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SIMPLE ELECTRONIC BUSINESS STANDARDS – SIMPL.EB

Submitted by the delegation of the United Kingdom *

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Simple Electronic Business Standards – Simpl.eb

Introduction

At the March 1998 meeting of the UN/CEFACT Plenary, the UK submitted a paper on developments in Simpler EDI. The discussion on this document and the subsequent consideration of the issues by the UN/CEFACT Steering Group (CSG) led to the establishment of an ad hoc group on SIMPL-EDI and web based forms, (SIMAC) under the Chairmanship of Mr A de Lijster of the Netherlands. In March 1999, following the positive recommendations of SIMAC and other developments in Web standards, the Plenary agreed to the further development of SIMPL -EDI standards to cover both EDI and Internet developments. This work is being undertaken by the UN/EDIFACT Working Group (EWG) in conjunction with the Techniques and Methodologies Working Group (TMWG). Since then the CSG has adopted the term “electronic business” (eb) as the most appropriate term to cover the range of UN/CEFACT’s work in this area. Further, the growth of the Internet has continued to gather pace, as has electronic business in general. It has also become increasingly evident that business and institutions will not be able to gain full benefits from the revolution in electronic communications unless:

1. Key value chain processes are re-designed to make them more streamlined and more common among the participants, and hence more responsive and dependable i.e. more simple, standard, speedy and certain (see bibliography-1). The work of the Business Process Analysis Working Group (BPAWG) is greatly helping these developments. Note that a value chain represents the process by which an objective is achieved or a product or service provided, and it includes all the physical stages, participants, interfaces, resources, data and communications involved.

Better, simpler and more standard processes both support the application of electronic business and indeed also greatly benefit from it. A key point is the development of master data exchanges to pre-align such data before electronic business begins.

2. Organisations develop accurate and comprehensive master data, covering the participants in their value chains, the products and services they buy and sell, their key processes and their assets. Organisations need to pre-align these master data files with their business partners so that subsequent transactions can be processed and actioned automatically, without error or delay. The more electronic a business becomes the more important are consistent, accurate and integrated master data, whether held on line, in catalogues or internally.
3. The same data definitions are used in Internet, enterprise-to-enterprise and internal I.T. systems. Failure to achieve this commonality means that organisations need to maintain cross reference tables relating their internal data definitions to each of their key partners in each of their main value chains i.e. bilateral communication standards, which bedevil much of current EDI. It is a mistake to believe that the availability of web-based systems will itself solve any of these problems.
4. All value chain locations, products and services move to using unique, unambiguous codes within their electronic messages and relegate meaning and descriptions to their master data files. Clearly some systems will continue to print out or display text for use by individuals (eg some international trade transaction documents), but this information should preferably be retrieved from master files and not retained within transaction messages.

Based on the experience gained with SIMPL-EDI, Simpl.eb standards have now been substantially developed to meet these objectives for the key ordering and invoicing activities across the principle value chains. These standards cover data definitions, codes, master data and messages. They are independent of syntax. For example, they can be expressed in XML when used within an Internet system, in UN/EDIFACT when within enterprise to enterprise EDI, and in proprietary formats when within an internal I.T. application.

Simpl.eb Standards

The most used data and messages have now been defined. These may be added to in future, but only if the functionality is not already provided for. It is important to remember that Simpl.eb does not provide for all current idiosyncratic ways of doing business. It assumes a more standard efficient way of running all value chains, because e.business demands standard processes. Simpl.eb assumes that the most competitive firms and institutions will want to adopt more simple, standard and cost effective processes and standards.

For example the key value chain event is the delivery of a product or service. This can only be to one place at one time. Hence the order is also defined as the order to deliver one or more items to one place on one date. So too is the invoice related to the delivery in this way. Some companies have traditionally produced orders for items specifying deliveries to several places on several dates. This is not good business practice, since changes to inventory and ownership normally relate to physical deliveries on each particular date. In any case, companies have to inform their goods receipt points what to expect each day on each delivery. Therefore they would benefit from generating all their orders in this format.

Thus, introducing cost effective e.business means rethinking not only external communications but also internal systems. Failure to do so by one organisation leaves the way open for another to be more cost effective. Simpl.eb benefits business and institutions both large and small. We have also tried to ensure that Simpl.eb is also equally applicable to the public and private sectors of each economy and that it covers both goods and services. It aims to ensure that all organisations can participate cost effectively in this electronic revolution.

The detailed work completed so far on Simpl.eb data definitions is shown in Appendix 1. Note that the definitions are syntax independent. Nevertheless, the UN/EDIFACT versions of these data definitions have been completed and are available, and XML versions will follow.

UN/EDIFACT messages have also been completed for:

Transactions

The order	The despatch advice
The invoice	The receipt advice
Tax Control	

Master Data

Buyer and seller participants
Product
Price

Note that in addition to having many fewer data elements within each message, each of these messages also replaces several other current EDI messages developed for particular types of transaction (eg orders) in particular business circumstances and current practice.

Process Modelling

For all key processes, a role model can be created to give a top level view of the data to be exchanged, the timescales, the participants involved, and the links between Internet systems, enterprise-to-enterprise and internal I.T. applications (see Appendix 2). Once this top-level role model is agreed by senior management it can be translated into a detailed data model for use by computer systems personnel for example by using UML.

Details of how the Simpl.eb messages can be used for operating most value chains successfully are also given in Appendix 3. These include orders to deliver, move, produce a product or service, treat a patient or process a material, and make a payment. Modern value chains may also be run not by generating orders, but by exchanging forward plans (to deliver, order, produce etc) and by reviewing past performance (deliveries or sales made, output produced etc). Complex products and services can also be covered, although special emphasis then has to be given to the technical specifications in master data (eg product life cycle data and graphics for engines).

Proof of Concept Trials

In the UK and beyond, plans are in hand to undertake trials with Simpl.eb via:

- a) trials between major companies
- b) initiatives involving SME's in conjunction with the University of Wales and with major software and network service suppliers
- c) incorporating Simpl.eb definitions into Collaborative Event Management systems such as EQOS, and into data catalogue work
- d) work on Internet trade facilitation systems such as SITPRO's Electra, which is geared to support UN aligned documentation and will be extended to incorporate Simpl.eb definitions, which in turn will support the key international trading requirements
- e) incorporating Simpl.eb definitions into such activities as the Global Commerce Initiative (eb standards for fast moving consumer goods) and various Internet service developments.

Recommendations

The Plenary is asked to note the work completed to date. It is asked to approve the further development by the EWG and TMWG of the concepts, data definitions, master data and messages as specified in the Appendices. This will include the syntax independent data definitions, together with the UN/EDIFACT and XML equivalent formats. (The latter will be developed following the completion of the ebXML project).

Bibliography

1. K.I.S.S. – keep it simple, standard speedy and certain – the principles of value chain management and electronic commerce by Tom McGuffog – Published by e.centre^{UK}, 1999 – available from UN/CEFACT secretariat
2. SIMPL.eb Blue Book – published by e.centre^{UK}, 1999 – available from UN/CEFACT secretariat

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Appendix 1

Simpl-eb– Improving data definitions

Background

The aim of Simpl-eb is to send simple messages as the majority of data has already been exchanged as master data as part of an ongoing business relationship.

During the course of producing message implementation guides for Simpl-edi, all edi (and for Internet systems and many internal I.T. applications) it became obvious that many of the data elements selected for use lacked clarity. The problem lay chiefly in the fact that the definitions of the data elements were not precisely understood. In some cases definitions contained terms which were implicitly rather than explicitly defined. In other cases multiple terms were included in the definitions and it was not clear whether one term was a synonym of another or whether there were subtle variations between the terms. Additionally, when it came to analysing code values, some codes were preferred by one sector (e.g. retail), and other codes - which performed the same function - were preferred by another sector (e.g. transport).

Clearly, if electronic data interchange, Internet systems and I.T. applications are to be able to communicate with each other automatically, then the data definitions must be the same.

Comparative Analysis

A small ad-hoc team within e centre^{UK} was established to perform a comparative analysis of all of the Simpl-eb data definitions against internationally recognised data directories. The sources for these data directories included:

- United Nations Trade Data Elements Directory (ISO 7372)
- United Nations Trade Data Interchange Directory, Version D99.A (From which the Simpl-edi subsets are extracted.)
- EANCOM Message Implementation Guidelines
- MADRAS renaming project
- Tradacoms
- Application Identifier definitions
- MIST (Multi-Industry Scenario for Transport)
- SITPRO's work on ElecTra (Web-based international trade documentation)

The objective of the comparative analysis was to provide a set of guidelines on how to interpret the data element definitions in a consistent manner by comparing all of the source directories to seek the 'best of class'. Several principles were established early on:

- *Understanding terminology.* Any term in the data definitions that was not explicitly defined was extracted and defined in a terminology table. Terms included party names (e.g. invoicee and payee) and business expressions.
- *Synonyms.* If synonyms appeared across the set of data definitions, where possible, one was chosen and the others removed. In particular this affected the choice of buyer versus customer and seller versus supplier. It also affected terms such as 'document' and 'message'. The removed terms were placed in the terminology table as synonyms of the lead terms.
- *Best in class.* The objective of the comparative analysis was to choose the best in class and clarify its usage where necessary. The ad hoc group resisted the temptation to redefine.
- *MADRAS renaming.* Given the recent decision for UN/EDIFACT data elements to be renamed using ISO standard 11179, it was decided to choose the MADRAS names as the 'best in class' for all data elements. The MADRAS was not applied to codes.

Following this analysis, three deliverables were produced.

The deliverables

The first two deliverables were:

- *Data Definitions Table*. This is the set of all of the Simpl-eb data definitions, along with definitions from all of the other identified sources, the comments following analysis, the selected definition ('best in class') and the recommended actions (such as 'remove and define terms in terminology table').
- *Terminology Table*. The set of terms extracted from the Data Definitions Table for explicit definition, along with synonyms where necessary. The MIST terminology table was a key source for this deliverable.

The third deliverable—the pseudo message maps—requires some background explanation.

During the production of the Data Definitions Table and the Terminology Table it became apparent that the way in which the UN/EDIFACT data definitions are *used* (i.e. following the rules of the UN/EDIFACT syntax) determines the way in which the definitions are *defined*. In particular, two constraints are worth mentioning. The first constraint is that given the generic nature of many UN/EDIFACT data elements, it is not until the code value definition is examined that the data element can be properly understood. Secondly, the UN/EDIFACT syntax (and hence the message content) relies heavily upon inheritance techniques derived from hierarchical message structures. In other words, meaning is not always established from the data element alone, but from the hierarchical path of where the data element is placed within a message, segment group and segment.

The net effect of these constraints is that the clarity provided by the data definitions table is dissipated because the data elements are out of context from the way in which they would be used in messages. This led the ad hoc team to the conclusion that the business data being mapped to the UN/EDIFACT Simpl-eb messages (i.e. application data) needed to be named and defined. The original idea for this requirement came from the observation that Simpl-eb messages require only a small proportion of data items (20% of the original) yet these data items when mapped require significantly more data elements. It was agreed that the production of the pseudo message maps should be accomplished in a syntax-neutral manner. In summary, the third deliverable is described as:

- *Pseudo message maps*. Mapping tables for all of the Simpl-eb transactional messages (not the master data messages). Defined in a syntax neutral manner, the mapping tables take application data as the starting point and provide names, definitions, length requirements and usage information. These are then mapped in subsequent tables to the UN/EDIFACT syntax (for EDI) and to the XML syntax. The pseudo message maps are now considered as the main deliverable.

Business Review

Following the production of the deliverables, the work of the comparative analysis was concluded and the work of the business review stage began. The objective of the business review stage was to have each of the deliverables reviewed by industry experts so that the theory would be tested by practitioners.

The first round of business review included members from e centre^{UK} special interest groups, namely: The UK Trade Message Group; the UK Technical Working Party and the Data Harmonisation Group, which is the overall co-ordinating group for this activity. Each group includes industry representation. This round concluded in December 1999.

Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
ORDERS, INVOIC, DESADV, PARTIN, PRICAT	UNH	0062		Sequential reference of the message within the interchange.	Unique message reference assigned by the sender	
ORDERS	UNH	S009/0065		Message type identifier	Code identifying a type of message and assigned by its controlling agency	
ORDERS	UNH	S009/0065	ORDERS		A code to identify the purchase order message.	
INVOIC	UNH	S009/0065	INVOIC		A code to identify the invoice message.	
DESADV	UNH	S009/0065	DESADV		A code to identify the despatch advice message.	
PARTIN	UNH	S009/0065	PARTIN		A code to identify the party information message.	
PRICAT	UNH	S009/0065	PRICAT		A code to identify the price/sales catalogue message.	
PRODAT	UNH	S009/0065	PRODAT		A code to identify the product data message.	
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	UNH	0052		Message type version number	Version number of a message type	Note If UNG/UNE is used, shall be identical in UNG and UNE. The representation of 0052 was specified as n..3 in version 1 of ISO 9735.
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	UNH	0054		message type release number	Release number within the current message type version number	Note The representation of 0054 was specified as n..3 in version 1 of ISO 9735.
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	UNH	0051		controlling agency	Code identifying the agency controlling the specification, maintenance and publication of the message type.	
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	UNH	0057		Association assigned code	Code, assigned by the association responsible for the design and maintenance of the message type concerned, which further identifies the message.	
	BGM	C002/1001		Document/message name, coded	Code specifying the document name	
ORDERS	BGM	C002/1001	105	Purchase order	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 set out in an offer, or otherwise known to the buyer.	
INVOIC	BGM	C002/1001	380	Commercial Invoice	Document claiming payment for goods or services supplied under conditions agreed between seller and buyer.	
INVOIC	BGM	C002/1001	381	Credit note	Document for providing credit information from the seller to the buyer.	
INVOIC	BGM	C002/1001	383	Debit note	Document for providing debit information from the buyer to the seller.	
INVOIC	BGM	C002/1001	389	Self billed invoice	An invoice the invoicee (I.e. buyer) is producing instead of the seller.	
DESADV	BGM	C002/1001	351	Despatch advice	Document by means of which the seller or consignor informs the consignee or buyer about the despatch of goods.	Scenario 1 - Document sent from seller to buyer. Scenario 2 - Seller sends DESADV to consignee. Scenario 3 - Consignor sends DESADV to Consignee. Scenario 4 - Consignor sends DESADV to buyer.
PARTIN	BGM	C002/1001	10	Party Information	Document providing basic data concerning a party	
PRICAT	BGM	C002/1001	9	Price/sales catalogue	Document providing information regarding pricing and catalogue details for goods and services	The PRICAT document is used for pricing information in preference to sales data

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
PRODAT	BGM	C002/1001	289	Product data message	Document providing master data, a set of data that is rarely changed, to identify and describe products or services the seller offers to their potential buyer(s).	
TAXCON	BGM	C002/1001	999	Tax control		
ALL	BGM	C106/1004		Document/message number	Reference number assigned to the document by the issuer	The issuer is the person who assigns the document number. This is dependent upon the type of message being sent and the scenario being used.
	BGM	1225		Message function, coded	Code indicating the function of the message.	
ORDERS, DESADV	BGM	1225	46	Provisional		
ORDERS, DESADV	BGM	1225	47	Definitive		
PARTIN, PRICAT, PRODAT	BGM	1225	2	Addition	Message containing data (e.g. line items, goods items, Customs items, equipment items) to be added to a previously sent message	
PARTIN, PRICAT, PRODAT	BGM	1225	3	Deletion	Message containing data (e.g. line items, goods items, Customs items, equipment items) to be deleted from a previously sent message	
PARTIN, PRICAT, PRODAT	BGM	1225	4	Change	Message containing data (e.g. line items, goods items, Customs items, equipment items) to be changed in a previously sent message	
PARTIN, PRICAT, PRODAT	BGM	1225	6	Confirmation	Message confirming the details of a previous transmission where such confirmation is required or recommended under the terms of a trading partner agreement	Previous transmission may have occurred by any means. The purpose of the confirmation message for the receiver is to compare data in the internal database with the content of the message and to take action only if the two are different.
	DTM	C507/2005		Date/time/period qualifier	Code giving specific meaning to a date, time or period.	
ORDERS	DTM	C507/2005	2	Delivery date/time, requested	Date on which buyer expects the goods to be delivered.	
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	DTM	C507/2005	137	Document/message date/time		
INVOIC	DTM	C507/2005	131	tax point date		
DESADV	DTM	C507/2005	17	Delivery date/time, estimated	The estimated date on which the delivery of goods to a buyer/consignee takes place.	In most cases goods will be delivered to the buyer. In some cases, however, consignee will act as a third party on behalf of the buyer.
PARTIN, PRICAT, PRODAT	DTM	C507/2005	7	Effective Date	Date and/or time at which specified event or document becomes effective	Used in master data messages to indicate when information becomes effective.
TAXCON	DTM	C507/2005	171	Reference date	Date on which the reference was issued.	Reference date normally refers to a file or message which has been previously sent. Eg previous Tax Control
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	DTM	C507/2380		Date/time/period	The value of a date, a date and time, a time or of a period in a specified representation.	Specifies the date in the format indicated in data element 2379.
ORDERS, INVOIC, DESADV, PARTIN, PRICAT, PRODAT	DTM	C507/2379		Date/time/period format qualifier	Code specifying the representation of a date, time or period	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
PARTIN	FII	3035		Party Qualifier	Code giving specific meaning to a party	
PARTIN	FII	3035	OR	Ordered bank	Identifies the account servicer for the ordering buyer or payor	
PARTIN	FII	3035	BF	Beneficiary Bank	Identifies the account servicer for the seller or the payee	
PARTIN	FII	C078/3194		Account holder number	The identifier for the holder of an account	This is commonly known as an account number
PARTIN	FII	C078/3192		Account holder name	Name of the holder of an account	
PARTIN	FII	C078/6345		Currency, coded	Code identifying a currency	Note: Use ISO 4217 three alpha code
PARTIN	FII	C088/3433		Institution name identification	Code specifying the name of an institution	This will identify a financial institution such as a bank
PARTIN	FII	C088/1131		Code list qualifier	Code identifying a code list	
PARTIN	FII	C088/1131	25	Bank Identification	Code for identification of banks	
PARTIN	FII	C088/1131	154	Branch sort code		
PARTIN	FII	C088/3055		Code list responsible agency, coded		
PARTIN	FII	C088/3055	133	APACS	GB, Association for Payment Clearing Services	
PARTIN	FII	C088/3055	5	ISO	International Organization for Standardization	
PARTIN	FII	C088/3434		Institution branch number	To identify a branch of an institution	
PARTIN	FII	3207		Country, coded	Identification of the name of the country or other geographical entity as specified in ISO 3166.	
PARTIN	RFF	C506/1153		Reference qualifier		
ORDERS, INVOIC, DESADV	RFF	C506/1153	CT	Contract number	Reference number of a contract concluded between parties	The contract is normally concluded between buyer and seller.
ORDERS, INVOIC, DESADV	RFF	C506/1153	ASG	Party Information message reference		
ORDERS, INVOIC, DESADV	RFF	C506/1153	PL	Price list number	Reference number assigned to a price list.	This code should be used to identify a Price Catalogue (PRICAT) message. PRICAT is used for price information in preference to sales data.
INVOIC, DESADV	RFF	C506/1153	AMW	Buyer's catalogue number		
INVOIC	RFF	C506/1153	AAU	Despatch note number	Reference number assigned by the seller to a Despatch Note	This is used to identify the number of the despatch advice message.
INVOIC, DESADV	RFF	C506/1153	VN	order number (supplier)	Reference number assigned by SELLER to a buyer's purchase order.	Supplier equals seller.
INVOIC, DESADV	RFF	C506/1153	ON	order number (buyer)	Reference number assigned by the buyer to an order	
INVOIC	RFF	C506/1153	IV	Invoice number		
RECADV, TAXCON, PRICAT	RFF	C506/1153	ACW	Reference to a previously sent message.	Reference number to previously sent message of the same kind	
PARTIN	RFF	C506/1153	VA	VAT registration number	Unique number assigned by the relevant tax authority to identify a party for use in relation to Value Added Tax (VAT).	
PRICAT	RFF	C506/1153	CR	Customer reference number	Reference number assigned by the BUYER to a transaction.	
PRICAT	RFF	C506/1153	SZ	Specification number	Number assigned by the issuer to his specification.	In the majority of cases the issuer of the specification number (the term number should be treated as a alpha numeric identifier) is the seller. For bespoke products the issuer may be the buyer.
TAXCON	RFF	C506/1153	FI	File line identifier	Number assigned by the file issuer (I.e. seller) or sender to identify a specific line within an invoice.	The file is the invoice therefore the file issuer is the seller.
ORDERS, INVOIC, DESADV, PARTIN	RFF	C506/1154		Reference number	Identifies a reference	Identifier, the nature and function of which can be qualified by an entry in data element 1153 Reference qualifier.

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
INVOIC	RFF	C506/1156		Line number	To identify a line of a document	Number of the line in the document referenced in 1154 Reference number.
ORDERS, INVOIC, DESADV	NAD	3035	BY	Buyer	Party to which goods or services are sold.	
ORDERS, INVOIC, DESADV	NAD	3035	SE	Seller	Party selling goods or services to a buyer.	
DESADV, RECADV	NAD	3035	SF	Ship from	Identification of the party from where goods will be or have been shipped	
DESADV, RECADV	NAD	3035	ST	Ship to	Identification of the party to where goods will be or have been shipped	
ORDERS	NAD	3035	DP	Delivery place		
INVOIC	NAD	3035	IV	Invoicee	Party to whom an invoice is issued.	Code IV is used when third party receives invoice on behalf of buyer.
INVOIC	NAD	3035	PE	Payee		
DESADV	NAD	3035	CA	carrier	The party undertaking transport of goods from one point to another.	
PARTIN	NAD	3035	MS	Message sender	Issuer of a document and/or sender of a message.	
PARTIN	NAD	3035	MR	Message receiver	Party receiving a message.	
ORDERS, INVOIC	NAD	C082/3039		Party identification	Code specifying the identity of a party	
ORDERS, DESADV	NAD	C082/3055	9	EAN	International Article Numbering Association	
PARTIN	NAD	C082/3055	91	Assigned by seller or seller's agent	Code assigned by the SELLER or SELLER's agent	
PARTIN	NAD	C082/3055	92	Assigned by buyer or buyer's agent	Code assigned by the buyer or buyer's agent	
PARTIN	NAD	C058/3124		Name and address line	Free form description of a name and address line	The first line of the address details should be used to specify Party Name if not using data element 3036 to specify Party Name.
PARTIN	NAD	C080/3036		Party Name	Name of a party	
PARTIN	NAD	C059/3042		Street and number/ PO box	To identify a street and number and/or Post Office box number	Post office box number (if available) followed by building name/number and street name
PARTIN	NAD	3164		City name	Name of a city (a town, a village) for addressing purposes	
PARTIN	NAD	3229		Country sub-entity identification	Identification of the name of sub-entities (state, province) defined by appropriate governmental agencies.	Use code defined by appropriate national authority.
PARTIN	NAD	3251		Postcode identification	Code specifying the postal zone or address	Use code defined by appropriate national authority.
PARTIN	NAD	3207		Country, coded	Identification of the name of the country or other geographical entity as specified in ISO 3166.	Use ISO 3166 two alpha country code
PRICAT	PGI	5379		Product group type, coded	Code specifying the type of product group	
PRICAT	PGI	5379	2	No price group used	Prices are not grouped based on price.	
PARTIN	LOC	3227		Place/location qualifier	Code qualifying the type of location	
PARTIN	LOC	3227	88	Place of receipt	Identification of the location at which goods or services are actually received.	
PARTIN	LOC	C517/3225		Place/location identification	Code specifying the name of the location	GLN location number recommended.
PARTIN	LOC	C517/3224		Place/location	Name of the location	other than 3164 City name.
PARTIN	CTA	3139		Contact function, coded	Code specifying the function of a contact (e.g. department or person).	
PARTIN	CTA	C056/3413		Department or employee identification	Code specifying the name of a department or employee	
PARTIN	CTA	C056/3412		Department or employee	Name of a department or employee	
PARTIN	COM	C076/3148		Communication number	To identify a communication number	
PARTIN	COM	C076/3155		Communication channel qualifier	Code identifying the type of communication channel being used.	
PARTIN	COM	C076/3155	TE	telephone	Voice/data transmission by telephone	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
PARTIN	COM	C076/3155	FX	Telefax	Device used for transmitting and reproducing fixed graphic material (as printing) by means of signals over telephone lines or other electronic transmission media.	
PARTIN	COM	C076/3155	EM	Electronic Mail	Exchange of mail by electronic means.	
PARTIN	PAI	C534/4439		Payment conditions, coded	Code specifying the payment conditions	
PARTIN	PAI	C534/4439	1	Direct payment	Payment is made directly between buyer and seller.	
PARTIN	PAI	C534/4439	33	Open account for payment		
PARTIN	PAI	C534/4461		Payment means, coded	Code identifying a means of payment	
PARTIN	PAI	C534/4461	20	Cheque	Written order to bank to pay named sum from drawers account to named person.	
PARTIN	PAI	C534/4461	42	Payment to bank account	Payment by buyer to bank account nominated by seller.	
PARTIN	PAT	4279		Payment terms qualifier	Code qualifying the type of payment terms	
PARTIN	PAT	4279	1	Basic	Payment conditions normally applied.	
PARTIN	PAT	4279	5	Discount not applicable	Discount is not applicable to the payment terms.	
PARTIN	PAT	4279	7	Extended	Payment terms offer an extension to the agreed basic payment terms.	
PARTIN	PAT	4279	22	Discount	Payment terms related to the discount.	
PARTIN	PAT	C112/2475		Payment time reference, coded	Code referencing a point in time	
PARTIN	PAT	C112/2475	5	Date of invoice	Payment time reference is date of invoice.	
PARTIN	PAT	C112/2475	29	date of delivery of goods to establishment/domicile/site	Date the goods are delivered at agreed place of destination.	
PARTIN	PAT	C112/2009		Time relation, coded	Code relating payment terms to a time before, on or after the reference date.	Time period normally expressed in number of days.
PARTIN	PAT	C112/2009	1	reference date	Payment terms related to reference date.	
PARTIN	PAT	C112/2009	3	After reference	Payment terms related to time after reference date.	
PARTIN	PAT	C112/2151		Type of period, coded	Code specifying the type of period	
PARTIN	PAT	C112/2151	D	Day	Agreed time period type is day.	Specify full number of days including non-working days.
PARTIN	PAT	C112/2152		Number of periods	Count of number of periods	
PARTIN	CUX	C504/6347		Currency detail qualifier	Code qualifying the usage of a currency	
PARTIN	CUX	C504/6347	2	Reference Currency	The currency applicable to amounts stated. It may have to be converted.	Currency applies to all subsequent transactions, unless otherwise indicated.
PARTIN	CUX	C504/6345		Currency, coded	Code identifying a currency.	Use ISO 4217 three alpha code
PARTIN	CUX	C504/6343		Currency qualifier	Code qualifying the type of currency	
PARTIN	CUX	C504/6343	4	Invoicing currency	The name or symbol of the currency used in an invoice.	
PARTIN	CUX	C504/6343	9	Order currency	The name or symbol of the currency used in an order.	
PARTIN	CUX	C504/6343	11	Payment currency	The name or symbol of the currency used for payment.	
ORDERS, INVOIC, DESADV, RECADV, PRODAT, PRICAT	LIN	1082		Line item number	To identify a line item	
ORDERS, INVOIC, DESADV, RECADV, PRODAT, PRICAT	LIN	C212/7140		Item number	To identify an item	Used to specify the article number (GLN recommended).
ORDERS, INVOIC, DESADV, RECADV, PRODAT, PRICAT	LIN	C212/7143		Item number type, coded	Code specifying the type of item identification.	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
ORDERS, INVOIC, DESADV, RECADV, PRODAT, PRICAT	LIN	C212/7143	EN	EAN article number	Number assigned to a manufacturer's product according to the International Article Numbering Association.	
ORDERS, INVOIC, DESADV, RECADV, PRODAT, PRICAT	LIN	C212/7143	IN	Buyer's item number	Item number allocated by the buyer of an item	
ORDERS, INVOIC, DESADV, RECADV, PRODAT, PRICAT	LIN	C212/7143	SA	Supplier's item number	Number assigned to an article by the supplier of that article	Supplier = seller
PRODAT	PIA	4347		Product ID function qualifier	Code qualifying the product identifier	
PRODAT	PIA	4347	5	Product identification	The identification of a product.	
PRODAT	DTM	C507/2005	169	Lead time	Time period required between order entry until earliest goods delivery	
PRODAT	DTM	C507/2005	363	Total shelf life period	A period indicating the total shelf life of a product.	
PRODAT	DTM	C507/2379	802	month	To indicate a quantity of months	
PRODAT	DTM	C507/2379	803	Week	To indicate a quantity of weeks	
PRODAT	DTM	C507/2379	804	Day	To indicate a quantity of days	
PRODAT	MEA	6311		Measurement purpose qualifier	Specification of the purpose of the measurement.	
PRODAT	MEA	6311	PD	Physical dimensions	Specified measurement dimensions refer to physical dimensions of a product, material or package.	
PRODAT	MEA	6311	AAI	Item weight		
PRODAT	MEA	C502/6313		Property measured, coded	Specification of the property measured.	
PRODAT	MEA	C502/6313	HT	Height dimension	Numeric value of height.	
PRODAT	MEA	C502/6313	LN	Length dimension	Length of pieces or packages stated for transport purposes	
PRODAT	MEA	C502/6313	WD	Width dimension	Numeric value of width.	
PRODAT	MEA	C502/6313	AAA	Unit net weight	Weight (mass) of goods including any packing used for retail purposes	
PRODAT	MEA	C502/6313	AAB	Unit gross weight	Weight (mass) of goods including packing but excluding the carrier's equipment	
PRODAT	MEA	C174/6411		Measure unit qualifier	Code specifying the unit of measurement	See UN/ECE Recommendation 20, common code.
PRODAT	MEA	C174/6314		Measurement value	To specify the value of a measurement	
	QTY	C186/6063		Quantity qualifier	Code qualifying the type of quantity	
ORDERS	QTY	C186/6063	21	Ordered quantity	The quantity which has been ordered	
INVOIC	QTY	C186/6063	47	Invoiced quantity	The quantity as per invoice	
DESADV	QTY	C186/6063	12	Despatch quantity	Quantity despatched by the seller	
PRICAT	QTY	C186/6063	53	Minimum order quantity	The smallest number of units of a product which can be ordered.	
PRODAT	QTY	C186/6063	251	Incremental order quantity	The incremental quantity by which ordering is carried out.	
PRODAT	QTY	C186/6063	52	Quantity per pack	The quantity contained in the currently identified pack.	
ORDERS, INVOIC	QTY	C186/6060		Quantity	To specify the value of a quantity.	
INVOIC	QTY	C186/6411		Measure unit qualifier	Code specifying the unit of measurement	See UN/ECE Recommendation 20, common code
INVOIC	ALI	3239		Country of origin, coded	Country in which the goods have been produced or manufactured, according to criteria laid down for the purposes of application of the Customs tariff, of quantitative restrictions, or of any other measure related to trade.	See Country and currency codes (UNTDDED) or ISO 3166 two alpha country code (Code set 3207).
	MOA	C516/5025		Monetary amount type qualifier	Code specifying the type of monetary amount	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
INVOIC	MOA	C516/5025	66	Goods item total	Goods item total excluding any allowances or charges for the line item. See also Code 203	
INVOIC	MOA	C516/5025	203	Line item amount	Item total for goods or services minus allowances plus charges for line item. See also Code 66.	
INVOIC	MOA	C516/5004		Monetary amount	To specify the value of a monetary amount	
	PRI	C509/5125		Price qualifier	Code qualifying the type of price	
INVOIC, PRICAT	PRI	C509/5125	AAA	Calculation net	The price stated is the net price including allowances/ charges and excluding taxes. Allowances/charges may be stated for information only	
INVOIC, PRICAT	PRI	C509/5118		Price	To specify the value of the price of an article, product or service	
	PRI	C509/5375		Price type coded	Code identifying the type of price of an item	
INVOIC, PRICAT	PRI	C509/5375	CA	Catalogue	The price detailed in the currently referenced catalogue	
INVOIC, PRICAT	PRI	C509/5375	CT	Contract	The price detailed in the currently referenced contract	
PRICAT	PRI	C509/5387		Price type qualifier		
PRICAT	PRI	C509/5284		Unit price basis	Basis on which the unit price/rate applies	Data elements 5284 and 6411 are used when a product is a variable quantity product, eg price per 200Kg, or when the unit of measure for purchasing, delivery and invoicing are different for a product, eg sugar is not a variable quantity product but ordered and delivered in packs, and invoiced in Kg or Tonnes.
PRICAT	PRI	C509/6411		Measure unit qualifier	Code specifying the unit of measurement	See UN/ECE Recommendation 20, common code.
PRICAT	RNG	6167		Range type qualifier		
PRICAT	RNG	6167	3	Monetary range		
PRICAT	RNG	C280/6162		Range minimum	To specify the minimum value of a range	
PRICAT	RNG	C280/6152		range maximum	To specify the maximum value of a range	
	TAX	5283		Duty/tax/fee function qualifier	Code qualifying the function of information relating to a duty, tax or fee	
INVOIC	TAX	5283	7	Tax	Contribution levied by an authority.	
	TAX	C241/5153		Duty/tax/fee type, coded	Code specifying a type of duty, tax or fee	If national codes needed, use in combination with 1131/3055.
INVOIC	TAX	C241/5153	VAT	Value added tax	A tax on domestic or imported goods applied to the value added at each stage in the production/distribution cycle.	
INVOIC	TAX	C243/5278		Duty/tax/fee rate	Rate of duty or tax or fee applicable to commodities or of a tax applicable to services.	
	TAX	5305		Duty/tax/fee category, coded	Code specifying a duty or tax or fee category.	
INVOIC	TAX	5305	A	Mixed	Transaction includes item taxed at different rates	
INVOIC	TAX	5305	E	Exempt	All items in the transaction or a specific line item are exempt from tax	
INVOIC	TAX	5305	O	Outside the scope of VAT		
INVOIC	TAX	5305	S	Standard	All items in the transaction or a specific line item are taxed at the standard rate of tax	
INVOIC	TAX	5305	Z	Zero	All items in the transaction or a specific line item are zero tax rated	
INVOIC	TAX	5305	AA	Lower rate	All items in the transaction or a specific line item are taxed at the lower rate of tax	The code value is to cater for the lower rate VAT in the UK. This tax applies to domestic energy charges
INVOIC	MOA	C516/5025	124	Tax amount	Tax imposed by government or other official authority related to the weight/volume charge or valuation charge.	
INVOIC	MOA	C516/5025	125	Taxable amount	The monetary amount liable to tax	
TAXCON	DOC	C002/1001	380	Commercial invoice	Document claiming payment for goods or services supplied under conditions agreed between seller and buyer	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
TAXCON	DOC	C002/1001	381	Credit note	Document for providing credit information to the relevant party	
TAXCON	DOC	C002/1001	383	Debit note	Document for providing debit information to the relevant party	
TAXCON	DOC	C002/1001	389	Self billed invoice	An invoice the BUYER is producing instead of the seller.	
	UNS	0081		Section identification		
PARTIN	UNS	0081	D	Header/detail section separation		
ORDERS, INVOIC	UNS	0081	S	Detail/summary section separation		
INVOIC	MOA	C516/5025	79	Total line item amounts	The sum of all the line item amounts	
INVOIC	MOA	C516/5025	176	Message total tax amount	Total of all duty/tax/fee amounts	
INVOIC	MOA	C516/5025	9	Amount due, amount payable	Amount to be paid	
	TAX	5283		Duty/tax/fee function qualifier	Code qualifying the function of information relating to a duty, tax or fee	
INVOIC	TAX	5283	7	Tax	Contribution levied by an authority.	
INVOIC, TAXCON, PRICAT	TAX	C243/5278		Duty/tax/fee rate	Duty or tax or fee rate	
INVOIC, TAXCON, PRICAT	TAX	5305		Duty/tax/fee category, coded	Code specifying a tax/duty/fee category within a tax/duty/fee type system.	Note: If national codes needed, use in combination with 1131/3055
	UNT					
	UNT	0074		Number of segments in a message	Control count of number of segments in a message	Note Control count including UNH and UNT.
ORDERS, INVOIC	UNT	0062		Message reference number	Unique message reference assigned by the sender	Shall be identical in UNH and UNT.
PRODAT	DGS	8273		Dangerous goods regulations, coded	Code specifying a dangerous goods regulation.	
PRODAT	DGS	C205/8351		Hazard code identification	Code identifying a hazard.	Notes: Use relevant code list.
PRODAT	DGS	C205/8078		Hazard substance/item/page number	To identify an additional hazard classification.	
PRODAT	DGS	C205/8092		Hazard code version number	To identify the version number of a hazard code.	
PRODAT	DGS	C234/7124		UNDG number	Unique serial number assigned within the United Nations to substances and articles contained in a list of the dangerous goods most commonly carried.	
PRODAT	DGS	C234/7088		Dangerous goods flashpoint	To specify the value of the flashpoint of the dangerous goods.	Lowest temperature, in the case of dangerous goods, at which vapour from an inflammable liquid forms an ignitable mixture with air.
PRODAT	DGS	C223/7106		Shipment flashpoint	To specify the value of the flashpoint of a shipment.	Temperature in centigrade determined by the closed cup test as per ISO 1523/73 where a vapour is given off that can be ignited.
PRODAT	DGS	8339		Packing group coded	Code specifying the level of danger for which the packaging must cater.	
PRODAT	DGS	8339	1	Great danger	Packaging meeting criteria to pack hazardous materials with great danger. Group I according IATA/IMDG/ADR/RID regulations.	
PRODAT	DGS	8339	2	Medium danger	Packaging meeting criteria to pack hazardous materials with medium danger. Group II according IATA/IMDG/ADR/RID regulations.	
PRODAT	DGS	8339	3	Minor danger	Packaging meeting criteria to pack hazardous materials with minor danger. Group III according IATA/IMDG/ADR/RID regulations.	
PRODAT	DGS	8364		EMS number	Emergency procedures for ships carrying dangerous goods.	
PRODAT	DGS	8410		MFAG	Medical first aid guide.	
PRODAT	DGS	8126		Trem card number	The identification of a transport emergency card giving advice for emergency actions.	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
PRODAT	DGS	C235/8158		Hazard identification number, upper part	The id. number for the Orange Placard (upper part) required on the means of transport.	
PRODAT	DGS	C235/8186		Substance identification number, lower part	The number for the Orange Placard (lower part) required on the means of transport.	
PRODAT	DGS	C236/8246		Dangerous goods label marking	Marking identifying the type of hazardous goods (substance), Loading/Unloading instructions and advising actions in case of emergency.	
PRODAT	DGS	8255		Packing instruction, coded	Code defining the quantity and the type of package in which a product is allowed to be shipped in a passenger or freight aircraft.	Notes: User or association defined code. May be used in combination with 1131/3055.
PRODAT	DGS	8325		Category of means of transport, coded	Identification of the type of means of transport determined to carry particular goods, not necessarily being hazardous.	
PRODAT	DGS	8211		Permission for transport, coded	Code giving evidence that transportation of particular hazardous cargo is permitted and identifies the restrictions being put upon a particular transport.	Notes: Code values to be provided.
PRODAT	HAN	C524/4079		Handling instructions, coded	Identification of the instructions on how specified goods, packages or containers should be handled.	Notes: User or association defined code. May be used in combination with 1131/3055. See also UNTDED 5.9 p.2 CIMP.
PRODAT	HAN	C524/4078		Handling instructions	Instructions on how specified goods, packages or containers should be handled.	
PRODAT	HAN	C218/7419		Hazardous material class code, identification	Code specifying the kind of hazard for a material.	Notes: Association defined code. May be used in combination with 1131/3055.
PRODAT	HAN	C218/1131		Code list qualifier	Code identifying a code list	
PRODAT	HAN	C218/3055		Code list responsible agency, coded		
PRODAT	HAN	C218/7418		Hazardous material class	To specify the kind of hazard for a material.	
RECADV	QVR	C279/6064		Quantity difference	To specify the value of the quantity variance.	
RECADV	QVR	C279/6063		Quantity Qualifier	Code qualifying the type of quantity	
RECADV	QVR	C279/6063	12	despatch quantity	Quantity despatched by the seller	
RECADV	QVR	C279/6063	21	ordered quantity	The quantity which has been ordered	
RECADV	QVR	C279/6063	46	delivered quantity	Quantity actually delivered to the final destination.	
RECADV	QVR	C279/6063	195	Received, not accepted, to be returned	Quantity which has been received but not accepted at a given location and which will consequently be returned to the relevant party.	
RECADV	QVR	C279/6063	196	Received, not accepted, to be destroyed	Quantity which has been received but not accepted at a given location and which will consequently be destroyed.	
RECADV	QVR	4221		Discrepancy, coded	Code identifying the nature of a discrepancy.	
RECADV	QVR	4221	AC	Over-shipped	Code indicating that there was an excess quantity of goods in a shipment relative to the order.	
RECADV	QVR	4221	AE	Delivered, but not advised	Shipment or goods have been delivered without any advance notification of delivery.	
RECADV	QVR	4221	AF	Goods delivered damaged	Part or all of the goods in a shipment were delivered damaged.	
RECADV	QVR	4221	AG	Delivered too late	Delivered but at a later date than the delivery date under the agreed conditions or stipulated in the order.	
RECADV	QVR	C960/4295		Change reason, coded	Code specifying the reason for a change.	
RECADV	QVR	C960/4295	AT	Item not ordered	Code indicating the item or product was not ordered.	
RECADV	QVR	C960/4295	AUE	Article code unknown (EAN Code)	Item identification code (EAN/UPC article number) is unknown.	

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Messages	Segments	Data Elements	Codes	Names	Definition Recommendation	Usage Notes
RECADV	QVR	C960/4295	BN	Bar code not readable	Bar code is not readable for some reason (e.g. poor print quality) by a bar code scanning device.	
RECADV	QVR	C960/4295	DME	Damaged	A change resulting from damaged goods.	
RECADV	QVR	C960/4295	IS	Item represents substitution from original order (EAN Code)	Code indicating the item or product is a substitute of the item or product originally ordered.	
RECADV	QVR	C960/4295	PC	Pack difference	The packaging of the product has changed.	
RECADV	QVR	C960/4295	PE	Minimum/maximum product durability date unacceptable (EAN Code)	Code indicating that the minimum durability date (e.g. best before date) or maximum durability date (e.g. expiry date) of a product are not acceptable.	
RECADV	QVR	C960/4294		Change reason	Free form description of the reason for change.	
RECADV	UNH	S009/0065	RECADV		A code identifying the Receiving Advice message	
RECADV	BGM	C002/1001	352	Receiving advice	Document issued by a buyer informing a seller that goods ordered have been received.	
RECADV	DTM	C507/2005	50	Goods receipt date/time	Date/time upon which the goods were received by a given party.	
RECADV	RFF	C506/1153	AAK	Despatch advice	Reference number assigned by issuing party to a despatch advice.	In this case the issuing party will be the seller or consignor.
RECADV	QTY	C186/6063	48	received quantity	The quantity which has been received.	

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ORDERS pseudo-table

Control/ Business Data	Data Item Name	Definition	Note	Required format	
C	Message reference number	Sequential reference of the message within an interchange	The same value appears in segments UNH and UNT.	AN..14	
C	Message type identifier	Name of message type in the EDI interchange	This data element is used in conjunction with 'Message name'	A6	
C	Directory Version	The UN/EDIFACT directory reference..		A1	
C	Directory Release	The release indicator of the UN/EDIFACT directory		AN3	
C	Controlling agency	The controlling agency responsible for mapping the association		AN2	
C	Association Assigned Code			AN6	
C	Message name	The name of the message	Purchase order	N3	
C	Message function, coded	Code indicating how the message content should be treated.	Dependent. This data element only used if message content is not definitive	N2	HEADER
B	Requested delivery date	Date on which buyer requests goods to be delivered.	Format always = CCYYMMDD	N8	
B	Order date	Date on which Orders message is transmitted	Format always = CCYYMMDD	N8	
B	Buyer's order reference number	The order reference number assigned by the buyer		AN..35	
B	Contract reference number	Reference of the contract number concluded between buyer and seller		AN..35	
B	Party Information message reference number	Reference of the previously sent PARTIN message		AN..35	
B	Price List message reference number	Reference of the previously sent PRICAT message		AN..35	
B	Buyer identification number	The number which uniquely identifies the buyer	Recommended: GLN	N13 (EAN)	
B	Seller identification number	the number which uniquely identifies the seller	Recommended: GLN	N13 (EAN)	
B	Delivery party identification number	The number which uniquely identifies the delivery party	Recommended: GLN	N13 (EAN)	
B	Line Item number	Application generated number of the item lines within the Order		AN..6	LINE ITEM
B	Item number	Prime identification number of the product (as agreed by trading partners)	Recommended: GTIN	N13 (EAN)	
B	Quantity ordered	The quantity which has been ordered.		N..15	
C	Number of segments in message	The total number of segments in the message	Includes UNH and UNT segments	N..6	

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DESADV pseudo-table

Control/ Business Data	Data Item Name	Definition	Note	Required format	
C	Message reference number	Sequential reference of the message within an interchange	The same value appears in segments UNH and UNT.	AN..14	
C	Message type identifier	Name of message type in the EDI interchange	This data element is used in conjunction with 'Message name'	A6	
C	Directory Version	The UN/EDIFACT directory reference..		A1	
C	Directory Release	The release indicator of the UN/EDIFACT directory		AN3	
C	Controlling agency	The controlling agency responsible for mapping the association		AN2	
C	Association Assigned Code			AN6	
C	Message name	The name of the message	Despatch Advice	N3	
C	Provisional message	Code indicating that the message content is provisional		N2	HEADER
C	Definitive message	Code indicating that the message content is definitive		N2	
B	Estimated delivery date	Date and/or time when the shipper of the goods expects delivery will take place.	Format always = CCYYMMDD	N8	
B	Despatch advice date	Date on which Despatch advice message is transmitted	Format always = CCYYMMDD	N8	
B	Despatch number	The despatch reference number assigned by the document sender		AN..35	
B	Contract number	Reference of the contract number concluded between buyer and seller		AN..35	
B	Party Information message reference number	Reference of the previously sent PARTIN message		AN..35	
B	Price List message reference number	Reference of the previously sent PRICAT message		AN..35	
B	Buyer's catalogue number	Identification of a catalogue maintained by a buyer.		AN..35	
B	Buyer's order number	Reference number assigned by the buyer to an order		AN..35	
B	Supplier's order number	Reference number assigned by supplier to a buyer's purchase order		AN..35	
B	Buyer identification number	The number which uniquely identifies the buyer	Recommended: GLN	N13 (EAN)	
B	Seller identification number	The number which uniquely identifies the seller	Recommended: GLN	N13 (EAN)	
B	Carrier identification number	The number which uniquely identifies the carrier	Recommended: GLN (Possible Alternative: BIC code (UN/SPSC codes for carriers))	N13 (EAN)	
B	Shipped to' place	Identification of the party to where goods will be or have been shipped	Recommended: GLN	N13 (EAN)	
B	Shipped from' place	Identification of the party from where goods will be or have been shipped	Recommended: GLN	N13 (EAN)	
B	Hierarchical identification number			N1	LINE ITEM
B	Line Item number	Application generated number of the item lines within the Despatch advice		AN..6	
B	Item number	Prime identification number of the product (as agreed by trading partners)	Recommended: GTIN	N13 (EAN)	
B	Quantity despatched	The quantity which has been despatched		N..15	
C	Number of segments in message	The total number of segments in the message	Includes UNH and UNT segments	N..6	

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RECADV pseudo-table

Control/ Business Data	Data Item Name	Definition	Note	Required format		
C	Message reference number	Sequential reference of the message within an interchange	The same value appears in segments UNH and UNT.	AN..14		
C	Message type identifier	Name of message type in the EDI interchange	This data element is used in conjunction with 'Message name'	A6		
C	Directory Version	The UN/EDIFACT directory reference..		A1		
C	Directory Release	The release indicator of the UN/EDIFACT directory		AN3		
C	Controlling agency	The controlling agency responsible for mapping the association		AN2		
C	Association Assigned Code			AN6		
C	Message name	The name of the message	Receiving Advice	N3		
C	Provisional message	Code indicating that the message content is provisional		N2	HEADER	
C	Definitive message	Code indicating that the message content is definitive		N2		
B	Document date	Date and/or time when the shipper of the goods expects delivery will take place.	Format always = CCYYMMDD	N8		
B	Goods receipt date/time	Date on which Despatch advice message is transmitted	Format always = CCYYMMDD	N8		
B	Receiving advice number	A reference number to a receiving advice		AN..35		
B	Customer reference number	Reference number assigned by the customer to a transaction.		AN..35		
B	Buyer's order number	Reference number assigned by the buyer to an order		AN..35		
B	Supplier's order number	Reference number assigned by supplier to a buyer's purchase order		AN..35		
B	Reference to a previously sent message.	Reference number assigned to the message which was previously issued (e.g. in the case of a cancellation, the primary reference of the message to be cancelled will be quoted in this element).		AN..35		
B	Despatch advice	Reference number assigned by issuing party to a despatch advice.		AN..35		
B	Buyer identification number	The number which uniquely identifies the buyer	Recommended: GLN	N13 (EAN)		
B	Seller identification number	The number which uniquely identifies the seller	Recommended: GLN	N13 (EAN)		
B	Carrier identification number	The number which uniquely identifies the carrier	Recommended: GLN	N13 (EAN)		
B	Shipped to' place	Identification of the party to where goods will be or have been shipped	Recommended: GLN	N13 (EAN)		
B	Shipped from' place	Identification of the party from where goods will be or have been shipped	Recommended: GLN	N13 (EAN)		
C	Hierarchical identification number			N1		LINE ITEM
B	Line Item number	Application generated number of the item lines within the Despatch advice		AN..6		
B	Item number	Prime identification number of the product (as agreed by trading partners)	Recommended: GTIN	N13 (EAN)		
B	Received quantity	The quantity which has been received.		N..15		
B	Quantity difference	Quantity variance value		N..15		
B	despatch quantity	Numeric value of variance between ordered/shipped/invoiced quantities.		N..15		
B	ordered quantity	Numeric value of variance between ordered/shipped/invoiced quantities.		N..15		
B	Over-shipped	Code indicating that there was an excess quantity of goods in a shipment relative to the order.		An..3		
B	Delivered, but not advised	Shipment or goods have been delivered without any advance notification of delivery.		An..3		
B	Goods delivered damaged	Part or all of the goods in a shipment were delivered damaged.		An..3		
B	Delivered too late	Delivered but at a later date than the delivery date under the agreed conditions or stipulated in the order.		An..3		
B	Item not ordered	Code indicating the item or product was not ordered.		An..3		
B	Article code unknown (EAN Code)	Item identification code (EAN/UPC article number) is unknown.		An..3		
B	Bar code not readable	Bar code is not readable for some reason (e.g. poor print quality) by a bar code scanning device.		An..3		
B	Damaged	A change resulting from damaged goods.		An..3		
B	Item represents substitution from original order (EAN Code)	Code indicating the item or product is a substitute of the item or product originally ordered.		An..3		
B	Pack difference	The packaging of the product has changed.		An..3		
B	Minimum/maximum product durability date unacceptable (EAN Code)	Code indicating that the minimum durability date (e.g. best before date) or maximum durability date (e.g. expiry date) of a product are not acceptable.		An..3		
C	Number of segments in message	The total number of segments in the message	Includes UNH and UNT segments	N..6		

Appendix 2

Simpl.eb

Simple electronic business – role model

Over many years, various industries, commercial arenas and institutions have evolved a wide variety of ways of undertaking business. There are different processes, sequences of decision taking, organisational structures and roles involved. Supporting data is defined in a wide variety of ways. The consequence is that data can be misinterpreted, resulting in extra costs and poorer service. The current remedy is either to print out and re-key data or to employ resources to develop cross-reference files between the data of trading organisations.

With the advent of electronic business, in order to provide clear, unambiguous and cost effective electronic communications, a great deal of simplification and standardisation is needed, not only of data but also of processes and structures of decision-taking. Failure to do so will result in value chains which are more slow, uncertain and costly than they need to be to remain competitive. Those organisations which translate their current idiosyncratic processes both into how they intend to do business electronically and also how they intend to deliver products and services to their end customers will fail to satisfy these customers both in service and cost terms. Simpl.eb standards provide common definitions of data elements, master data, the use of EAN codes to link transactions unambiguously to master data, and key messages for all electronic business – the Internet, EDI and internal I.T. applications. Simpl.eb standards are syntax independent. They are relevant to all business in all industrial, commercial, private and public sectors.

A fundamental part of rethinking processes for electronic business is to align data in advance of doing business. That is, to ensure that buyers and sellers are working to shared, committed plans and have defined their master data in the same way. Master data are all the data which describe and define the participants, products and services, processes and assets in any value chain. Transaction data includes the dates/times, quantities and values. Transaction data are linked to master data via unique codes/numbers which identify the participants, products and services, processes and assets e.g. 20 units of 5000189427582 to be delivered from location number 5000189006237 to location number 4000627015924 on 06022000.

Thus, if the details of both buyer and seller (including names and addresses), and of the products/services to be traded (including descriptions, dimensions and prices) have been confirmed electronically in advance of communicating orders and invoices, these transactions can be a simple stream of codes and quantities, capable of being processed and actioned immediately without error.

Master files will be synchronised by direct electronic communication between buyer and seller or via a common electronic catalogue held at an agreed point on the shared network (which could be the Internet). Note that the more electronic that business becomes the more important it becomes to define and align master data in advance of trading. For example, in offering an electronic product catalogue to the end customer or consumer it is essential that what is offered is what is delivered, since the customer is basing the selection on the electronic definition in the catalogue and not on a visual inspection of the product. The main advantage of a catalogue is that each buyer or seller may only need to send data to or receive data from one central point. However, trading partners may not be willing to store sensitive data such as prices in a catalogue, and may wish to exchange all master data directly by EDI. The choice is theirs.

An example is given of the sequence of decision taking (a process) among the various partners (and their functions) in a value chain. This Role Model represents how the process might best work for one type of trading relationship. While the number and sequence of decisions may change, it is believed that the principles proposed, and the supporting data standards, will be common to the great majority of business activities i.e. relatively few standard data definitions and master data structures will support most electronic business very well, provided organisations are prepared to simplify and standardise their processes. Those who don't are less likely to be competitive.

Simple.b. role model

This is an example of how electronic business should be conducted. While it is specific to some industries, equivalent role models will be developed for other public and private processes.

It is vital to define and agree the overall process including:-

- a) the timescale
- b) the parties and functions
- c) the products and services

Individuals share knowledge, create joint plans and pre-align master earlier in the process so that as much data as is practicable can be later processed and actioned automatically.

TIMESCALE	BUYER functions					PROCESS	SELLER functions					AGENTS	AUTHORITIES
	P	L	M	O	D		S	L	M	PR	D		
						Agreement to conduct business - define terms of trading - sign contracts							
	✓					define buyer, seller, trading locations							
		✓			✓	Assign product (eg EAN) codes				✓			
						Buyer m/f ↔ Seller m/f							
						exchange/align m/fs							
		✓	✓	✓	✓	Assign product (eg EAN) codes				✓			
						Product m/f ↔ Product m/f							
						define products to be traded				✓		✓	Product data
						Specs							licensing bodies for certain products
						Costs							
6 months	✓	✓	✓	✓	✓	plan new product launch (Collaborative event management)				✓	✓	✓	Technical specs to suppliers
						share structured knowledge about event							Advertising/Promotional/Design Agencies
						develop plans for event							
5 months		✓		✓	✓	- delivery plans				✓	✓	✓	Carriers (if used)
						- inventory plans				✓	✓	✓	
						- production plans				✓	✓	✓	Proofs to Packaging Suppliers and Printers
						- material requirements				✓	✓	✓	
1 week ahead of orders		✓				Product m/f ↔ Product m/f				✓			banks, insurance companies freight
						codes							Customs if imports or exports
						Price m/f ↔ Price m/f							Inspection bodies for certain products
						synchronise product, code and price data							
1 week ahead of deliveries	✓	✓		✓	✓	place orders							
						communication of expected deliveries to warehouse				✓			
						process orders				✓			
						confirmation of orders							
						pick orders							
2 weeks ahead of consumer sale					✓	deliveries made to warehouse							
		✓		✓		delivery acceptance at warehouse				✓			
						invoice							
		✓	✓		✓	deliveries made to shops				✓			banks
						payment							
day 0 - on sale						consumer sales				✓	✓	✓	
days, weeks thereafter						sales, data, evaluation of sales, reports on all aspects of performance							
	✓	✓	✓	✓									

P = Purchasing (buyers)
L = Logistics (supply chain)
M = Marketing
O = Operations (shop management)

D = Distribution
S = Sales (sellers)
PR = Production (Manufacturing)

m/f = master file (catalogue, specification etc)

Simpl-electronic business – role model

Businesses begin the trading process by defining themselves and the products and/or services they wish to trade. They may specify these in a contract. The length of time between contract signing and buying, selling and delivering goods and services may vary from days to years. In the example, the process relates to the launch of a new product which takes 6 months from agreement to conduct business to being on sale to the end customer (consumer). In different industries/businesses, the sequence and content of decision taking may also vary somewhat from that shown. When undertaking an expensive, large scale project lasting many years, there will be many more functions and partners involved and master data specifications will become even more important.

The BUYER functions are defined in this example as:

P = Purchasing/Buyers
L = Logistics incl. Planning, Stock Control and Delivery Management
M = Marketing
O = Store Operations
D = Distribution

The SELLER functions are defined as:

S = Sales/Sellers
L = Logistics incl. Planning, Stock Control and Delivery Management
M = Marketing
PR = Production / Manufacturing
D = Distribution

The functions involved in other value chains may also differ from these.

Nevertheless, the principles outlined should be the same, and the data concerned with plans, reports, master files and transactions ought to be largely the same. The better that plans and master data are aligned in advance of transactions flowing the better will be the service to the end customer and the lower will be the total cost of doing business. This is the basis of the Simpl-eb standards which have been developed to support all electronic business, and ultimately, also, the I.T. applications within each participant in electronic business which process these communications among and data.

Business Objectives for Simpl-electronic business

1) Improved product availability and service performance for the consumer through:

- improving total supply chain performance
- improving data accuracy and timeliness
- improving accuracy of codes for products and trading locations
- improving alignment of plans between trading partners
- improving service
 - at point of sale (shop, home, on the move))
 - backstore)
 - Picking Centre/Warehouse)
 - Intermediate Logistics Centre) At all points in the value chain
 - Finished Goods Store)
 - Factory)
 - Materials Supplier)

2) Reduced total cost - greater data accuracy and alignment helps to cut inventory, waste, capacity, resources. Improves load factors of facilities and transport.

3) Reduced institutionalised uncertainty

- maintenance of cross reference files
- refused deliveries
- correction of data
- inspections of quality and quantity

Appendix 3

Electronic Business

SIMPL.electronic business messages and their use

A value chain represents the process by which an objective is achieved or a product or service provided, and includes all the physical stages, participants, interfaces, resources, data and communications involved. The simplest and most important value chain message is the order.

1) Order

The simplest value chain message involves a **buyer/customer** ordering a **product** or **service** from a **seller/supplier** or **provider**. Buyers and sellers are identified by EAN location codes – now known as Global Location Numbers (13 digits assigned by each value chain participant – see below). The location code provides the link from the order transaction to the corresponding master file (a master file contains data about the participants, products, processes and assets involved in each value chain – see below). This contains as much data about the value chain participant as is necessary for the effective operation of the value chain, including:

- a) name of buyer, seller (or provider)
- b) location name
- c) address
- d) contact and communication details – telephone, fax, e-mail
- e) opening hours
- f) physical characteristics
- g) payment instructions and terms
- etc

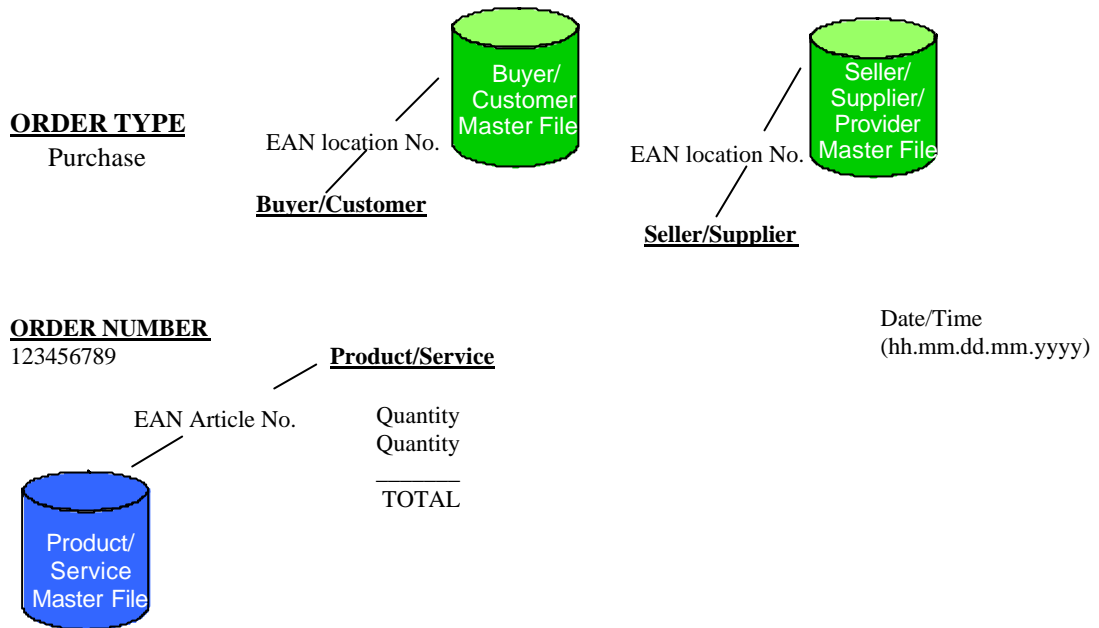
Products and services are identified by EAN article numbers – now known as Global Trade Identification Numbers. The item code provides the link from the transaction to the corresponding master file. Likely data will include:

- a) description of product or service (according to agreed rules)
This will include all the different descriptions needed for such purposes as consumer home shopping, shelf edge descriptions, till rolls, market analyses. These will be provided in relation to each unique EAN number.
- b) physical dimensions – height, length, width, weights (with and without packaging)
- c) handling or logistics information including lead time and minimum order quantity

(The Product Master File does not contain price information which may be bilateral between value chain participants – but see section 4 “Prices and Costs”)

The minimum content of an order is:

- i) order type iii) buyer v) item vi) date/time required vii) quantities/totals
- iv) seller
- eg purchase order
- production order
- transport order
- ii) order number



- Orders can be to:
- 1) purchase/provide/deliver
 - 2) transport/move
 - 3) produce

Orders are of the form

- instruction to deliver one or more items to one place and only one on one date/time.

The date is when the product or service is required to be delivered/provided to the buyer.

Hence this matches to the delivery document/receipt note.

The invoice then matches to the delivery note.

Multiple deliveries to the same location or a number of locations should be expressed as a number of such simple orders to ensure standard, unambiguous communications.

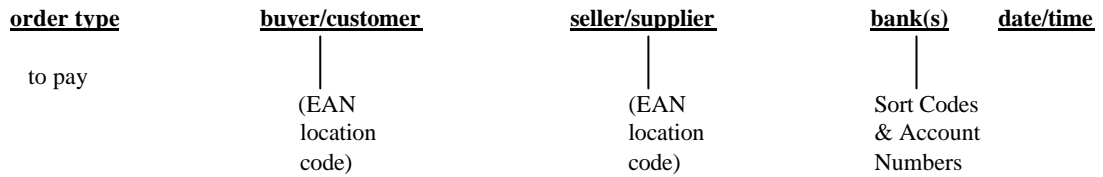
- 2) **Value Chain Participants** are the organisations, institutions and individuals who interact to make a value chain operate. These are:
- a) buyers/sellers/providers
 - b) agents
 - c) authorities or
 - d) individuals

Agents

Sometimes there is a third party to a transaction such as:

- a) bank or financial institution
- b) insurance company
- c) transporter
- d) freight forwarder or other party who facilitates the transaction

For example an order to pay involves the following value chain participants:



order number

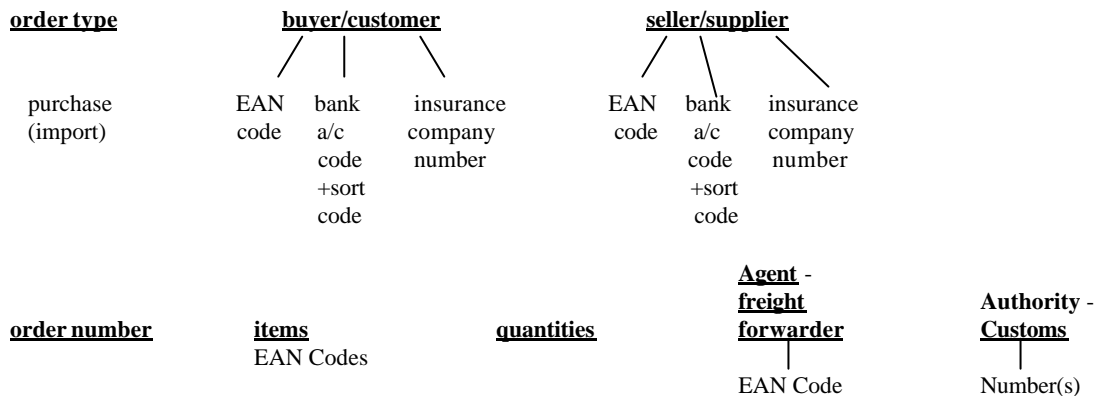
currency **quantity/amount**

This payment order could also include references to previous invoice numbers for which this payment is being made.

Authorities

There may also be an official Authority involved in the transaction, for example, when goods cross national frontiers, or when they need to be inspected, certified, measured or officially accompanied.

For example an international order could include:



Individuals

The remaining type of value chain participant beyond

- buyer/customer
- seller/supplier/provider
- agent
- authority

is the **individual** – employee, citizen, consumer, patient etc. Ideally, all individuals would have a unique identity for all purposes, which would be verifiable securely and automatically.

A service may, for example, be provided to a patient:

<u>order type</u>	<u>buver/customer</u>	<u>seller/provider</u>	<u>individual</u>	<u>date/time</u>
provision of service	consultant / EAN location code	x-ray department / EAN location code	identity number	
<u>order number</u>	<u>service</u> / EAN article number for type of x-ray			

- 3) Beyond value chain participant and products/services there are two other types of master data – processes and assets – making 4 types in total.

Processes

The provision of a service may need to be specified in greater detail as a process, with the information held in a master file accessed via a process code. There will be master files of
treatments (eg of patients with specific illnesses)
processes (eg of metals from one state to another)

Assets

Processes may not only involve customers, providers, products, services and/or individuals, but also assets. For example use machine number 6 (EAN asset identification number) to process this piece of metal as specified.

- 4) Further master data which relates to products and services are prices/costs and specifications.

Prices and Costs

Products, Services, Processes and Assets may have a price or cost, which will be held in the appropriate master file and accessed by code when required. The transaction which of necessity will involve a price is the **Invoice**. Apart from price and tax data and an order reference, the invoice in nearly all aspects will mirror the order.

Specifications

Products, Services and Assets will have detailed technical specifications, which again will be held in separate master files. This can include not only text, but also drawings, graphics and multimedia.

The construction of specifications may well be a major task in its own right which precedes to a significant degree the product/service master file and the associated price/cost file.

5) **Plans**

A plan is a **future** transaction. It is normally a summary of proposed orders. (An exception would be planned inventory). Its timescale may be a particular date/time as for a current order, or a **time period** – from to Hence there will be planned deliveries, movements, production, sales, processing, treatment, payments etc.

6) **Actuals, Achievements and Performance**

An actual, or achievement is a summary of **past** transactions – a record of performance. It is a record of completed events. It is similar to a plan except that the dates are in the past.

7) **Master Data**

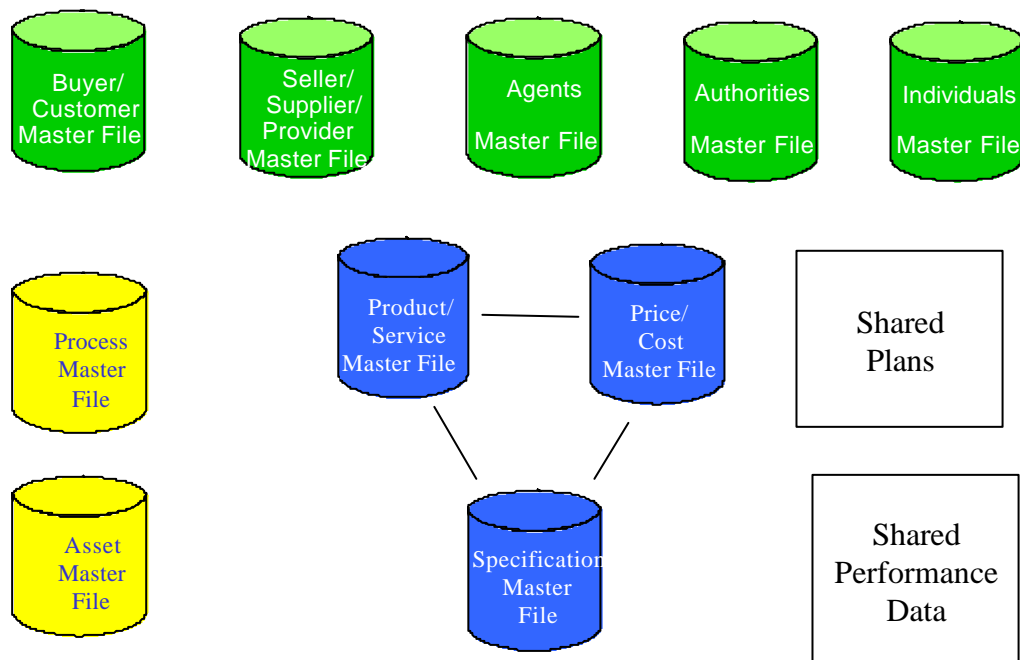
Master Data should be synchronised or aligned among value chain partners in advance of communicating transactions. No master data should appear in a transaction. Collaborative Event Management (the completion of common forms of data supporting an agreed joint process) over the Internet can be used to build up master data well in advance of orders or invoices being communicated. Master files should also be synchronised shortly before transactions flow to ensure complete accuracy, and hence speedy and certain processing, routing and actioning.

Master data may be exchanged by EDI, or may be held on a shared catalogue somewhere on the Internet or an agreed network. It may also be provided by a third party service.

8) **Transparent Joint Management of the Value Chain**

An “ideal” scenario would be:

- a) value chain participants build up agreed joint master files ahead of transactions being exchanged.



As with Master data creation, this can be done via Collaborative Event Management using shared Internet screens. CEM will also support the development and dissemination of joint

plans (planned orders, deliveries, movements etc). Also important will be the sharing of performance data.

A single server containing the master data may be shared by all the participants or separate master files may be synchronised or pre-aligned. Data can then be automatically downloaded into internal I.T. applications. All data definitions should be according to SIMPL.eb standards. This will ensure that data can flow automatically from the earliest plans, through transactions, to records of actuals achieved, and also from Internet systems, to EDI, to internal applications, with no error or delay or costly cross-reference tables.

CEM supports the sharing of knowledge (which is then structured into master data) and also the building of joint plans – to launch a product, promote a service, build a machine, design a bridge etc – i.e. any collaborative event across a value chain involving different participants and functions.

One of the key objectives of simplifying and standardising both processes and data is to ensure that the maximum amount of data can be automatically processed and actioned with speed, certainty and minimum cost. Individuals take decisions and share information via Internet systems to ensure that subsequent inter-enterprise data can be immediately processed and actioned.

Plans to be jointly developed

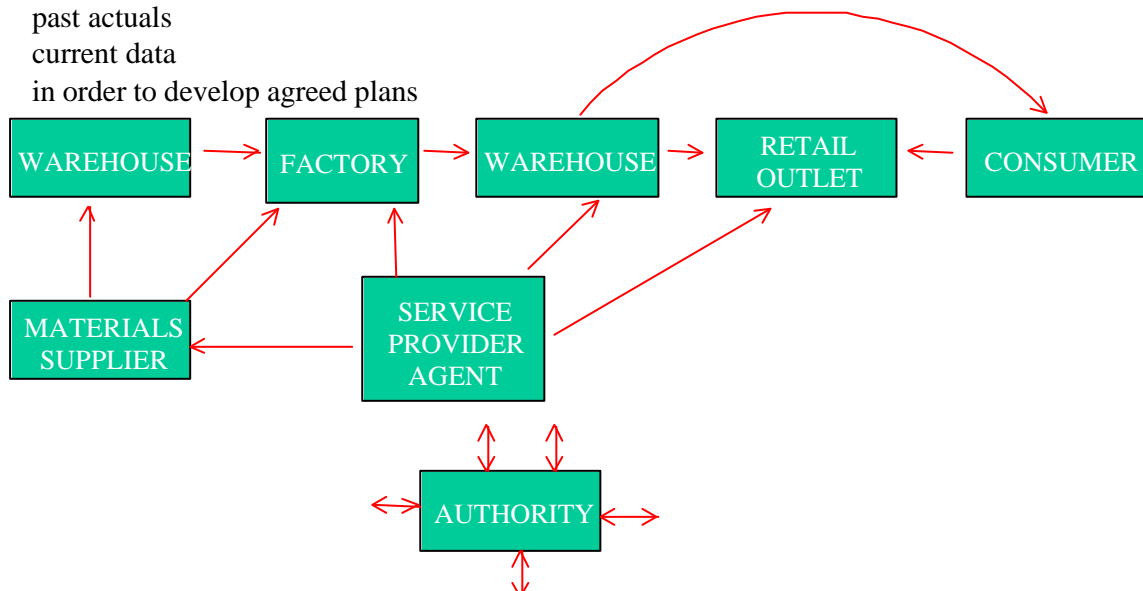
Some or all of the following data is shared over agreed timescales -

- inventory at each value chain location
- consumer sales or customer usage
- deliveries to value chain locations
- production/provision/deliveries of products or services from each value chain location

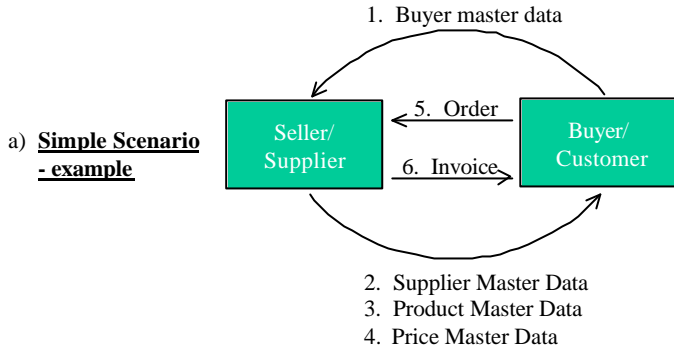
based on

past actuals
current data

in order to develop agreed plans



Each value chain location will potentially provide and use data on inventory, planned, current and actual (past) orders relating to any other location. This data may be used to trigger a new order to deliver, move, produce, etc. The sets of data used will depend on what data and techniques the value chain partners have agreed to use collectively and individually to plan and manage the chain (via Vendor or Co-managed Inventory, Continuous Replenishment, or customer or consumer – triggered ordering).

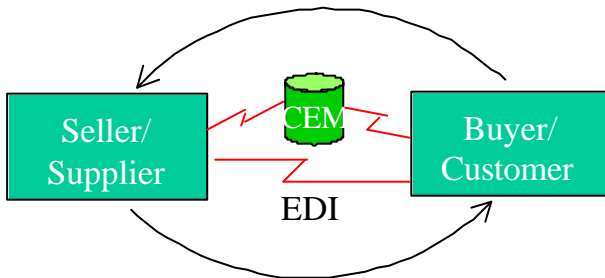


master data can be exchanged in advance in any suitable way - spreadsheet, fax, via a common catalogue or file.

b) **Sophisticated Scenario - example**

as above plus

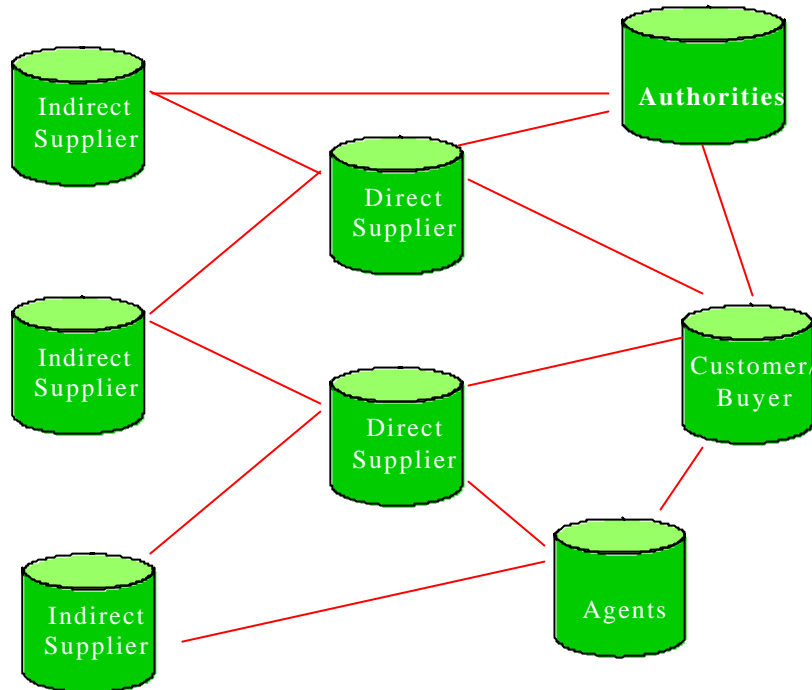
- Inventory Data - branches, warehouses, plans, current, past actuals
- Consumer Sales - current, past actuals
- Planned Deliveries - warehouses to branches
- Planned Orders - warehouses to supplier
- Payments



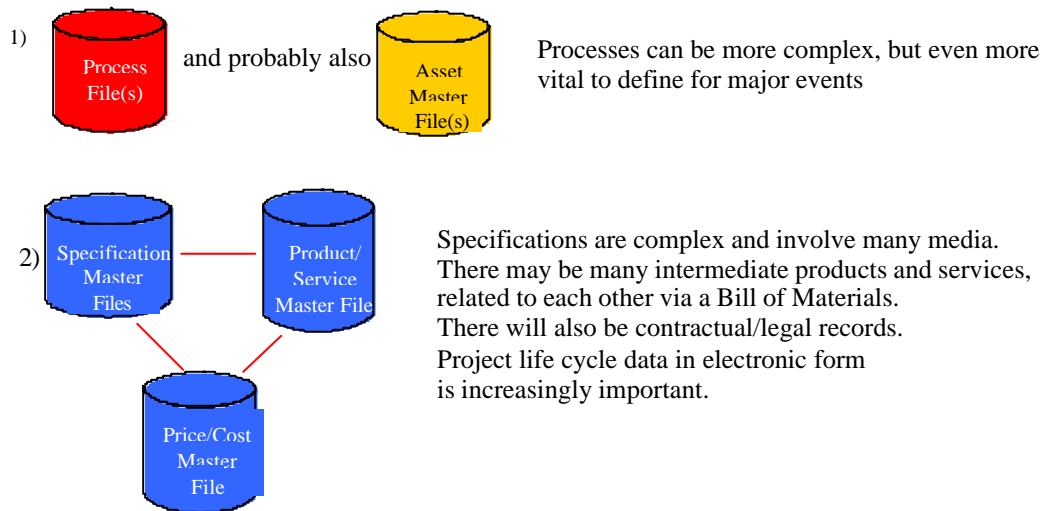
- Inventory Data - Warehouses
- Planned Production/Deliveries to Warehouses
- Direct Debits

9) **Major Event Management**

This would occur where there were many value chain partners collaborating over a number of years on a large scale project (engineering, scientific, administrative, governmental).



In addition to the master files above, all parties would build and access all or part of



Clear objectives need to be set in terms of dates (stages and completion), cost and performance. The agreed process supports the achievement of the objectives. Since effective processes depend on the development and sharing of specifications, agreement of joint plans, and measurement of performance, it is highly beneficial to be able to share standard data across all relevant value chain participants. Master data as defined above according to SIMPL.eb rules will then support simple, standard transactions to be quickly and accurately communicated and actioned across the value chain. The use of CEM provides very powerful support for the processes.