>
<td></td>
</tr>
<tr>
<td>Korean Airline Cargo</td>
<td></td>
</tr>
<tr>
<td>Lufthansa Cargo AG</td>
<td></td>
</tr>
<tr>
<td>Qantas Freight</td>
<td></td>
</tr>
<tr>
<td>SAS Cargo</td>
<td></td>
</tr>
<tr>
<td>Singapore Airlines Cargo</td>
<td></td>
</tr>
<tr>
<td>Swissport</td>
<td></td>
</tr>
<tr>
<td>Swiss World Cargo</td>
<td></td>
</tr>
</tbody>
</table>
Cargo-XML White Paper


Although it is possible to support the Cargo-IMP partners in a Cargo-XML implementation however, it may result in compromising certain benefits of the Cargo-XML messages.

Companies migrating to Cargo-XML Messages need to have a solution in place to support their Cargo-IMP Partners.

It is recommended that parties involved in Cargo-XML messages exchange, upgrade their Cargo Management and/or Messaging Systems to include these additional fields of the Cargo-XML messages otherwise; there is a risk of data/information loss.
What are the Tools available for Cargo-XML Adoption?

https://cargo-xml-autocheck.iata.org/
Cargo-XML Autocheck

- Powerful online service
- Syntax check validation
- Self-test without partner
- Support during rollout and when connecting additional partners
- Permanent availability (24/7)
- High data quality and integrity
- Test results immediately available
- Fast overview of the error situation

https://cargo-xml-autocheck.iata.org/
Cargo-XML Training/Consultancy

http://www.iata.org/training/
Why Cargo-XML Training?

- `<ram:IncludedMasterConsignmentItem>`
  - `<ram:SequenceNumeric>`1</ram:SequenceNumeric>
  - `<ram:TypeCode listAgencyID="1"/>
  - `<ram:GrossWeightMeasure unitCode="KGM">2360.0</ram:GrossWeightMeasure>
  - `<ram:GrossVolumeMeasure unitCode="MTQ">0.01</ram:GrossVolumeMeasure>
  - `<ram:PackageQuantity>`318</ram:PackageQuantity>
  - `<ram:PieceQuantity>`2</ram:PieceQuantity>
  - `<ram:Information>NDA</ram:Information>

- `<ram:NatureIdentificationTransportCargo>`
  - `<ram:Identification>`FRESH FOODSTUFFS URGENT PERISHABLES - PLEASE DONT DELAY
  PLEASE PLACE IN CHILLER 2 DEGREES C UPON ARRIVAL 174 CARTONS LOADED INTO
  AKE14092XX 1335.0 KGS 144 CARTONS LOADED INTO AKE14092XX 1025.0 KGS DIM 1X1X1 2
  </ram:Identification>
</ram:NatureIdentificationTransportCargo>

- `<ram:ApplicableFreightRateServiceCharge>`
  - `<ram:CategoryCode>`Q</ram:CategoryCode>
  - `<ram:ChargeableWeightMeasure unitCode="KGM">2360.0</ram:ChargeableWeightMeasure>`
Cargo-XML Training

- Cargo-XML Training Course is available
- Classroom Training at IATA training center and in-company
- In company Training - tailored as per your requirements
- Miami training took place Feb 2\textsuperscript{nd}, 13 people
- UK training took place on Jun 4\textsuperscript{th}, 7 people
  - Airlines, ground handlers and IT Providers
  - Project managers and developers

Click here to visit webpage for Cargo-XML Training
Cargo-XML Standards Workshops

www.iata.org/events/cargo-xml-workshop
Cargo-XML Workshops

**Highlights**

- Industry experts share implementation experience
- Discussions on strategies to adopt Cargo-XML
- Migration from Cargo-IMP to Cargo-XML
- Tools and resources available for implementation
Strategic Partner/IT Service Providers and Cargo-XML

www.iata.org/cargoxml-toolkit
IT Providers (Strategic Partners) & Cargo-XML Licenses (1/2)
IT Providers (Non Strategic Partners) & Cargo-XML Licenses (2/2)
Customs and Cargo-XML Standards

www.iata.org/cargoxml-toolkit
Customs & IATA Cargo-XML Standards

Following Customs Authorities have got IATA Cargo-XML Manual and Toolkit:
- World Customs Organization (WCO)
- CA-CBSA
- US-CBP
- Mexican Customs
- Argentinian Customs
- Paraguay Customs
- Pakistan Customs
- Abu Dhabi Customs
- Qatar Customs
- Bahrain Customs
IATA & UNCTAD signed MoU on adoption of Cargo-XML standards in ASYCUDA World
Thankyou