



UNECE
UN / CEFAC

Executive Guide

**Reference
Data Models**

Introduction

The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) has been developing, for several decades, base semantic standards to ensure end-to-end supply chain facilitation. These include the United Nations Trade Data Element Directory (UNTDDED); the United Nations Electronic Data Interchange for Administrations, Commerce and Transport (UN/EDIFACT); the UN/CEFACT Core Component Library (UN/CCL); and a series of code lists, business process models and message schemas.

UN/CEFACT aims to be the semantic hub for all electronic data requirements in the international supply chain. The UN/CCL and code lists cover activities in all sectors including materials management, commercial transactions, logistics, transport, agriculture, health, insurance, finance, payments, customs, etc. They are truly useful tools and provide an encyclopedia of semantic information that anyone can use free of charge.

However, like an encyclopedia, it may not always be easy to find the exact information needed for a single procedure. UN/CEFACT has therefore created subsets of this information (similar to individual volumes in an encyclopedia set) dedicated to single sectors of activity, called Reference Data Models (RDMs).

Application

Reference Data Models (RDMs) provide a comprehensive subset of the UN/CCL and its associated code lists with all the information pertinent to a sector of activity such as Supply Chain Management (SCRDM) or Multi-Modal Transport (MMT RDM).

RDMs group together all the necessary data requirements for a sector of activity and cover all of that sector's relevant documentary and information requirements. The pertinent code lists are recommended within the subsets and all non-relevant codes are removed—making it easier to reuse and supporting global interoperability. For example, the UN/CEFACT unit of measure code list is restricted to weight-related codes for gross weight only (volume and distance are not included).

Individual messages related to a sector of activity are seen as a subset of the RDM, which itself is a subset of the UN/CCL (like a box within a box within a

box). The RDMs are not exclusive of each other as they will obviously share a lot of the same information.

Furthermore, as the UN/CCL is a hierarchical data model, the RDMs also inherit the underlying hierarchy. This allows to identify relationships between data (such as a “Seal Identification” being related to the container on which it is affixed). This hierarchy enables a process-driven (or event-driven) approach to data exchange instead of being obliged to consider information only in the context of a paper-based data exchange.

Benefits

The UN/CEFACT RDMs facilitate the use of international standards by packaging the information by the sector of activity. They provide the basic semantic library of all information and code lists necessary for data exchange in that sector.

As RDMs are subsets of the larger UN/CCL, which covers all sectors of activity across the world, the use of a single RDM makes interoperability with other sectors seamless. As UN/CEFACT proposes to be a semantic hub for other standards development organizations, the use of its RDMs should enable interoperability.

More information

Link to SCRDM:

http://www.unece.org/fileadmin/DAM/uncefact/BRS/BRS_SCRDM_v1.0.0.2.pdf

Link to MMT-RDM:

http://www.unece.org/fileadmin/DAM/cefact/brs/BRS_T_L-MMT.zip

Link to RDM White Paper:

http://www.unece.org/fileadmin/DAM/cefact/cf_plenary/2017_Plenary/ECE_TRADE_C_CEFACT_2017_11E__White_Paper_on_RDM_.pdf

Link to RDM Guideline:

<http://www.unece.org/fileadmin/DAM/cefact/GuidanceMaterials/ReferenceDataModelGuideline-v1.0.0.2.pdf>

What is UN/CEFACT?

UN/CEFACT, the United Nations Centre for Trade Facilitation and Electronic Business, supports activities dedicated to improving the ability of business, trade and administrative organizations, from developed, developing and transition economies, to **exchange products and relevant services effectively**. Its principal focus is on facilitating national and international transactions, through **the simplification and harmonization of processes, procedures and information flows**, and so contributing to the growth of global commerce.

UN/CEFACT has a global mandate. Participation in the UN/CEFACT Forum is open to all. There are 1000 experts from every region in the world.

Within the framework of the United Nations Economic and Social Council, the United Nations Economic Commission for Europe (UNECE) serves as the focal point for **trade facilitation recommendations and electronic business standards**, covering both commercial and government business processes that can foster growth in international trade and related services. In this context UN/CEFACT was established, as a subsidiary, intergovernmental body of the UNECE.

Participation in the development of UN/CEFACT standards and recommendations is free of charge.

If you are interested in joining us, you should register at <https://uncefact.unece.org/display/uncefactpublic/UNCEFACT+Expert+Registration>

All resulting deliverables are available online free of charge at <http://www.unece.org/cefact>

For more information:
<http://www.unece.org/cefact>
See also: <http://tfig.unece.org/>

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