Interoperability for data and document exchange in multimodal transport aligned to UN standards.

UN project to respond to the COVID-19 crisis

26 April 2021

UNECE
United Nations Economic for Europe

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

UNDA multiagency project in response to the COVID-19 crisis. ECE segment: multimodal data exchange harmonization using UN (UN/CEFACT) standards and reference data models

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)

Key partners: UN organizations custodians of transport documents: UNECE, ICAO, IMO, etc., and work with key non-UN partners.

Ready standards or standards under preparation	Key documents accompanying goods (B2B)
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, already prepared for the following documents:	**3. Standardized data exchanges to support cross-modal cargo transfers**
• 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	• 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
2. Standardized data exchanges published in October 2020, making information already in the MMT-RDM more easily discoverable	**4. Addition of dangerous goods and air cargo documents:**
• Provisional booking • Firm booking • Booking confirmation • Shipping instructions • Waybill • Status report • Status request • Packing list • RASFF (Rapid Alert for Security of Food and Feed) (published at www.unttc.org and www.unece.org/trade/uncefact/mainstandards.html)	• **airwaybill,** • **dangerous goods declaration, and** • **consignment security declaration**

Pivotal reference for all multimodal data in the e-docs based on UN/CEFACT standards & reference data models – Stakeholder agencies retain control over the documents and legal frameworks.

Seamless multimodal supply chain

The transport chain

				shipper, forwarder
Transportation of a consignment through different modes				
Invoice, packing list, certificate of origin				transport operator, freight forwarder
Bill of Lading IMO/FAL forms	CIM, SMGS	eCMR, eTIR	eairwaybill, CSD	
	Port community system		airport	captain, operator, driver, pilot
Trip 1: sea		Trip 2: rail	Trip 3: road	Trip 4: air	
Ship		Train	Truck	Airplane	
Sea		Country 1, 2	Country 2		regulatory controls

B2B

**To be fed into regulatory Single Window and other systems processing
export and import declarations, transit documents**

Consignment information

Information for goods control

Example of mapping of data in documents accompanying goods in different modes of transport (data matrix)

	Level	BIE Type	BN	MMT ITIGG IFTM P_P	eCMR	Maritime BoL	CIM-SMGS Consignment Note	CIM-SMGS Consignment Note under UR	Wagon List	Inland Waterway BoL	FIATA BoL
223	3	ASBIE	Transport Dangerous Goods	X	X	X	X	X	X	X	X
224	4	BBIE	UNDG ID	X	X	X	X	X	X	X	X
225	4	BBIE	Regulation Code	X	X	X	X	X		X	
226	4	BBIE	Regulation Name				X	X			
227	4	BBIE	Technical Name	X	X		X	X			
228	4	BBIE	Information	X		X	X	X		X	
229	4	BBIE	EMS ID	X		X	X			X	
230	4	BBIE	TREM ID	X			X				
231	4	BBIE	Upper Part Orange Hazard Placard ID	X	X		X				
232	4	BBIE	Lower Part Orange Hazard Placard ID	X	X						
233	4	BBIE	MFAG ID	X			X				
234	4	BBIE	Packaging Danger Level Code	X	X	X	X	X		X	
235	4	BBIE	Marking Text	X		X	X			X	
236	4	BBIE	Packing Instruction Type Code	X		X		X		X	
237	4	BBIE	Gross Weight					X			
238	4	BBIE	Hazard Classification ID	X		X	X	X		X	X
239	4	BBIE	Hazard Class Version ID	X		X				X	
240	4	BBIE	Net Weight				X	X			
241	4	BBIE	Proper Shipping Name	X	X						
242	4	BBIE	Package Type Code				X	X			

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
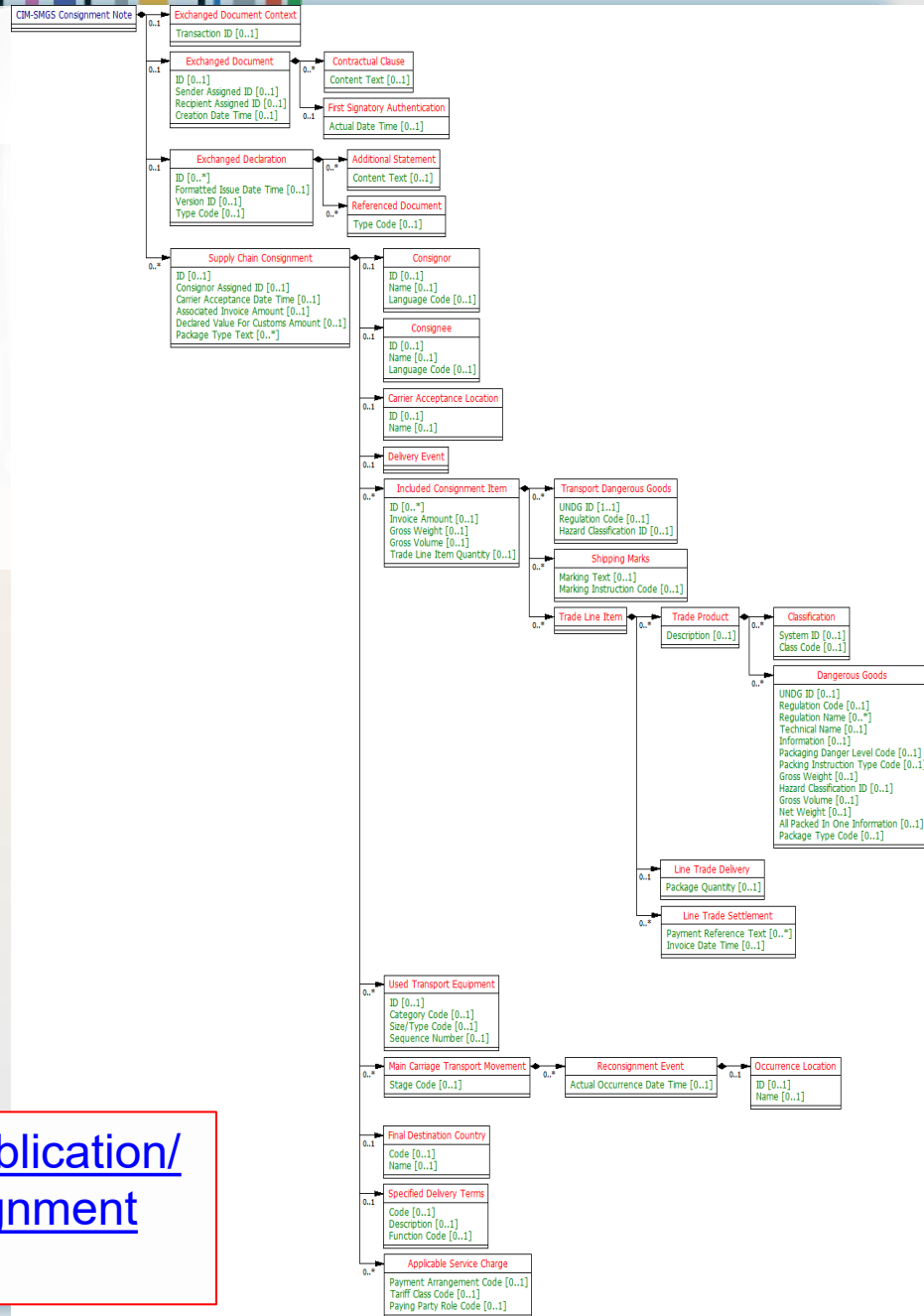
unttc.org web site

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

On data sharing: next steps

- **In general**
  - **Use the project's products (standards) in real world business practices.**
  - **Dangerous goods declarations for various modes – can be combined in the same data set / data model**
  - **Moving from exchange of documents to exchange of data.**
- **Implementation pilot projects:**
  - **Electronic FIATA Bill of Lading; possible further FIATA documents.**
  - **Exports of wood and cellulose from Belarus to Serbia via rail, road, sea and inland transport.**
  - **Possible further pilots: Eurasian Economic Union; Ukraine-Georgia-Azerbaijan**
  - **Developing data models for digital MMT corridors as subsets of MMT RDM?**
- **Capacity-building:**
  - **Guide on how to use the standards for real world documents**
  - **Upcoming: 11th UNECE Odessa seminar on trade facilitation and digitalization of multimodal corridors 26-28 May 2021**
  - **4th Western Balkan seminar on the Single Window and data sharing**

Pilot case – Dnieper-Danube (sea, railway, road, inland waterways)

Thank you!

Mario Apostolov, Regional Advisor
UNECE Economic Cooperation and Trade Division:
mario.apostolov@un.org,
Tel. +41 22 9171134 or +41 79 2790936