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DEVELOPMENTS BY EXPERT GROUPS: DELIVERABLES AND PRIORITIES

Business Requirements Specification
Cross-Border Supply Chain (UNeDocs)

Submitted by International Trade and Business Processes Group (TBG)

Summary

This Business Requirements Specification (BRS) was approved by the Forum Management Group (FMG) on 30 March 2007.

The document can be downloaded from www.unece.org/cefact/brs/brs_index.htm.

This document is for approval by the Heads of Delegation at the 13th UN/CEFACT Plenary meeting, to be held from 14 to 16 May 2007.

* The UNECE Trade and Timber Division has submitted the present document after the official documentation deadline due to resource constraints.

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Business Processes:	Cross-Border Trade, Transport, Finance, Insurance, Border Clearance (Customs & Other Governmental Authorities (OGAs))
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REFERENCES

UNeDocs Project Proposal v5 (TBG2-2005-10-5)

UNeDocs Scope Document v3 (TBG2-2006-25-3)

UN/CEFACT BPAWG Reference Model of the International Supply Chain v1.0 March 2003. (UN/CEFACT/BPA/PB044)

UN/CEFACT Modeling Methodology (UMM) v1.0

UN/CEFACT Core Component Technical Specification v2.01 (CCTS/ISO15000-5)

UN/CEFACT Core Component Library v0.6A

United Nations Trade Data Elements Directory (UNTDED/ISO 7372)

UN/CEFACT Recommendation No. 1 - United Nations Layout Key (UNLK)

SITPRO ElecTra International Document System & v1.2 UneDocsUK

UNECE United Nations Electronic Trade Documents (UNeDocs) version 0.4

1. OBJECTIVES

1. The objective of this BRS is to describe the requirements for a generic data model supporting the processes involved in the cross border supply chain and covering at a high-level the involved business areas, the main parties and the information involved.

2. This BRS, in combination with the ISCRM developed by TBG14 and in combination with the detailed BRSs from the related TBG WGs, will provide the framework for any cross-border related business and government domains to specify their own specific information exchange requirements whilst complying with the overall process and data structures.

3. Derivative information exchange specifications will be able to be developed to support the requirements of conventional UN/CEFACT data exchange formats for UN aligned paper documents, UN/EDIFACT or UN/CEFACT XML messages as well as information exchanges to support web based processes such as those required for Single Windows implementations.

4. United Nations electronic Trade Documents (UNeDocs) is a project of the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT). The objectives of this project is to develop, publish and maintain a Business Standard which can be applied by countries, regions or industries to provide the definitions of contextualised data exchange documents which can be integrated into software solutions for traders, carriers, freight forwarders, agents, banks, Customs and Other Governmental Authorities etc.

5. UNeDocs takes a holistic approach which develops a canonical data model which brings together the data exchange requirements of international trade, transport, finance, insurance, Customs and other regulatory documents based on the integration of trade facilitation and e-Business best practices.

6. The UN/CEFACT UNeDocs Business Standard will include paper and electronic document structures which have been derived from the UNeDocs canonical data model. Derivation from this canonical data model ensures that each UNeDocs paper or electronic document specification is an individual implementation of a document development methodology which follows the aligned concepts described in UNECE Recommendation 1, the UN Layout Key (UNLK). This ensures that traders can choose the type of document technology that best meets their business requirements and technology capabilities and also provides a migration path for the adoption of new technologies.

7. These business requirements have been developed by means of a close co-operation between trade, transport, finance, insurance, customs and other regulatory authorities document users. The UNeDocs project is a TBG cross-domain project, which is managed by the TBG ‘Digital Paper’ Working Group (TBG2).

2. SCOPE

8. This section describes the aspects of the international purchase and supply chain covered by the UNeDocs project and relates them to the UN/CEFACT Reference Model of the International Supply Chain v2001 (ISCRM).

9. The extent and limits of the business processes described in this document have been developed in such as way that it allows application of the UNeDocs Business Standard for implementations of national, regional or industry specific cross-border scenarios. In addition only the high-level process descriptions are described in order that the detailed process analysis of the involved TBG Domain Groups can provide the detailed process requirements in their published Business Requirements Specifications (BRSs). See sect. 5.

2.1. Scope comparison

10. The ISCRM Reference Model covers the processes following the recognition of need by a Customer for a product or service up until the fulfilment of an order by a Supplier and the resulting financial settlement. In addition to the business processes associated with cross-border trading it also incorporates the necessary logistical and cross-border regulatory activities, which may be required by Intermediaries and Authorities.

This is illustrated in the following use case diagram.

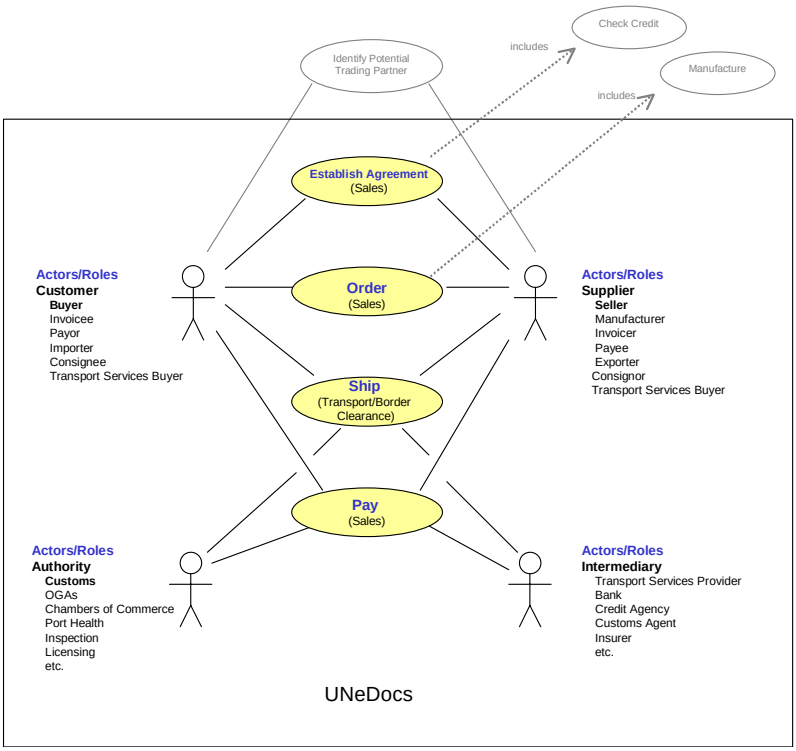

Figure1. Use case Diagram-International Supply Chain Model

2.2 Scenario introduction

12. The scope of the UNeDocs project can be expressed as a subset of the scope of the UN/CEFACT International Supply Chain Reference Model (ISCRM) covering the quotation, ordering and transportation of goods through to invoicing. However, not all aspects of these processes are covered in the initial phase.

13. The ISCRM covers processes in the four main business areas - Commercial, Logistics, Regulatory and Financial as illustrated in Figures 2 and 3. The UNeDocs project supports the processes across the Commercial, Logistics (Transport) and Regulatory Areas. See Section 5.

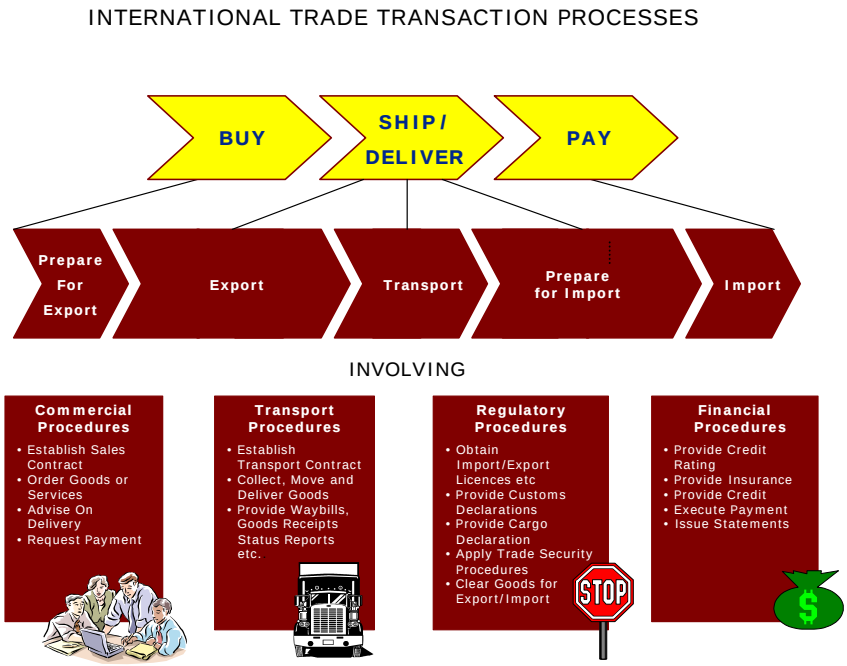

Figure 2. Business processes within the four main Business Areas

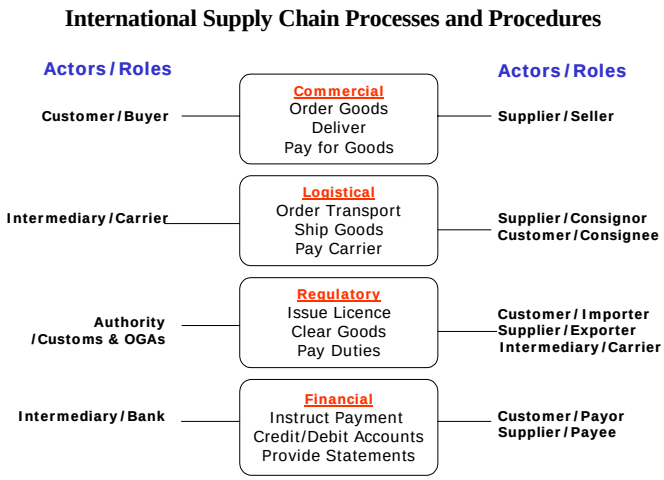

Figure 3. Key Actors/Roles associated with the four main Business Areas

3. BUSINESS REQUIREMENTS

3.1 "Business requirements" views

14. As described in Section 4.2 above the UNeDocs process scope may be viewed as four interrelated business areas representing Commercial, Logistics (Transport), Regulatory and Financial processes together with the corresponding information used both within each business area and which passes between them. The following two diagrams describe these areas in terms of the key governing contracts – the Sales Order Contract and the Transport Service Contract – and these diagrams also show the relationships between the four areas together with an indication of the documentary requirements.

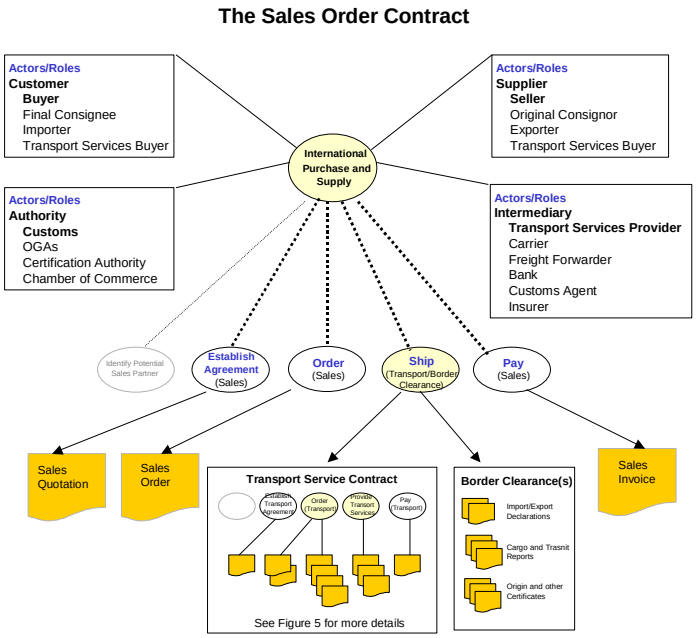

Figure 4. The Sales Order Contract view

15. Figure 4 shows that, for the Sales Order Contract, the Establish Business Agreement, Order, Ship and Pay use cases are within the scope of UNeDocs. However, only the quotation process is included in the Establish Business Agreement use case and only invoicing is included within the Pay use case.

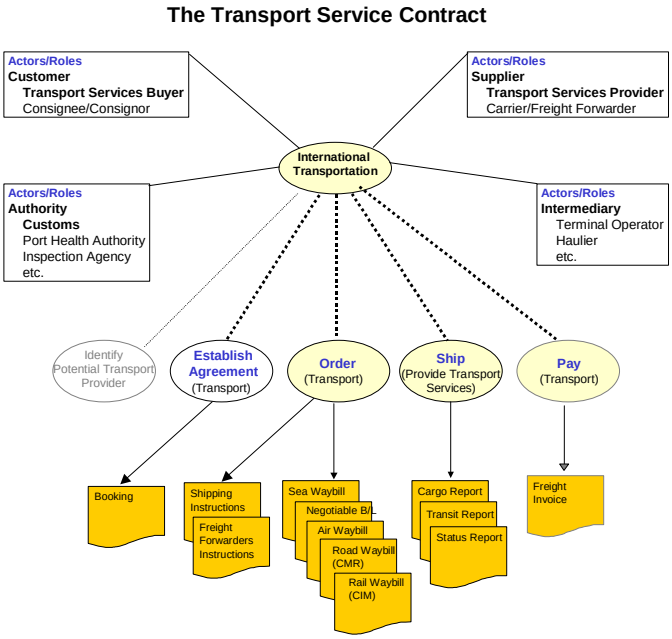

Figure 5. The Transport Service Contract view

16. Figure 5 shows that, for the Transport Services Contract, the Establish Business Agreement, Order, Ship and Pay use cases are within the scope of UNeDocs. However, only the booking process is included in the Establish Business Agreement use case and only invoicing is included within the Pay use case. The UNeDocs scope therefore includes the transport booking, transport ordering and freight invoicing processes together with the actual transportation and the required border clearance processes.

3.1.1 Business process elaboration

17. The processes include:

(a) Commercial Processes

Covers:

(i) Issuing of Quotation,
(ii) Confirmation of Sales Order,
(iii) Issuing of Despatch Advice and Packing List,
(iv) Sales Invoicing

To be defined separately in conjunction with TBG1 and TBG14

(b) Logistical (Transport) Processes

Covers:

(i) Booking of Cargo Space,
(ii) Issuing of Shipping Instructions,
(iii) Issuing of Transport Contract Document (AirWaybill, etc.),
(iv) Transportation of Goods,
(v) Requesting and Issuing of Transport Status Reports
(vi) Freight Invoicing

To be defined separately in conjunction with TBG3, TBG1 and TBG14

(c) Regulatory Processes

Covers:

(i) Reporting to Customs or appropriate Other Governmental Agencies:
(ii) Import/Export Declarations,
(iii) Cargo and Transit Reports,
(iv) Certificates of Origin,
(v) Phytosanitary Certificates,
(vi) Dangerous Goods Declarations including OECD Hazardous Waste notifications

To be defined separately in conjunction with TBG4, TBG13, TBG18 and TBG14.

(d) Financial Processes

Covers:

(i) Documentary Credit procedures,
(ii) Cargo Insurance

To be defined separately in conjunction with TBG5, TBG1 and TBG14.

3.1.2 Information Flow definition

18. There are potentially many parties participating in the cross-border international purchase and supply chain. These parties can be grouped into four main categories as indicated in the table below.

Trade/Transport/Customs Party Roles		
Sales Order Contract	**Transport Service Contract**	**Definition**
Seller	Original Consignor/Original Shipper	The party selling goods or services as stipulated in a Sales Order Contract.
Buyer	Final Consignee/Ultimate Consignee	The party to whom goods are sold services as stipulated in a Sales Order Contract.
	Transport Services Buyer (Consignor or Consignee)	The buyer of transport services as stipulated in a Transport Service Contract.
	Transport Services Provider (Carrier or Freight Forwarder)	The provider i.e. seller of transport services as stipulated in a Transport Service Contract.
	Consignor	The party consigning goods as stipulated in a Transport Service Contract.
	Consignee	The party receiving a consignment of goods as stipulated in a Transport Service Contract.
	Carrier	The party which provides transport services.
	Freight Forwarder	The party undertaking the forwarding of goods by provision of transport, logistics, associated formalities services etc.

	Despatch Party	The party where goods are collected or taken over by the transport services provider. Operational term is 'Pick-up Place'.
	Delivery Party	The party to which goods should be delivered by the transport services provider. Operational term is 'Place of Positioning'.
Ship From	Original Despatch Party	The party from whom goods will be or have been originally shipped.
Ship To	Final Delivery Party/Ultimate Delivery Party	The party to whom goods will be or have been ultimately shipped.

Tabel 1. Trade/Transport/Customs Party Roles

(a) Buyer
The party stipulated as the party to whom goods or services are sold. The primary role of the Customer as specified in a Sales Order Contract is the **Buyer** and other possible roles include the Final/Ultimate Consignee, Transport Services Buyer, Importer and Invoicee.

(b) Importer
The party who makes, or on whose behalf a Customs clearing agent or other authorized person makes, an import declaration. This may include a person who has possession of the goods or to whom the goods are consigned.

(c) Invoicee
The party to whom an invoice is issued.

(d) Seller
The party stipulated as the supplier of goods or services. The primary role of the Supplier as specified in the Sales Order Contract is the Seller and other possible roles include the Original Consignor/Shipper, Transport Services Buyer, Exporter, and Invoice Issuer.

(e) Transport Service Buyer
The party stipulated as the buyer of transport services in a Transport Service Contract. The Transport Service Buyer role may be performed by either the Consignor or the Consignee depending on the Terms of Delivery specified in the associated Sales Order Contract.

(f) Exporter
The party who makes, or on whose behalf the export declaration is made, and who is the owner of the goods or has similar rights of disposal over them at the time when the declaration is accepted.

(g) Invoice issuer
The party who issues an invoice.

(h) Intermediary
Within the international purchase and supply chain, an Intermediary can be any party who provides services to support either the Sales Order Contract or the Transport Service Contract. The possible roles of an Intermediary include the Transport Service Provider (e.g. Carrier, Freight Forwarder), Financial Institution or Customs Agent etc.

(i) Authority
An Authority provides authorisation associated with any conventions or regulations applicable to the trading of goods within the international purchase and supply chain. The possible roles of an Authority include border control authorities (e.g. Customs), permit/licensing issuing authorities and port authorities.

3.2 Business Entities and Business Rules

19. Throughout the international purchase and supply chain various types of information are exchanged. The UNeDocs Data Model provides a cross-domain framework for the derivation of generic documents for the exchange of information between the Customers, Suppliers, Intermediaries and Authorities no matter which countries or modes of transport may be involved. Therefore the UNeDocs data model uses generic terms for the involved parties and for the business information entities contained within it.

20. The UNeDocs CCTS Data Modelling includes full referencing between the business information entities and the UNTDED v 2005 (United Trade Data Elements Directory).

21. The following diagram and accompanying text describe the relationships between the highest-level Business Information Entities of the CCTS UNeDocs Data Model.

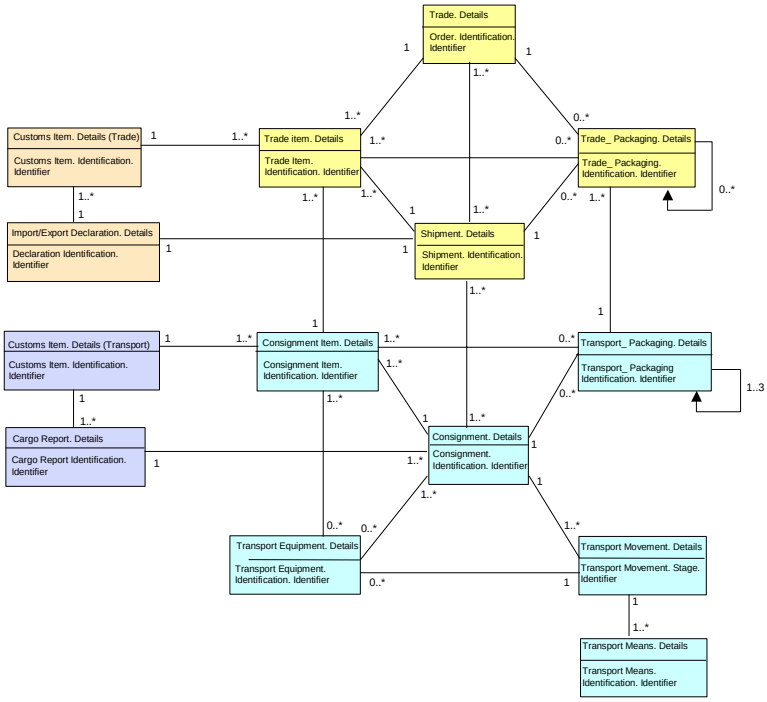

Figure 6. UNeDocs High-Level Entity Relationships

(a) Sales Order

A sales order is a contractual document by means of which a buyer initiates a transaction with a seller involving the supply of goods or services as specified, according to conditions which are either set out in a formal quotation or otherwise known to the buyer. The information included in the UNeDocs cross-border Order document covers both the commercial information between the Buyer and the Seller relating to the Sales Order and also the additional information required by intermediaries and authorities.

(i) A Sales Order can only have one Buyer
(ii) A Sales Order can only have one Seller
(iii) A Sales Order is made up of one or more Trade Items

(b) Trade Item
A Trade Item describes the lowest level of "commercial" information in a Sales Order between the Buyer and the Seller. Each Trade Item will usually be associated with a particular product and will include details such as product code, quantity and unit price etc. In the case of cross-border orders each product will also have an associated Customs tariff code.

(i) A single Trade Item cannot be split across Shipments
(ii) Trade Items are aggregated by Tariff Code/Packaging into Consignment Items

(c) Shipment
A shipment is an identifiable collection of one or more Trade Items (available to be) transported together from the Seller (Original Consignor/Shipper), to the Buyer (Final/Ultimate Consignee).

(i) A Shipment can only be destined for one Buyer
(ii) A Shipment can be made up of some or all Trade Items from one or more Sales Orders
(iii) A Shipment can have only one Customs UCR
(iv) A shipment may form part or all of a Consignment or may be transported in different Consignments.

(d) Consignment (Transport Service Order)
A consignment is a separately identifiable collection of Consignment Items (available to be) transported from one Consignor to one Consignee via one or more modes of transport as specified in one single transport service contractual document.

(i) A Consignment can only have one Transport Service Buyer
(ii) A Consignment can only have one Transport Service Provider
(iii) A Consignment can only have one Consignor
(iv) A Consignment can only have one Consignee
(v) The Transport Service Buyer can be either the Consignor or the Consignee

(vi) A Consignment is made up of one or more Consignment Items
(vii) A Consignment can be made up of some or all Trade Items (aggregated into Consignment Items) from one or more Shipments
(viii) A Consignment is made up of one or more Customs Items for reporting to Customs
(ix) A Consignment can have one or more Customs UCRs

(e) Consignment Item
A separately identifiable quantity of products grouped together by Customs tariff code or packaging for transport purposes. A Consignment Item is the lowest level of information within a Consignment. In the case of cross-border consignments each Consignment Item must have only one associated Customs tariff code in order to satisfy Customs requirements.

(i) A Consignment Item can contain one or more Trade Items
(ii) A Consignment Item can only have one associated Customs tariff code

(f) Import/Export Customs Declaration
Documents by which consignments of goods are declared for either export or import Customs clearance, conforming to the layout key set out at Appendix I to Annex C.1 concerning outright exportation to the Kyoto convention (WCO). A Customs tariff code must be provided for each Consignment Item within a consignment. The Customs tariff code, also known as the commodity code, specifies the goods classification under the Harmonised Commodity Description and Coding System of the World Customs Organisation (WCO).

(i) An Export or Import Declaration can contain one or more Customs Items
(ii) An Export or Import Declaration can have only one UCR

(g) Customs Item
A Customs Item is a Consignment Item, a Trade Item or an aggregation of Consignment or Trade Items with distinct Customs tariff code for reporting to Customs.

(i) A Customs Item can only have one associated Customs tariff code
(ii) A Customs Item can refer to one or more Trade Items
(iii) Each reported Consignment may contain one or more separately reported Customs Items

(h) Customs Cargo Report
Documents by which movements of goods are reported to Customs at a place of export, import or transit.

(i) A Customs Cargo Report reports on one Transport Movement of goods
(ii) A Customs Cargo Report reports on one or more Consignments

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