Interoperability for data and document exchange in multimodal transport aligned to UN/CEFACT standards and Multimodal Data Model (MMT RDM): benefits for landlocked countries in Asia & Europe

UNDA project Transport and Trade Connectivity in the Age of Pandemic (unttc.org)

Upgrading existing and developing data exchange standards for key documents accompanying cargo in different modes of transport

Based on UN/CEFACT Multimodal Transport Reference Data Model

Pilot applications: e.g. in a digital multimodal transport corridor or documents (FIATA B/L, air cargo, IWT)

Mario Apostolov, Regional Advisor Economic Cooperation and Trade Division, UNECE
Cooperation and teamwork needed

• Challenges: Digitalization efforts fragmented between modes of transport and sectors. Need to stop contacts & COVID-19 infection

• UNECE offers solution: interoperability in data and document exchange between modes & sectors using UN/CEFACT’s Multimodal Transport Reference Data Model (MMT RDM)

• EU eFTI Regulation uses MMT RDM

• Working with organizations (ICAO, IMO, FIATA, OSJD, CIT, RailData, UIC, OTIF, etc.), countries, and the business community
### Ready standards or standards under preparation

1. Standardized data exchanges (executive guide; business requirement specification; business name structure; subset; CCL structure; XLS guideline structure; XSD schema; UML diagram; HTML index, using as a model the e-CMR standard) [www.unece.org/uncefact/mainstandards.html](http://www.unece.org/uncefact/mainstandards.html), already prepared for the following documents:

- eCMR
- Cross Industry Invoice
- Cross Industry Delivery
- Cross Industry Catalogue
- Cross Industry Quotation
- Cross Industry Remittance Advice
- Cross Industry Scheduling
- Cross Industry Ordering Process
- Material Safety Data Sheet Details (MSDS)
- Contract Financial Execution Management
- Market Research Information
- Verified Gross Mass (VERMAS) documents
- International Forwarding and Transfer documents
- Smart container information
- A number of agricultural certificates, accounting and other documents

These standards you can find at [www.unece.org/trade/uncefact/mainstandards.html](http://www.unece.org/trade/uncefact/mainstandards.html)

2. Standardized data exchanges published in October 2020, making information already in the MMT-RDM more easily discoverable

### Key documents accompanying goods (B2B)

3. Standardized data exchanges to support cross-modal cargo transfers

- Inland water transport contract document: IWT “Bill of Lading”; CMNI consignment note; etc.
- Maritime waybill.
- CIM/SMGS and SMGS Consignment Note;
- CIM/SMGS Wagon List (+ Commercial Act, etc.)
- eCERT (sanitary-phytosanitary certificates and basis for other certificates): aligned to the Buy-Ship-Pay Reference Data Model

4. Air cargo and dangerous goods documents:

- airwaybill,
- dangerous goods declaration, and
- consignment security declaration

FIATA multimodal Bill of Lading +

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Common foundation for all multimodal data & e-docs based on UN/CEFACT standards & reference data models – Stakeholder agencies retain control over their documents and legal frameworks. EU’s eFTI Regulation uses MMT RDM
Air: core mappings

Air Foundation Common Data Elements

Copyright UNECE
Railway documents and data

Basic data mappings

Common railway data elements
For example: the CIM-SMGS railway consignment note referenced to the UN/CEFACT Multi-Modal Transport Reference Data Model, according to the prepared XML schema for CIM-SMGS

Subsets for the CIM-SMGS consignment note and the consignment note under UNECE’s work on the Unified Railway Law (URL) developed

MS Excel and UML diagram, XSDs and html publication prepared

Standards for CIM/SMGS wagon list finalized

https://service.unece.org/trade/uncefact/publication/Transport and Logistics/CIM-SMGS_Consignment_Note/HTML/001.htm
Railway & multimodal interconnectivity: objectives and next steps

1. Multimodal interoperability
2. Compatibility of data exchange on cargo transported by railway (E. Asia – W. Europe)

• Legal framework: negotiations – agreements
• Technology neutral solution – EDI, XML, JSON API – for blockchain
• Call to all stakeholders to collaborate/use standards
• Move from documents to data exchange
Digitalization of air cargo transport information as part of interoperability for multimodal data
UNDA project: unttc.org web site

Modal Specific MMT-based Customizations: standards developed

- Maritime
- Inland Waterway
- Road
- Rail

UN/CEFACT Streamlined Standards

Transport and Logistics

Multi-Modal Transport Reference Data Model (MMT-RDM)

- White Paper on RDM  English  French  Russian
- RDM Guidelines
- BRS
- Executive Guide on RDM English  French  Russian
- Structure Report / Data Elements
- XSD Schema
- UML Diagram
- HTML index

International Forwarding and Transfer

Multimodal Booking
Multimodal Shipping Instruction
Multimodal Waybill
Multimodal Status Report / Request
Road Consignment Note (eCMR)
Maritime Bill of Lading
Inland Waterway Bill

UN/CEFACT Streamlined Standards page
Matrix: data mapping for CIM/SMGS, eCMR, eTIR, eFIATA BL, AWB...

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Similar mapping matrix and a data set can and will be developed for Dangerous Goods Declarations in the five transport modes.
UN/CEFACT data reference models and standards (for multimodal transport)

Sectors and organizations:

- Traders
- Logistics companies
- National regulatory agencies
- Sectoral organizations (UNECE, ICAO, IMO, CIT, OSJD, IRU, IATA, etc.)
- Regional organizations (EU, EAEU, TRACECA, GUAM, BSEC)
Thanks!
Further Information

Standards and reports available on UNTTC.org project and UN/CEFACT pages.

On the project web site (unttc.org), we upload information on the standards and tools at https://unttc.org/stream/electronic-trade-and-transport-documents-and-data

A streamlined web presentation of the UN/CEFACT standards can be found at https://unece.org/trade/uncefact/standards

Information on the UN/CEFACT projects: https://unecfact.unece.org/display/unecfactpublic/Transport+Modal+Views+of+MMT

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