44th Meeting of the IEC-ISO-ITU-UNECE eB MoU/MG Report from UN/CEFACT T+L Domain

Background

The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Transport and Logistics Domain (T+L) was established to deal with operational challenges of multimodal transport chains, the intricacies of complex networks of economic operators, the promises of new ICT technologies, interoperability of management systems, compliance with regulatory requirements and more in the context of recent technology developments and new ICT technologies.

The Transport & Logistics Domain builds upon the structures and work items formerly established by the transport business group (TBG3) and its predecessor within the UNECE Working Party 4 which was founded in the 1960s.

Under this area of activity, UN/CEFACT develops and maintains e-business standards related to transport and logistics as well as some White Papers and Executive Guides. These include key themes such as:

- Multi-Modal Transport Reference Data Model (MMT-RDM)
- United Nations Location Codes for Trade and Transport (UN/LOCODE)
- United Nations Electronic Data Interchange for Administrations, Commerce and Transport (UN/EDIFACT) transport-related directories
- UNECE Recommendation 16 – UN/LOCODE
- UNECE Recommendation 19 – Codes for Modes of Transport
- UNECE Recommendation 21 – Codes for Passengers, Types of Cargo, Packages and Packaging Materials
- UNECE Recommendation 23 – Freight Cost Codes
- UNECE Recommendation 24 – Trade and Transport Status Codes
- UNECE Recommendation 28 – Codes for Types of Means of Transport
- UN/EDIFACT code lists related to transport and logistics
- Smart Containers
- Data Pipeline
- eCMR
- Verified Gross Mass

Recent achievements of UN/CEFACT T+L

Integrated Track and Trace for Multi-Modal Transportation

Today, the granularity of tracking is primarily focused on the means of transport or transport equipment as trackable transport assets, in which the traded goods are placed (e.g. goods are tracked as part of the container, in which it is being shipped). It is often thought that if the location of the trackable transport asset is known, the information about the location of traded goods is included therein. However, this is not a one-to-one relationship, and the relationship may vary over time, considering that goods may be consolidated, split, deconsolidated, or re-combined at waypoints during the transport journey.

The key challenge is how to link the available "identifiers" in a consistent way across the business steps and life cycle of a trade shipment from the seller to the buyer of those goods. In fact, during trade and transportation processes, links of different entities of the end-to-end supply chain are often not properly recorded or adequately referenced in down-stream communications. As a result, very few stakeholders can easily capture a complete overview of the actual end-to-end journey of goods of trade shipments moved as consignments.

To address the lack of consistent identifiers end-to-end across the many actors involved and to bridge this communication gap between the trade and transport sectors, UNECE UN/CEFACT has produced the international standard "**Integrated Track and Trace for Multi-Modal Transportation Business Requirements Specification (BRS)**". Developed in accordance with the UN/CEFACT Open Development Process and validated by the UN/CEFACT Bureau, the new standard was presented to the 28th UN/CEFACT Plenary in October 2022. It contributes a framework on how to close the gap by creating an effective linkage to unique identifiers.   This is now published.

Transport and trade connectivity in the age of pandemics (https://unttc.org)

Reducing human contact is one of the key elements in stopping the propagation of the COVID-19 and similar viruses. Many paper-based transactions can be performed electronically, eliminating such contact. However, for this, clear semantic standards are necessary in order to ensure that all parties understand the same information in the same way.   To this end, UN/CEFACT has developed the UN/EDIFACT standard; a dictionary of trade terms called the United Nations Trade Data Element Dictionary (UNTDED); a library of trade terms in their business context called the Core Component Library; subsets of this library aimed at specific sectors of activity called Reference Data Models; explanatory documents linked to each electronic standard in order to explain and harmonize how these are implemented called Business Requirement Specifications; as well as XML schema to provide sample messages standards. Together or individually, these standards help to promote interoperability between electronic solutions and contribute to reducing or eliminating human contact.

As part of the high-profile multi-agency United Nations Development Account project Transport and Trade Connectivity in the Age of Pandemics, UNECE has developed a segment focusing on the harmonization of standards for the digitalization of data and document exchange in multimodal transport and trade. The objective is to use the standards of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), a UNECE subsidiary body, notably the UN/CEFACT Multimodal Transport Reference Data Model, to provide for interoperability and data exchange between documents, modes of transport and sectors. This will allow for seamless exchange of information, for example in digital corridors, and will limit person-to-person contacts in the supply chain. The use of United Nations standards and modern IT tools, provided as international public goods, helps improve the efficiency and safety of international transport and trade in the face of the COVID-19 pandemic.

A package of standards to be used in the digitalization of key documents accompanying goods transported by various modes: maritime, road, railway, air and inland water transport is developed.

The objective is not to impose solutions (ready electronic documents) to the various stakeholders, but to provide solutions for interoperability, including the use of such modern technologies as XML and JSON API. Initial interoperability exercise was focused on the digitalization of the multimodal Bill of Lading and alignment to UNCEFACT MMT is well achieved with key stakeholder groups and their electronic bill of lading initiatives, namely

- International Federation of Freight Forwarders Associations (FIATA)
- The Baltic and International Maritime Council (BIMCO)
- The Digital Container Shipping Association (DCSA).

This work was further recognized by the International Chamber of Commerce (ICC) in its IAB working group on Key Trade Documents and Data Element (KTDDE) which now also highlights the value of UN/CEFACT MMT RDM.

Ongoing activities of UN/CEFACT T+L

IMO eFAL mapping

The International Maritime Organization (IMO) have published in 1965 the Convention of Facilitation of International Maritime Traffic (FAL). This convention contains standards and recommended practices on formalities, documentary requirements and procedures which should be applied on arrival, stay and departure of ships and ports. Standard forms were developed for these declarations. Over time, UN/EDIFACT messages were developed to correspond to each of these forms and integrated into the IMO FAL Compendium. This UN/CEFACT approved project is working to harmonize these data

requirements into the UN/CEFACT semantic library in alignment with the already developed transport and logistics standards and the MMT-RDM. The project is extended to include maritime declaration of health and there are some decisions to be made around if UN/CEFACT will continue to support all data set extensions of the IMO FAL Compendium Reference Model mapped to MMT.

Dangerous Goods eBusiness standard

The UN/EDIFACT Dangerous Goods Notification message (IFTDGN) is an important message which has been widely implemented over the past 20+ years especially in the maritime sector where it the basis for communication between shipping lines and their agents to report dangerous goods and polluting and noxious substances on board of their vessels upon arrival in and departure from ports (part of the IMO FAL Compendium). The current project aims to create an equivalent standard based on the UN/CEFACT MMT-RDM and integrate changes in legislation proposed by the UNECE Transport Division and the European Union. This project has been launched in 2020 and is now adapted to UN/CEFACT D21.B, its mapping is around 80% complete.

Semantic harmonization

The UN/CEFACT T+L Domain invites all groups within the transport and logistics space to submit their data requirements needs in order to harmonize them with existing standards and to other procedures in the supply chain. This is in line with the eB-MoU/MG resolution R07/06.

The UN/CEFACT T+L Domain invites the WCO to review and consider the reuse of its UN/CEFACT eCMR deliverable. This is in line with the eB-MoU/MG action A17/06.

The UN/CEFACT SCMP Domain restates its offer for ITU-T Study Group 16 to work with the UNECE Transportation Division and with ISO-IEC JTC1 SC42 and the work of ISO TC204 on the topic of autonomous / assisted driving. This is in line with the eB-MoU/MG resolution R19/03.