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PART II : THE MESSAGES**EANCOM Trade Messages.****EANCOM
Version number**

COACSU	Commercial Account Summary	002
COMDIS	Commercial Dispute	001
CONTRL	Syntax and Service Report	002
DELFOR	Delivery Schedule	002
DESADV	Despatch Advice	005
GENERAL	General Message	003
INSDDES	Instruction To Despatch	001
INVOIC	Invoice	008
INVRPT	Inventory Report	004
MSCONS	Metered Services Consumption Report	002
ORDCHG	Purchase Order Change Request	005
ORDERS	Purchase Order	008
ORDRSP	Purchase Order Response	005
OSTENQ	Order Status Enquiry	002
OSTRPT	Order Status Report	002
PARTIN	Party Information	006
PRICAT	Price/Sales Catalogue	006
PRODAT	Product Data	002
PROINQ	Product Inquiry	002
QUALITY	Quality Test Report	001
QUOTES	Quotation	002
RECADV	Receiving Advice	003
REMADV	Remittance Advice	003
REQOTE	Request for Quotation	002
RETANN	Announcement For Returns	001
RETINS	Instruction For Returns	001
SLSFCT	Sales Forecast Report	004
SLSRPT	Sales Data Report	004
TAXCON	Tax Control	002

EANCOM Transport Messages.**EANCOM
Version number**

HANMOV	Cargo/Goods Handling and Movement	002
IFCSUM	Multiple Consignment Transport Instruction	001
IFTMAN	Arrival Notice	001
IFTMBC	Booking Confirmation	001
IFTMBF	Firm Booking	001
IFTMIN	Transport Instruction	002
IFTSTA	Transport Status	002

EANCOM Finance Messages.**EANCOM
Version number**

BANSTA	Banking Status	001
CREMUL	Multiple Credit Advice	001
DEBMUL	Multiple debit advice	001
FINCAN	Financial Cancellation	001
FINSTA	Financial Statement	001
PAYMUL	Multiple Payment Order	001

PART III : DATA ELEMENT & CODE SETS DIRECTORY

* * * * *

1 OVERVIEW

1.1 Introduction

This document is the EDI (Electronic Data Interchange) standards manual developed and made available by EAN International. It is an implementation guideline of the EDIFACT standard (Electronic Data Interchange For Administration, Commerce and Transport) developed under the auspices of the United Nations.

The EANCOM manual should be read in conjunction with the "General EAN Specifications" manual which describes the EAN numbering and bar-coding standards. EAN Numbering Organisations publish specifications manuals adapted to the local needs, based on the EAN general recommendations. The current list of EAN Numbering Organisations is appended.

This document replaces the EANCOM manual published on 31st of March 1994 and it includes forty two standard EDI messages. All agreed change requests on the EANCOM 1994 manual have been incorporated into the existing messages. The documentation has been improved by adding more comprehensive examples, adding code values to restricted code sets where appropriate and further clarifications regarding the use of codes, data elements, segments and messages.

According to the rules agreed within EAN (see section 3.2.), the new version of the EANCOM manual must be implemented by user companies not later than one year after publication.

The 1997 version of EANCOM will remain stable for a minimum period of two years.

1.2 About EAN International

In 1977, representatives of manufacturers and distributors in twelve European countries took the initiative to form the organisation which they called the European Article Numbering Association (EAN). As members from countries outside Europe joined however, the name was changed to International Article Numbering Association, EAN International. The EAN abbreviation has been retained to identify the numbering and symbol marking system.

Today, approximately 350,000 companies world-wide participate in the EAN system through an international network of 78 Numbering Organisations representing 84 countries from all continents. EAN International is a fully independent organisation.

A formal agreement of co-operation has been established with the Uniform Code Council (UCC), the equivalent organisation acting for USA and Canada. UCC has currently a membership of approximately 200,000 companies.

As a result of this co-operation with UCC a number of common committees exist between EAN International and UCC. A prime example of such a committee is the International Data and Application Standards Committee (IDASC) which aims to ensure a consistent and technically sound development of the EAN/UCC system.

Since 1995 UCC have had a formal representation on the EAN International Communication Systems Committee (CSC), the committee responsible for the maintenance and development of

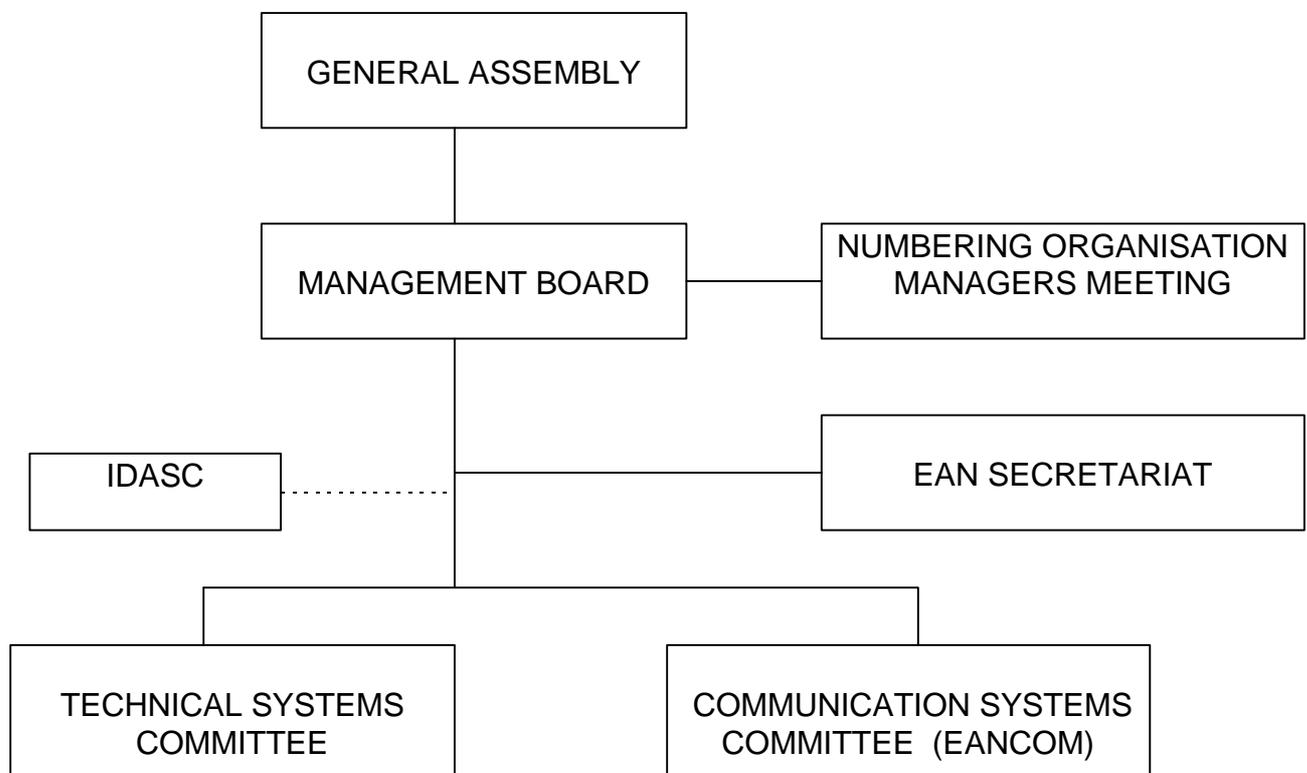
EANCOM. In 1996 UCC will issue the first release of their Global EDI guides (GEDI) which detail the use of several key EANCOM messages in an North American environment.

1.3 EAN Mission Statement

The mission of the International Article Numbering Association, EAN, and the Numbering Organisations, is to take a leading role in establishing a global multi-industry system of identification and communication for products and services based on internationally accepted and business led standards.

The objective is to improve the efficiency of integrated logistics while contributing added value to partners involved, as well as to consumers.

EAN organisational structure



The **General Assembly**, at which all member Numbering Organisations have voting rights, takes place at least once a year. It determines EAN objectives and strategies and the operational plans to achieve the defined policies.

The **Management Board** with a representation from industry, trade and numbering organisations meets at least three times a year and is the body responsible for the decision and final approval of all technical matters, as well as for the association's organisational issues.

The Management Board receives inputs from the **Numbering Organisation's Managers Meeting** which meets once a year. In addition a **Regional Numbering Organisation Managers Meetings** take place on average once per year where technical and other issues relevant to that region are discussed.

Specific issues are entrusted to expert working parties. The **Technical Systems Committee** handles the developments of coding and bar-coding standards. The **International Data and Application Standards Committee (IDASC)** is a joint EAN/UCC committee taking care of the global compatibility of the EAN & UCC standards. The **Communication Systems Committee** concentrates on EDI matters and more specifically on the development of EANCOM.

The **Secretariat** is located in Brussels, Belgium, where EAN is registered as a not for profit international association under Belgian law. The working language is English.

Liaison is established and in some cases formal agreements have been made with a number of international organisations, such as:

- European Commission (EC)
- Automatic Identification Manufacturers Association (AIM)
- European Committee for Standardisation (CEN)
- International Organisation for Standardisation (ISO)
- United Nations, Economic Commission for Europe (UN/ECE)
- European Board for EDI Standardisation (EBES)
- Pan-American EDIFACT Board (PAEB)
- Asian EDIFACT Board (ASEB)
- Australia/New Zealand EDIFACT Board (AZEB)
- International Standard Book Numbering (ISBN)
- International Standard Serials Numbering (ISSN)
- Industry EDI Groups (e.g. CEFIC, ODETTE, EDIFICE, EMEDI, EDItEUR)

1.4 EAN standards

The International Article Numbering Association EAN standards include:

- * Standard identification of trade items (goods and services), logistic units, locations and assets and other specialist applications;
- * Standard bar code formats to allow the automatic and secure capture of the standard identification;
- * Standard supplementary codes to encode variable data, in addition to the identification, in bar code form;
- * Standard format for trade, transport and finance transactions communicated from computer to computer.

1.5 Bar coding standards

EAN specifies standards for representing identification and supplementary data using bar codes. Three bar code symbologies are included in the EAN standards:

1. EAN/U.P.C. symbology (used exclusively to represent trade item identification)
2. Interleaved Two-of-Five (ITF - used exclusively to represent trade item identification)
3. UCC/EAN-128 (a subset of Code 128 which, throughout the use of UCC/EAN Application Identifiers, is capable of encoding all EAN identification numbers and supplementary codes).

1.6 UCC/EAN Application Identifiers in EANCOM

The UCC/EAN Application Identifiers (AIs) comprise of:

- * standard format and definition for each relevant data element;
- * application identifiers used as a prefix to the data elements represented in bar coded form;
- * a bar code symbology specifically dedicated to encoding AIs: UCC/EAN-128.

Application Identifiers have been defined for international and inter-sectorial use. AIs allow simple and generic data elements to be encoded in bar code form. This in turn allows fully automated data capture and processing within computer systems.

EAN standards are used in five major areas of application which are listed below. A table of the most important Application Identifiers and a mapping for each to the segment, data element, and if relevant code value in EANCOM is given for each area.

Please note that the tables are intended to allow the identification of the primary information mapping requirements between the UCC/EAN Application Identifiers and EANCOM. Additional information on UCC/EAN Application Identifiers may be found in the General EAN Specifications.

1.6.1 Application Identifiers related to Trade units

Trade units are goods and services upon which there is a need to retrieve fixed information at any point in the supply chain. A trade unit is typically any unit which is priced or ordered or invoiced.

AI	DATA CONTENT	EANCOM Segment	Data Element	Code Value / Code Name
Identification of a trade item				
01	EAN Article Number	LIN PIA	7143 7143	EN = EAN International Article Numbering Association or UP = UPC (Universal product code)
Supplementary information				
10	Batch or Lot number	PIA GIN	7143 7405	NB = Batch number BX = Batch number
11	Production date	DTM	2005	94 = Production / manufacture date
13	Packaging date	DTM	2005	365 = Packaging date
15	Minimum durability date	DTM	2005	360 = Sell by date 361 = Best before date
17	Maximum durability date	DTM	2005	36 = Expiry date
20	Product Variant	PIA	7143	PV = Promotional variant number

AI	DATA CONTENT	EANCOM Segment	Data Element	Code Value / Code Name
21	Serial number	PIA GIN	7143 7405	SN = Serial number BN = Serial number
22	HIBCC - Quantity Date and Batch	QTY DTM PIA GIN	6063 2005 7143 7405	17E = Number of units in lower packaging or configuration level (EAN Code) 36 = Expiry date NB = Batch number BX = Batch number
240	Additional product identification assigned by the manufacturer	PIA	7143	SA= Supplier's article number
241	Customer part number	PIA	7143	IN = Buyer's item number
30	Variable Quantity	QTY	6411	Various
310(1)	Net weight, kilograms	MEA	6313	AAA = Unit net weight
311(1)	Length or 1st dimension, metres, trade	MEA	6313	LN = Length
312(1)	Width, diameter or 2nd dim., metres, trade	MEA	6313	WD = Width
313(1)	Depth, thickness, height, 3rd dimension, metres, trade	MEA	6313	HT = Height
314(1)	Area, square metres, trade	MEA	6313	No Code Available in 6313
315(1)	Net volume, litres	MEA	6313	AAX = Net volume
316(1)	Net volume, cubic metres	MEA	6313	AAX = Net volume
422	Country of origin of the product	ALI	3239	Various
<p>NOTE: (1) UCC/EAN Application Identifiers for measures are four digits. The fourth digit is a decimal point indicator, see General EAN Specifications for details.</p> <p>Only UCC/EAN Application Identifiers for „metric“ measures are shown in this table. For other units of measure see the General EAN Specifications.</p>				

1.6.2 Application Identifiers related to Logistic units

Logistic units are physical units established for transport and storage of goods of any kind which need to be tracked and traced individually in a supply chain.

AI	DATA CONTENT	EANCOM Segment	Data Element	Code Value / Code Name
Identification of a logistic unit				
00	Serial Shipping Container Code	GIN	7405	BJ = Serial shipping container code
Supplementary data				
02	EAN number of article contained (used in conjunction with AI 37)	PIA	7143	ACU = Article number contained
37	Quantity (used in conjunction with AI 02)	QTY	6063	Various
330(1)	Gross weight, kilograms	MEA	6313	AAB = Unit gross weight
331(1)	Length or 1st dimension, metres, logistics	MEA	6313	LN = Length
332(1)	Width, diameter or 2nd dim., metres, logistics	MEA	6313	WD = Width
333(1)	Depth, thickness, height, 3rd dimension, metres, logistics	MEA	6313	HT = Height
334(1)	Area, square metres, logistics	MEA	6313	No Code Available in 6313
335(1)	Volume, litres, logistics	MEA	6313	AAW = Gross volume AAX = Net volume
336(1)	Volume, cubic metres, logistics	MEA	6313	AAW = Gross volume AAX = Net volume
400	Customer's purchase order number	RFF	1153	ON - Order number (buyer)
401	Consignment number	RFF	1153	CU = Consignor's reference number
<p>NOTE: (1) UCC/EAN Application Identifiers for measures are four digits. The fourth digit is a decimal point indicator, see General EAN Specifications for details.</p> <p>Only UCC/EAN Application Identifiers for „metric“ measures are shown in this table. For other units of measure see the General EAN Specifications.</p>				

1.6.3 Application Identifiers related to Locations

A **Location** is anything which is, or can be addressed. Some examples of this would include companies, departments, rooms, factories, shelves, delivery points, EDI network addresses, etc.

AI	DATA CONTENT	EANCOM Segment	Data Element	Code Value / Code Name
410	Ship to EAN location number	NAD LOC	3035 3227	DP = Delivery party 7 = Place of delivery
411	Bill to (invoice to) EAN location number	NAD	3035	IV = Invoicee
412	Purchase from EAN location number	NAD	3035	SU = Supplier
413	Ship for (deliver for - forward to) EAN location number	NAD LOC	3035 3227	DP = Delivery party 7 = Place of delivery
414	EAN location number (for physical identification)	NAD LOC	3035 3227	Various Various
420	Ship to postal code	NAD	3251	
421	Ship to postal code with ISO country code	NAD	3251 3207	Various

1.6.4 Application Identifiers related to Assets (including returnable containers)

An **asset** is broadly defined as anything that is owned and not traded. This definition includes individual assets of a company as well as *returnable assets* which may be used to transport products between organisations. Examples of assets include beer kegs, gas cylinders, chemical containers, pallets and crates.

AI	DATA CONTENT	EANCOM Segment	Data Element	Code Value / Code Name
Identification of an asset				
8003	EAN/U.P.C. number & serial number of returnable asset	LIN and PIA	7143 7143	EN = EAN International Article Numbering Association or UP = UPC (Universal product code) SN = Serial number
8004	EAN/UCC serial asset identification	PIA	7143	SN = Serial number

1.6.5 Other applications

This area comprises specific application guidelines dealing with the numbering and symbol marking of items not covered by the areas above. The applications described are generally very specific and require special consideration (e.g. coupons, refund receipts, service relationships, etc.), but are still aimed to be used in an open environment.

1.7 EDI Standards

Many EAN Numbering Organisations have been approached and entrusted by their member companies to develop a standard communication system, including telecommunication facilities, allowing commercial documents such as purchase orders, delivery instructions, invoices, product information to be sent via Electronic Data Interchange to their trading partners.

The EAN International EDI standard, EANCOM, came about as a result of EDI developments among the EAN Numbering Organisations. In 1987 a decision was taken at the General Assembly that an international EDI standard based on EDIFACT should be developed. EAN International's EDI standard, EANCOM, has been in existence since 1990 and this issue is the fourth release of the standard.

1.8 EANCOM objective and strategy

EAN International's objective regarding EANCOM is to provide EAN users with a standard for national and international EDI communications. Numbering organisations should make EANCOM available to their members and are encouraged to promote the concept of EANCOM for national and international use.

EAN International's strategy regarding EANCOM is to provide, as an integral part of the EAN system, an EDI standard which is fully compliant with UN/EDIFACT and to co-operate with EDI service providers with the objective of supporting inter-operability

1.9 The Communication Systems Committee.

The development of the EANCOM standard is performed by the EAN Communication Systems Committee whose members are experts in EDI technical matters and who have access to experts in their Numbering Organisations.

The Communication Systems Committee deals with the following :

1. To provide EAN users with a practical, multi-industry EDI standard: EANCOM.
2. To achieve this by defining Standard Implementation Guidelines of United Nations Standard Messages (UNSM's).
3. To define such agreements primarily to meet the needs of users for international EDI, but to take account of the requirements for national standards for domestic use to be compatible with the international standard.

4. To monitor EDIFACT developments and to use the information gathered to guide EANCOM work.
5. To influence EDIFACT developments, through the appropriate EDIFACT working groups, so that the requirements of the EAN community, through EANCOM, are compatible with the general standards. To draft proposed UNSM's if required.
6. To produce explanatory documentation to support implementation of the EANCOM standards by the EAN community.
7. To develop clear and informative descriptions of the EANCOM standards. To create awareness of the standards amongst both the EAN community and other opinion formers including governmental authorities, network providers and the media.
8. To assist Numbering Organisations in co-ordinating exchange partnerships internationally if required.
9. To propose EAN policy regarding use of Value Added Networks (VAN) and to liaise with VAN suppliers.
10. To liaise with the EAN Technical Committee to ensure that coding rules used in EANCOM are consistent across all strands of EAN work.

Appendix: EAN MEMBER LIST**ALGERIA (1994) - EAN ALGERIE**

2, Rue des Frères Ziata
El Mouradia
ALGER
Tel. : 213.2.59.14.36
Telefax : 213.2.59.22.41

ARGENTINA (1985) - ASOCIACION CIVIL ARGENTINA DE CODIFICACION DE PRODUCTOS COMERCIALES (CODIGO)

Viamonte 340 - 1° Piso
1053 BUENOS AIRES
Tel. : 54.1.313.17.19
Telefax : 54.1.313.17.65

ARMENIA (1996) - EAN ARMENIA

Komitas Avenue 49/2
P.O. Box 51
375051 YEREVAN
Tel. : 3742.23.47.78
Telefax : 3742.28.56.20

AUSTRALIA (1979) - EAN Australia

Locked Bag, 10
Oakleigh
VICTORIA 3166
Tel. : 61.3.9.569.97.55
Telefax : 61.3.9.569.15.25

AUSTRIA (1977) - EAN-AUSTRIA

Gesellschaft für Kooperative Logistik GmbH
Mayerhofgasse 1/15
1040 WIEN
Tel. : 43.1.505.86.01
Telefax : 43.1.505.86.01.22

BELGIUM AND GRAND DUCHY OF LUXEMBURG (1977) - ASBL ICODIF /

EAN Belgium -Luxembourg VZW
Rue Royale 29
1000 BRUXELLES
Tel. : 32.2. 229. 18. 80
Telefax : 32.2.217.43.47

BOLIVIA (1994) - EAN BOLIVIA

Camara de Industria y Comercio de Santa Cruz
Suarez de Figueroa 127
P.O.Box 180
SANTA CRUZ DE LA SIERRA
Tel. : 591.3.334.555
Telefax : 591.3.342.353

BOSNIA-HERZEGOVINA (1995) - EAN-BIH

C/O Chamber of Economy of Bosnia and Herzegovina
Mis Irbina 13
71000 SARAJEVO
Tel. : 387.71.66.33.70
Telefax : 387.71.66.36.33

BRAZIL (1985) - EAN BRAZIL

Av. Paulista 2644
10° Andar
01310.934 SAO PAULO
Tel. : 55.11.259.34.44
Telefax : 55.11.231.28.08

BULGARIA (1991) - BULGARIAN CHAMBER OF COMMERCE

AND INDUSTRY - EAN BUREAU
42 P. Partchevitch Str.
1000 SOFIA
Tel. : 359.2.87.26.31
Telefax : 359.2.87.32.09

CENTRAL AMERICA (1991) - INSTITUTO CENTROAMERICANO DE CODIFICACION COMERCIAL (ICCC)

Ruta 6, 9-21 Zona 4
Edificio Camara de Industria
Nivel 10
GUATEMALA
Tel. : 502.2.341.327
Telefax : 502.2.326.658

CHILE (1989) - EAN CHILE

Vecinal 140, Las Condes
SANTIAGO
Tel. : 56.2.231.30.24
Telefax : 56.2.233.35.16

CHINA (1991) - ARTICLE NUMBERING CENTRE OF CHINA (ANCC)

East Gate No. 46 Dewai
Yuzhongxili Xicheng District
100029 BEIJING
Tel. : 86.10.20.24.528
Telefax : 86.10.20.24.523

COLOMBIA (1989) - INSTITUTO COLOMBIANO DE CODIFICACION Y AUTOMATIZACION COMERCIAL (IAC)

Avenida Jorge Eliecer Gaitan n°68B-85
Torre 2 Piso 6° cem.
BOGOTA D.C.
Tel. : 57.1.427.09.99
Telefax : 57.1.427.02.01

CROATIA (1992) - CROATIAN EAN CENTER (CRO-EAN)

Rooseveltov Trg 2
10000 ZAGREB
Tel. : 385.1.465.1555
Telefax : 385.1.448.618

CUBA (1990) - CAMARA DE COMERCIO DE LA REPUBLICA DE CUBA

Calle 21 No. 661
Esquina a Vedado
Ciudad de la Habana
Apartado 4237
LA HABANA 4
Tel. : 53.7.30.44.36
Telefax : 53.7.33.30.42

CYPRUS (1985) - CYPRUS CHAMBER OF COMMERCE AND INDUSTRY (EAN-CYPRUS)

39, Grivas Dighenis Ave. and Deligiorgis 3
P.O. Box 1455
NICOSIA
Tel. : 357.2.44.95.00
Telefax : 357.2.36.56.85

CZECH REPUBLIC (1983) - EAN CZECH

Na Pankraci 30
140 00 PRAHA 4
Tel. : 42.2.61.00.11.45
Telefax : 42.2.61.00.11.47

DENMARK (1977) - EAN DENMARK

Aldersrogade 6d
2100 COPENHAGEN
Tel. : 45.39.27.85.27
Telefax : 45.39.27.85.10

DOMINICAN REPUBLIC (1995) - EAN REPUBLICA DOMINICANA

Edif. Plaza Compostela, Suite 3-I-5
Ave. John F. Kennedy esq. Calle 7
SANTO DOMINGO
Tel. : 1.809.476.0829
Telefax : 1.809.476.0828

ECUADOR (1992) - ASOCIACION ECUATORIANA DE CODIGO DE PRODUCTO (ECOP)

Ruiz de Castilla 763 y Andagoya
Edif. Conde Ruiz de Castilla
Tercer Piso, Oficina 3
QUITO
Tel. : 593.2.507.580
Telefax : 593.2.507.584

EGYPT (1996) - EAN EGYPT C/o T3A

6 "A" Giza Street, Giza
P.O. Box 61
EL ORMAN
Tel. : 202.571.93.02
Telefax : 202.571.51.61

ESTONIA (1993) - EAN-ESTONIA
 Estonian Chamber of Commerce and Industry
 17 Toom-Kooli Street
 EE0106 TALLINN
 Tel. : 372.2.44.34.82
 Telefax : 372.2.44.36.56

FINLAND (1977) - THE CENTRAL CHAMBER OF COMMERCE OF FINLAND
 World Trade Center Helsinki
 Aleksanterinkatu 17
 P.O. Box 1000
 00101 HELSINKI
 Tel. : 358.0.69.69.69
 Telefax : 358.0.65.03.03

FRANCE (1977) - EAN FRANCE - GENCOD
 13 Boulevard Lefebvre
 75015 PARIS
 Tel. : 33.1.53.68.05.60
 Telefax : 33.1.48.28.16.81

GEORGIA (1996) - C/o Georgian Chamber of Commerce and Industry
 11 Chavchavadze Avenue
 380079 TBILISI
 Tel. : 995.32.222.552
 Telefax : 995.32.235.760

GERMANY (1977) - CENTRALE FÜR COORGANISATION (CCG)
 Spichernstrasse 55
 50672 KÖLN
 Tel. : 49.221.57.49.02
 Telefax : 49.221.57.49.159

GREECE (1985) - HELLENIC CENTRE OF ARTICLE NUMBERING S.A.
 (HELLCAN)
 Plat. Aghiou Dimitriou Square & D. Kyriakou 2
 145 62 Kifissia - ATHENS
 Tel. : 30.1.80.17.224
 Telefax : 30.1.80.19.156

HONG KONG (1989) - HONG KONG ARTICLE NUMBERING ASSOCIATION
 (HKANA)
 Unit B, 23/F United Centre
 95 Queensway
 HONG KONG
 Tel. : 852.28612.819
 Telefax : 852.28612.423

HUNGARY (1984) - Hungarian Association of Packaging and Material Handling - EAN
 Bureau
 Rigo u. 3
 1085 BUDAPEST
 Tel. : 36.1.113.7034
 Telefax : 36.1.133.8170

ICELAND (1984) - EAN ICELAND
 Icetec
 Keldnaholt
 112 REYKJAVIK
 Tel. : 354.5877.000
 Telefax : 354.5877.409

INDIA (1995) - EAN INDIA
 C/O Indian Institute of Packaging
 E-2, MIDC Area
 Andheri (East)
 BOMBAY 400 093
 Tel. : 91.22.821.98.03
 Telefax : 91.22.837.53.02

INDONESIA (1993) - EAN INDONESIA PRODUCT NUMBERING COUNCIL
 C/o Yayasan Codex Universalis
 J.L. R.P. Suroso No. 26
 JAKARTA 10350
 Tel. : 62.21.325.800
 Telefax : 62.21.310.3357

IRAN (1996) - EAN IRAN
 C/O The Institute for Trade Studies and Research
 ITR Building
 240 North Kargar Street
 TEHRAN
 Tel. : 98.21.920.781
 Telefax : 98.21.927.236

IRELAND (1992) - EAN IRELAND
 Irish Business and Employers Confederation
 Confederation House
 84/86 Lower Baggot Street
 DUBLIN 2
 Tel. : 353.1.605.15.34
 Telefax : 353.1.660.17.17

ISRAEL (1984) - ISRAEL CODING ASSOCIATION (ICA)
 Industry House
 29 Hamered Street
 TEL-AVIV 61500
 Tel. : 972.3.519.8839
 Telefax : 972.3.516.2082

ITALY (1977) - ISTITUTO NAZIONALE PER LA DIFFUSIONE
 DELLA CODIFICA DEI PRODOTTI (INDICOD)
 Via Serbelloni 5
 20122 MILANO
 Tel. : 39.2.79.59.94
 Telefax : 39.2.78.43.73

JAPAN (1978) - THE DISTRIBUTION CODE CENTRE (DCC)
 No. 3rd TOC - Bldg. 7-23-1
 Nishigotanda - Shinagawa-ku
 TOKYO No. 141
 Tel. : 81.3.34.94.4029
 Telefax : 81.3.34.94.4080

KAZAKHSTAN (1996) - EAN KAZAKHSTAN - C/o Medstandart
 Mynbaev Street 47
 480008 ALMATY
 Tel. : 3272.455.75.78
 Telefax : 3272.455.93.2

LATVIA (1994) - EAN LATVIA
 C/O Latvian Chamber of Commerce and Industry
 21 Brivibas Blvd
 RIGA LV - 1849
 Tel. : 371.733.32.27
 Telefax : 371.782.00.92

LEBANON (1996) - C/o Beirut Chamber of Commerce and Industry
 Justinien Street
 BEIRUT
 Tel. : 961.1.345.425
 Telefax : 961.1.602.050

LITHUANIA (1994) - EAN LITHUANIA
 C/O Association of Lithuanian Chambers of Commerce and Industry
 18 V. Kudirkos
 2600 VILNIUS
 Tel. : 370.2.61.45.32
 Telefax : 370.2.22.26.21

FYR MACEDONIA (1994) - EAN-MAC
 C/O Economic Chamber of Macedonia
 Dimitrie Cupovski 13
 P.O.Box 324
 91000 Skopje
 Tel. : 389.91.118.088
 Telefax : 389.91.116.210

MALAYSIA (1988) - MALAYSIAN ARTICLE NUMBERING COUNCIL (MANC)
 C/o Federation of Malaysian Manufacturers
 17th Floor, Wisma Sime Darby
 Jalan Raja Laut
 50350 KUALA LUMPUR
 Tel. : 60.3.293.12.44
 Telefax : 60.3.293.26.81

MALTA (1992) - MALTA ARTICLE NUMBERING ASSOCIATION (MANA)
 c/o Malta Confederation of Industry (MFOI)
 Development House
 St Anne's Street
 FLORIANA VLT 01
 Tel. : 356.222.074
 Telefax : 356.240.702

MAURITIUS (1994) - EAN MAURITIUS
 C/O The Mauritius Chamber of Commerce and Industry
 3 Royal Street
 Port Louis
 Tel. : 230.208.33.01
 Telefax : 230.208.00.76

MEXICO (1987) - ASOCIACION MEXICANA DEL CODIGO DE PRODUCTO AC (AMECOP)
Horacio 1855 - 6° Piso
Col. Chapultepec Morales
11570 MEXICO, D.F.
Tel. : 52.5.395.20.44
Telefax : 52.5.395.20.38

MOLDOVA (1995) - EAN MOLDOVA
63 Kogalniceanu Street
277014 KISHINEV
Tel. : 373.2.44.32.53
Telefax : 373.2.44.01.19

MOROCCO (1993) - EAN-MAROC
11 Blvd Emile ZOLA
Appt 17
CASABLANCA
Tel. : 212.244.73.50
Telefax : 212.244.73.31

NETHERLANDS (1977) - EAN NEDERLAND
Tourniairestraat 3
1006 KK AMSTERDAM
Tel. : 31.20.511.38.20
Telefax : 31.20.511.38.30

NEW ZEALAND (1981) - EAN NEW ZEALAND
35-37 Victoria Street
P.O. Box 11-110
WELLINGTON
Tel. : 64.4.499.48.38
Telefax : 64.4.499.48.70

NORWAY (1977) - EAN NORGE
Spireaveien 6
0580 OSLO
Tel. : 47.2.265.10.00
Telefax : 47.2.265.56.

PARAGUAY (1994) - EAN PARAGUAY
Asociacion de Empresarios Cristianos
Antequera 611
1° Piso
ASUNCION
Tel. : 595.21.442.108
Telefax : 595.21.445.490

PERU (1989) - ASOCIACION PERUANA DE CODIGOS (APC)
Av. Javier Prado Oeste
2150 San Isidro
LIMA
Tel. : 51.1.221.10.00
Telefax : 51.1.440.02.70

PHILIPPINES (1993) - PHILIPPINE ARTICLE NUMBERING COUNCIL (PANC)
20 San Rafael St.
Bo. Kapitolyo
Passig City
METRO MANILA 1200
Tel. : 63.2.631.46.31
Telefax : 63.2.631.46.31

POLAND (1990) - EAN POLAND
C/o Institute of Warehouse Management
Ul. Estkowskiego 6
61-755 POZNAN
Tel. : 48.61.527.681
Telefax : 48.61.526.376

PORTUGAL (1986) - ASSOCIACAO PORTUGUESA DE IDENTIFICACAO E CODIFICACAO DE PRODUTOS (CODIPOR)
Rua Professor Fernando da Fonseca 16
Escritorio II
1600 LISBOA
Tel. : 351.1.757.62.54
Telefax : 351.1.757.05.07

ROMANIA (1994) - EAN ROMANIA
13 Mexic Street
1st Ward
Bucarest
Tel. : 40.1.212.13.02
Telefax : 40.1.212.18.72

RUSSIAN FEDERATION (1986) - AUTOMATIC IDENTIFICATION ASSOCIATION - UNISCAN
P.O. Box 10
MOSCOW 117415
Tel. : 7.095.432.49.26
Telefax : 7.095.431.08.54

SINGAPORE (1987) - SINGAPORE ARTICLE NUMBER COUNCIL (SANC)
SMA House
20 Orchard Road
SINGAPORE 238830
Tel. : 65.338.87.87
Telefax : 65.338.33.58

SLOVAKIA (1994) - EAN SLOVAKIA
Predmestska ul. 1
010 01 ZILINA
Tel. : 42.89.641.896
Telefax : 42.89.641.897

SLOVENIA (1992) - SLOVENIAN ARTICLE NUMBERING ASSOCIATION (SANA)
WTC Ljubljana
Dunajska 156
61000 LJUBLJANA
Tel. : 386.61.18.81.350
Telefax : 386.61.16.88.312

SOUTH AFRICA (1982) - SOUTH AFRICAN NUMBERING ASSOCIATION (SAANA)
P.O. Box 41417
CRAIGHALL 2024
JOHANNESBURG
Tel. : 27.11.447.61.10
Telefax : 27.11.447.41.59

SOUTH KOREA (1988) - EAN KOREA
6th Floor, Textile Center
944-31, Daechi-Dong
Kangnam-Ku
135-713 SEOUL
Tel. : 82.2.528.54.54
Telefax : 82.2.528.54.50

SPAIN (1978) - ASOCIACION ESPANOLA DE CODIFICACION COMERCIAL (AECOC)
Calle Mallorca 288
08037 BARCELONA
Tel. : 34.3.207.53.62
Telefax : 34.3.459.21.52

SRI LANKA (1995) - EAN SRI LANKA
C/O Ceylon Chamber of Commerce
50 Navam Mawatha
P.O.Box 274
COLOMBO 2
Tel. : 94.1.421.745
Telefax : 94.1.449.352

SWEDEN (1977) - EAN SWEDEN
(Stiftelsen EAN Sverige)
Klarabergsviadukten 96
S-106 13 STOCKHOLM
Tel. : 46.86.98.30.40
Telefax : 46.86.98.30.49

SWITZERLAND (1977) - EAN (SWITZERLAND)
Güterstrasse 133
4053 BASEL
Tel. : 41.61.366.70.00
Telefax : 41.61.366.70.99

TAIWAN (1985) - COMMERCIAL AUTOMATION AND NUMBERING INSTITUTE (CAN)
4th Floor
10 Lin Shen South Road
TAIPEI
Tel. : 886.2.39.39.145
Telefax : 886.2.39.13.171

THAILAND (1988) - THAI ARTICLE NUMBERING COUNCIL (TANC)

Queen Sirikit National Convention Center
4th Floor, Zone C
60 New Rachadapisek Road
Klongtoey
BANGKOK 10110
Tel. : 66.2.229.42.55
Telefax : 66.2.229.49.39

TUNISIA (1992) - SOCIETE TUNISIENNE DE CODIFICATION (TUNICODE)

24, rue Jamel Abdel Nasser
TUNIS 1000
Tel. : 216.1.334.058
Telefax : 216.1.334.574

TURKEY (1988) - UNION OF CHAMBERS OF COMMERCE, INDUSTRY,
MARITIME COMMERCE AND COMMODITY EXCHANGES OF TURKEY
(UCCET)

Atatürk Bulvarı 149
06540 Bakanlık
ANKARA
Tel. : 90.312.425.22.43
Telefax : 90.312.419.32.28

UKRAINE (1994) - EAN UKRAINE

26 Artema Street
254053 KIEV
Tel. : 380.44.216.07.34
Telefax : 380.44.216.00.32

UNITED KINGDOM (1977) - ARTICLE NUMBER ASSOCIATION UK LTD
(ANA-UK)

11 Kingsway
LONDON WC2B 6AR
Tel. : 44.171.240.29.12
Telefax : 44.171.240.81.49

URUGUAY (1989) - CENTRO URUGUAYO DE NUMERACION DE ARTICULOS
(CUNA)

Agr. German Barbato 1363 / 903
11200 MONTEVIDEO
Tel. : 598.2.983.534
Telefax : 598.2.931.382

VENEZUELA (1987) - EAN VENEZUELA

Avenida Independencia Frente al Centro Comercial Bello Campo
Edificio Omnis - Piso 8 - Of. 82
CARACAS 1062
Tel. : 58.2.261.83.52
Telefax : 58.2.263.01.73

VIETNAM (1995) - EAN VIETNAM

C/O Vietnam Standards Institute
Nghia do
Tuliem
HANOI
Tel. : 84.4.361.463
Telefax : 84.4.361.771

YUGOSLAVIA (1982) - YUGOSLAV ARTICLE NUMBERING ASSOCIATION
(YANA)

Terazije 23/V
11000 BEOGRAD
Tel. : 381.11.324.83.92
Telefax : 381.11.324.87.54

United States & Canada (Administered by UCC)**United States** - Uniform Code Council (UCC)

8163 Old Yankee Road
Suite J
Dayton, Ohio 45459
Tel. : 1.513.435.38.70
Fax : 1.513.435.4749

Canada - Product Code Council of Canada (PCCC)

885 Don Mills Road, Suite 301
Don Mills
Ontario M3C 1V9
Tel: : 1.416.510.80.24
Fax: : 1.416.510.80.43

2 EDIFACT

2.1 Definition of UN/EDIFACT

UN/EDIFACT: United Nations rules for Electronic Data Interchange for Administration, Commerce and Transport. They comprise a set of internationally agreed standards, directories and guidelines for the electronic interchange of structured data, and in particular that related to trade in goods and services, between independent computerised information systems.

Recommended within the framework of the United Nations, the rules are approved and published by the UN/ECE/WP.4 (United Nations / Economic Commission for Europe / Working Party 4) in the United Nations Trade Data Interchange Directory (UNTDID) and are maintained under agreed procedures. UNTDID includes:

- EDIFACT syntax rules (ISO 9735);
- Message design guidelines;
- Syntax implementation guidelines;
- EDIFACT Data Elements Directory, EDED (a subset of UNTDED);
- EDIFACT Code list, EDCL;
- EDIFACT Composite data elements Directory, EDCD;
- EDIFACT standard Segments Directory, EDSD;
- EDIFACT United Nations Standard Messages Directory, EDMD;
- Uniform Rules of Conduct for the Interchange of Trade Data by Tele-transmission (UNCID);
- Explanatory material, as appropriate.

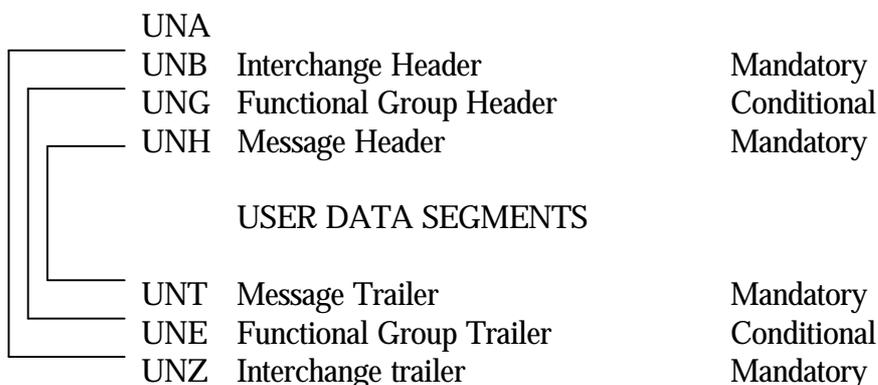
2.2 EDIFACT syntax overview

This section is a summary of the ISO 9735 document: "EDIFACT Application level syntax rules", first released on 1988-07-15, amended and reprinted on 1990-11-01, and Amendum 1 of 1992.

The EDIFACT syntax rules set the standards for structuring data into segments, segments into messages, and messages into an interchange.

2.2.1 Structure of an interchange

An interchange may consist of the following segments:



Segments starting with "UN" are called service segments. They constitute the envelope or the "packing" of the EDIFACT messages.

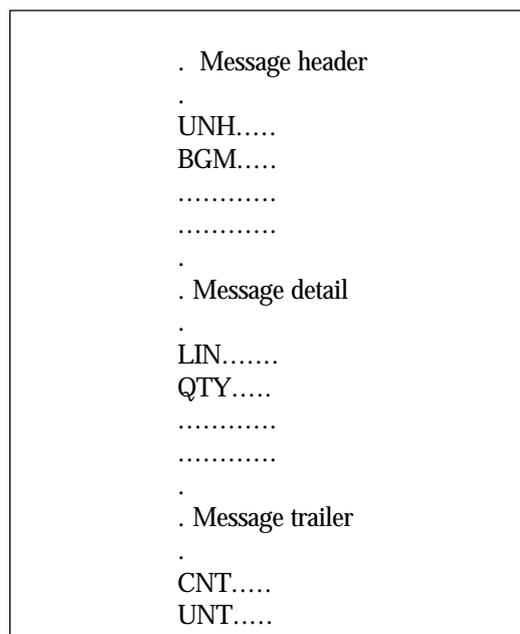
User data segments contain the information itself, in a format specific to each message type.

2.2.2 Structure of a message

Each data segment has a specific place within the sequence of segments in the message. They may occur in any of the following three sections of the message:

- a. **Heading section** - A segment occurring in this section relates to the entire message.
- b. **Detail section** - A segment occurring in this section relates to the detail information only.
- c. **Summary section** - Only segments containing totals or control information may occur in the summary section, e.g. invoice total amount, number of lines in a purchase order, etc.

The sequence of the three message sections can be represented by the following simple example;



The same segment type may occur in more than one of the message sections, e.g. in the header and in the detail section, and/or more than once in the same section.

Some segments may be repeated a certain number of times at their specific location in the message. The status, Mandatory or Conditional, and the maximum number of repetitions of segment types are indicated in the message structure.

Within a message, specific groups of functionally related segments may be repeated; these groups are referred to as "segment groups". The maximum number of repetitions of a particular segment group at a specific location is included in the message definition.

A segment group may be nested within other segment groups, provided that the inner segment group terminates before any outer segment group terminates.

2.2.3 Segment structure

A segment consists of:

- A segment tag: identifies the segment type
- Data element separators
- Simple, composite, or component data elements
- A segment terminator

Data elements can be defined as having a fixed or variable length.

A composite data element contains two or more component data elements.

A component data element is a simple data element used in a composite data element.

A data element can be qualified by another data element, the value of which is expressed as a code that gives specific meaning to the data. The data value of a qualifier is a code taken from an agreed set of code values.

2.2.4 Separators

In EANCOM four service characters (extracted from UNOA) have a special meaning and act as the default separators for EANCOM;

Apostrophe	'	= segment terminator
Plus sign	+	= segment tag and data element separator
Colon	:	= component data element separator
Question Mark	?	= release character; immediately preceding one of the service characters, it restores their normal meaning. E.g. 10?+ 10= 20 means 10+ 10= 20. Question mark is represented by ??

Should trading partners agree to use any of the character sets from B to F (inclusive) and the default separators from UNOA, then the UNA segment must be provided to explicitly state the default separator values.

When using any of the character sets A through F then the syntax version number (DE 0002) in the UNB segment should be set to 3.

Example of an EDIFACT segment:

DTM+ 137:19940101:102'

DTM	=	Tag of the "Date/Time/Period" segment;
+	=	separator;
137	=	Qualifier to indicate the date is the Document/Message Date/Time;
:	=	separator of data elements within a composite (here, the date qualifier and the date);
19940101	=	the date;
:	=	separator of data elements within a composite (here, the date and the date format qualifier);
102	=	Qualifier to indicate the format of the date (CCYYMMDD);
'	=	Segment terminator.

2.2.5 Compression of data

In data elements for which the Trade Data Elements Directory specifies variable length and no other restrictions, non-significant character positions shall be suppressed. In the case of non-significant characters, leading zeroes and trailing spaces shall be suppressed.

TAG = segment tag; DE = data element; CE = component data element.

- **Exclusion of segments.** Conditional segments containing no data shall be omitted (including their segment tags).
- **Exclusion of data elements by omission.** Data elements are identified by their sequential position within the segments as stated in the Segment Directory. If a conditional data element is omitted and followed by another data element, its position shall be indicated by retention of its data element separator.

Eg: TAG+ DE+ DE+ DE+ CE:CE:CE' complete segment including all data elements

TAG+ DE+ + DE+ CE:CE:CE'
 ↓ one DE has been omitted

- **Exclusion of data elements by truncation.** If one or more conditional data elements at the end of a segment are omitted, the segment may be truncated by the segment terminator.

Eg: TAG+ DE+ DE+ DE+ DE' Original including all data elements

TAG+ DE+ DE'
 ↓ truncation

negative. In addition some data element and code combinations will lead to implied negative values, e.g. data element 5463 with code value 'A, Allowance' in an ALC segment in an invoice.

If a value is to be represented as negative, it shall in transmission be immediately preceded by a minus sign e.g. -112. The minus sign shall not be counted as a character when computing the maximum field length of a data element.

2.2.7 Character set

For the characters in the set below, the 7-bit codes in the basic ISO 646 standard shall be used, unless the corresponding 8-bit codes in ISO 6937, ISO 8859.1, ISO 8859.2, ISO 8859.5 and ISO 8859.7, or other bit codes are specifically agreed between the interchanging partners. If another bit code set is being used this must be specifically stated in the interchange agreement between the parties.

The following character set, known as character set level A, is **recommended** to be used within EANCOM for international exchanges:

Letters, upper case	A to Z
Numerals	0 to 9
Space character	
Full stop	.
Comma	,
Hyphen/minus sign	-
Opening parentheses	(
Closing parentheses)
Oblique stroke (slash)	/
Equal sign	=
Exclamation mark	!
Quotation mark	"
Percentage sign	%
Ampersand	&
Asterisk	*
Semi-colon	;
Less-than sign	<
Greater-than sign	>

When using the Level A service characters (UNOA), the characters Apostrophe ('), Plus sign (+), Colon (:), and Question mark (?) are reserved for special use (see section 2.2.4.).

In addition to the Level A characters detailed above, a number of additional characters may be required by EANCOM users. These characters are contained in the International Reference Version (IRV) of ISO 646.

EAN International recommends that should any EANCOM user wish to use any of these additional characters, that agreement must first be obtained from their trading partners in order to ensure correct processing by the receiving application.

Following you will find the set of characters contained in the IRV:

Number sign	#	
Commercial at	@	
Left square bracket	[.
Reverse solidus	\	
Left square bracket]	.
Circumflex accent	^	
Grave accent	`	
Left curly bracket	{	
Vertical line		
Right curly bracket	}	

The identification of the character set being used must be made in data element 0001 of the UNB segment.

When using any of the character sets A through F then the **syntax version number** (DE 0002) in the UNB segment should be set to **3**.

The following table explains which languages are catered for in which version of ISO-8859;

ISO 8859 version	Languages
1	Danish, Dutch, English, Faroese, Finnish, French, German, Icelandic, Irish, Italian, Norwegian, Portuguese, Spanish, Swedish
2	Albanian, Czech, English, Hungarian, Polish, Romanian, Serbo-Croatian, Slovak, Slovene
5	Bulgarian, Byelorussian, English, Macedonian, Russian, Serbo-Croatian, Ukrainian
7	Greek

2.3 Directory status, version and release

All EANCOM 1997 messages are based on the draft directory set D.96A released by the United Nations in March 1996.

This directory set includes techniques for the identification of the status, version and release of the directory. The data element 0052 is used to indicate the status of the directory which is being used, 'D'raft. The EDIFACT Directory Set release is identified by a three character alpha/numeric in data element 0054, of which the first two characters identifies the Directory Set Issue number (which is equivalent to the last two digits of the year in which the Directory Set was issued), followed by a single alpha character indicating the release.

2.4 EANCOM message version

Each EANCOM message carries its own version number which allows the unambiguous identification of different versions of the EANCOM messages. The EANCOM version number is indicated in Data Element 0057 in the UNG and UNH segments. It is structured as follows:

EANnnn

where: EAN = Indicates EAN as the agency controlling the subset.
 nnn = Three-digit version number of the EANCOM subset.

Version numbers for formally released EANCOM messages start at the number '001' and are incremented by one for each subsequent release of the message.

In addition to the EANCOM message version numbers '001' and greater, EANCOM also caters for messages at version '000', or pre-release. Version '000' EANCOM messages are messages which have completed their development phase and which are available to potential users for trial purposes. Because updates to EANCOM are issued on average once per year it is not possible to make available immediately every EANCOM message developed to every EANCOM user. The existence of version '000' messages is communicated by EAN International to its numbering organisations and copies are made available to the numbering organisations only following specific requests. All version '000' messages are automatically included in the next update of EANCOM when they formally become part of the standard, i.e. move to version '001'.

2.5 Documentation conventions

2.5.1 Format and picture of data elements

The following conventions apply in the present documentation:

a	alphabetic characters
n	numeric characters
an	alpha-numeric characters
a3	3 alphabetic characters, fixed length
n3	3 numeric characters, fixed length
an3	3 alpha-numeric characters, fixed length
a..3	up to 3 alphabetic characters
n..3	up to 3 numeric characters
an..3	up to 3 alpha-numeric characters

2.5.2 Status indicators

(M)andatory data elements or composites in EDIFACT segments retain their status in EANCOM.

Additionally, there are five types of status with a (C)onditional EDIFACT status, whether for simple, component or composite data elements. They are listed below and can be identified when relevant by the abbreviations.

- REQUIRED **R** Indicates that the entity is required and must be sent.
- ADVISED **A** Indicates that the entity is advised or recommended.
- DEPENDENT **D** Indicates that the entity must be sent in certain conditions, as defined by the relevant explanatory note.

- OPTIONAL **O** Indicates that the entity is optional and may be sent at the discretion of the user.
- NOT USED **N** Indicates that the entity is not used and should be omitted.

Code values have two status's in EANCOM:

- **Restricted (*)** A data element marked with an asterix (*) in the fourth column of the segment details of a message indicates that the listed codes in column five are the only codes available for use with the data element at the same level as the asterix, in the segment, in the message.
- **Open.** All data elements where coded representation of data is possible and a restricted set of code values is not indicated are open. The available codes are listed in the Data Elements and Code Sets Directory (Part III of this manual). Code values may be given as examples or there may be a note on the format or type of code to be used.

2.5.3 Temporary Codes.

Several codes within the EANCOM 1997 codes list are identified as being temporary code values through the use of '**(EAN Code)**', or other codes (such as EAN Code Book or SWIFT Code), immediately after the code value. These codes are values which do not exist in the UN/EDIFACT codes list. In many instances the data element containing the temporary code value will be followed in a composite by the data element 3055. This data element allows the explicit identification of temporary codes.

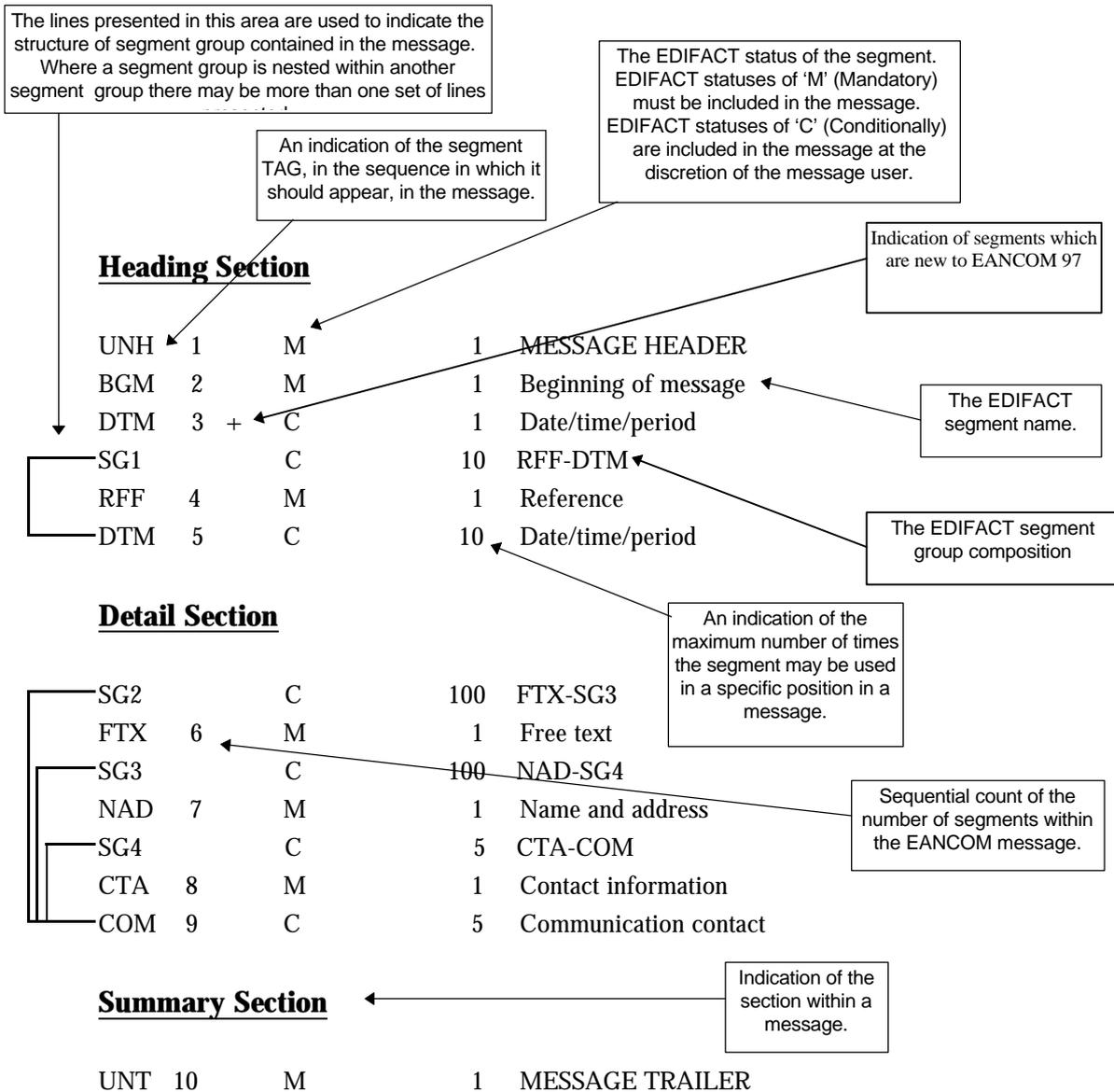
When EAN codes are used in coded EDIFACT data elements, which exist in composite data elements containing data elements 1131 and 3055, the code value '9 = EAN' (for finance messages code value '17 = SWIFT') must be used in data element 3055 to identify unambiguously the fact that a temporary code is being used. See C273 in IMD, C524 in HAN, for examples of this.

All temporary codes will be forwarded to UN/EDIFACT for official EDIFACT values. It must be noted however that the code values allocated by EDIFACT will not normally be the same as the temporary code allocated and that some alignment may be needed when formal EDIFACT codes are issued.

2.6 Message branching diagrams and structure charts

Within every EANCOM message two diagrams are presented which explain the structure and sequence of the message. These diagrams are known as the Message Structure Chart and the Message Branching Diagram.

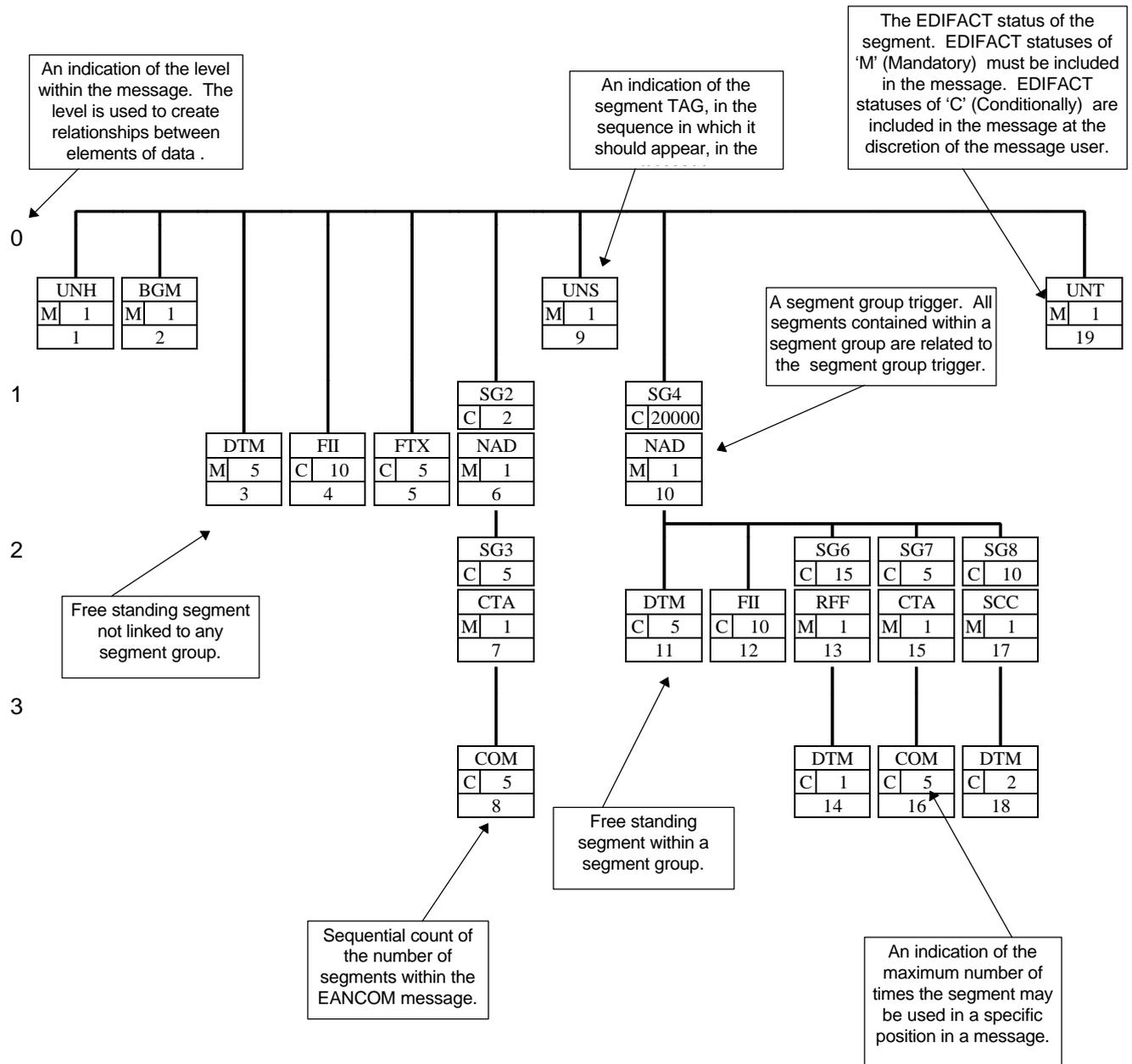
The message structure chart is a sequential chart which presents the message in the sequence in which it must be formatted for transmission. Every message is structured under three headings, header, detail, and summary. An example of a message structure chart follows:



The structure chart should always be read from top down and left to right (please note that the message detailed is simply an example message and does not bear any relevance to real EANCOM messages).

A message branching diagram is a pictorial representation (in flow chart style) which presents the logical sequence and relationships contained within a message.

Branching diagrams should be read, starting at the UNH segment, from left to right and top to bottom. The lines contained within a branching diagram should be considered as guides which must be followed in order to progress through the message.



2.7 Interchange structure and service segments

The interchange structure in an EDIFACT transmission is organised in several grouping levels. The service segments are the envelope of the groups.

The first service segment possible in an interchange is the 'UNA' segment which is used to define the separators being used in the interchange.

The second service segment, 'UNB', indicates the beginning of the interchange.

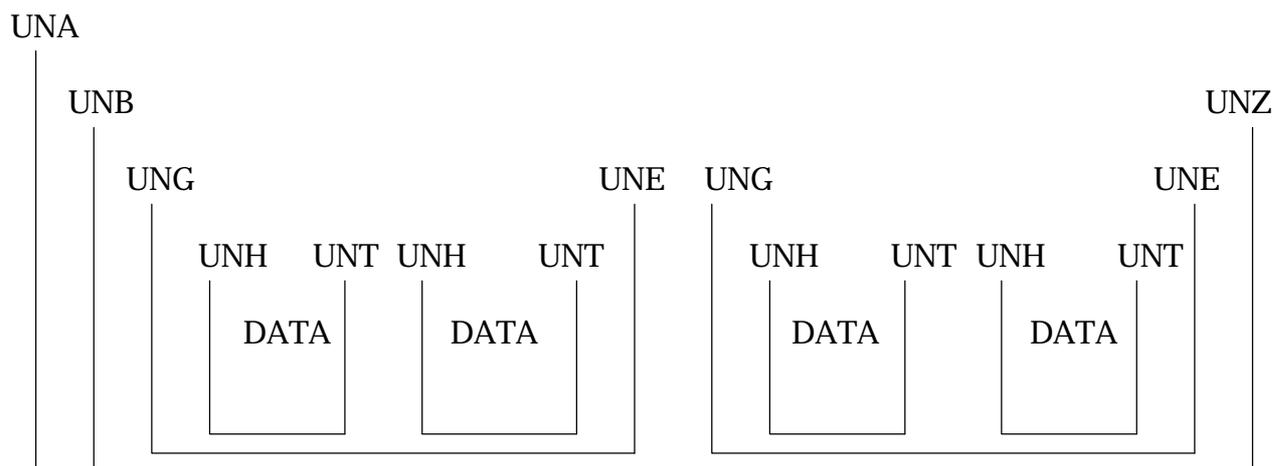
The next one, 'UNG', indicates the beginning of a group of messages of the same type, for example invoices.

The last service segment, 'UNH', indicates the beginning of a given message.

To each beginning service segment corresponds an ending service segment (note, UNA is not a beginning segment).

Service string advice: UNA
 Interchange envelope: UNB UNZ
 Group envelope: UNG UNE
 Message envelope: UNH UNT

The interchange can thus be represented like this:



Segment UNA is dependent on the character set being used. If the EANCOM default character set A is being used then the UNA segment is not required.

Segments UNB..UNZ and UNH..UNT are mandatory.

Segments UNG..UNE are conditional. Within EANCOM the use of the UNG..UNE segments is not recommended as the grouping of same message types is not considered to add significant value to simply including multiple same message types within one interchange, i.e. between UNB..UNZ.

If the UNG..UNE segments are used then it should be noted that it is not possible in the EANCOM CONTRL message to syntactically report on a functional group.

The message itself is structured with a Header, a Detail and a Summary section. In messages where there may be ambiguity between the sections the UNS segment may be used as a separator.

The layout of the service segments UNA, UNB..UNZ, and UNG..UNE is presented in this section.

The segments UNH, UNS, and UNT being different for each message, are detailed in the message description part of this manual.

Segment Layout - UNA segment.

UNA - C 1 - SERVICE STRING ADVICE				
Function : To define the characters selected for use as delimiters and indicators in the rest of the interchange that follows.				
Segment number :				
	EDIFACT	EAN	*	Description
UNA1 Component data element separator	M an1	M		Is used as a separator between component data elements contained within a composite data element (default value :)
UNA2 Data element separator	M an1	M		Is used to separate two simple or composite data elements (default value : +)
UNA3 Decimal notation	M an1	M		Is used to indicate the character used for decimal notation (default value : .)
UNA4 Release character	M an1	M		Used to restore the separator and the terminator signs to their original specification (default value: ?)
UNA5 Reserved for future use	M an1	M		(default value : space)
UNA6 Segment terminator	M an1	M		Used to indicate the end of segment data (default value : ')
<u>Segment Notes.</u>				
This segment is used to inform the receiver of the interchange that a set of service string characters which are different to the default characters are being used.				
When using the default set of service string characters the UNA segment need not be sent. When it is sent it must immediately precede the UNB segment and contain the six service string characters selected by the interchange sender.				
Regardless of whether or not all of the service string characters are being changed every data element within this segment must be filled, i.e. if some default values are being used with user defined ones then both the default and user defined values must be specified.				
When expressing the service string characters in the UNA segment it is not necessary to include any element separators.				

Segment Layout - UNB segment.

UNB - M 1 - INTERCHANGE HEADER				
Function : To start, identify and specify an interchange.				
Segment number :				
	EDIFACT	EAN	*	Description
S001 SYNTAX IDENTIFIER	M	M		
0001 Syntax identifier	M a4	M	*	UNOA . UNOB . Controlling Agency (UNO = UNOC . UN/ECE) followed by character UNOD . set level UNOE . UNOF .
0002 Syntax version number	M n1	M	*	3 = Syntax version number 3
S002 INTERCHANGE SENDER	M	M		
0004 Sender identification	M an..35	M		EAN location number (n13)
0007 Partner Identification code qualifier	C an..4	R	*	14 = EAN International
0008 Address for reverse routing	C an..14	O		
S003 INTERCHANGE RECIPIENT	M	M		
0010 Recipient identification	M an..35	M		EAN location number (n13)
0007 Partner Identification code qualifier	C an..4	R	*	14 = EAN International
0014 Routing address	C an..14	O		
S004 DATE / TIME OF PREPARATION	M	M		
0017 Date	M n6	M		YYMMDD
0019 Time	M n4	M		HHMM
0020 Interchange control reference	M an..14	M		Unique reference identifying the interchange. Created by the interchange sender.
S005 RECIPIENT'S REFERENCE PASSWORD	C	O		
0022 Recipient's reference/password	M an..14	M		
0025 Recipient's reference/password qualifier	C an2	O		
0026 Application reference	C an..14	O		Message identification if the interchange contains only one type of message. A = Highest priority
0029 Processing priority code	C a1	O		
0031 Acknowledgement request	C n1	O		
0032 Communications agreement identification	C an..35	O	*	EANCOM.....
0035 Test indicator	C n1	O		1 = Interchange is a test

Segment Notes.

This segment is used to envelope the interchange and also to identify the party for whom the interchange is intended and the party who has sent the interchange. The principle of the UNB segment is the same as a physical envelope which covers one or more letters or documents and which details the address where delivery is to take place and the address from where the envelope has come.

DE 0001: The recommended (default) character set for use in EANCOM for international exchanges is character set A (UNOA). Should users wish to use character sets other than A then agreement on which set to use should be reached on a bi-lateral basis before communications begin.

DE 0004 and 0010: Within EANCOM the use of the EAN location number is recommended for the identification of the interchange sender and recipient.

DE 0008: The address for reverse routing is provided by the interchange sender to inform the interchange recipient of the address within the sender's system to which responding interchanges must be sent. It is recommended that EAN location numbers be used for this purpose.

DE 0014: The address for routing, which was originally provided by the interchange recipient, is used by the interchange sender to inform the recipient of the address of the recipient's systems to which the interchange should be routed. The address provided here is normally informed to the interchange sender by the recipient in advance of the interchange transmission. It is recommended that EAN location numbers be used for this purpose.

DE S004: The date and time specified in this composite should be the date and time at which the interchange sender prepared the interchange. This date and time may not necessarily be the same as the date and time of contained messages.

DE 0020: The interchange control reference number is generated by the interchange sender and is used to uniquely identify each interchange. Should the interchange sender wish to re-use interchange control reference numbers it is recommended that each number be preserved for at least a period of three months before being re-used. In order to guarantee uniqueness the interchange control reference number should always be linked to the interchange sender's identification (DE 0004).

DE S005: The use of passwords must first be agreed bi-laterally by the parties exchanging the interchange.

DE 0026: This data element is used to identify the application on the interchange recipient's system to which the interchange is directed. This data element may only be used if the interchange contains only one type of message, e.g. only invoices. The reference used in this data element is assigned by the interchange sender.

DE 0031: This data element is used to indicate whether an acknowledgement to the interchange is required or not. The EANCOM CONTRL message should be used to provide acknowledgement of interchange receipt. In addition the EANCOM CONTRL message may be used to indicate when an interchange has been rejected due to syntactical errors.

DE 0032: This data element is used to identify any underlying agreements which control the exchange of data. Within EANCOM the identity of such agreements must start with the letters 'EANCOM' with the remaining characters within the data element filled according to bi-lateral agreements.

Segment Layout - UNG segment.

UNG - C 1 - FUNCTIONAL GROUP HEADER				
Function : To start, identify and specify a functional group.				
Segment number :				
	EDIFACT	EAN	*	Description
0038 FUNCTIONAL GROUP IDENTIFICATION	M an..6	M		Identifies the type of message contained in the functional group, e.g. INVOIC
S006 APPLICATION SENDER'S IDENTIFICATION	M	M		
0040 Sender identification	M an..35	M		EAN location number (n13)
0007 Identification code qualifier	C an..4	R	*	14 = EAN International
S007 INTERCHANGE RECIPIENT	M	M		
0044 Recipient identification	M an..35	M		EAN location number (n13)
0007 Identification code qualifier	C an..4	R	*	14 = EAN International
S004 DATE / TIME OF PREPARATION	M	M		
0017 Date	M n6	M		YYMMDD
0019 Time	M n4	M		HHMM
0048 Functional group reference number	M an..14	M		Unique reference identifying the functional group. Created by the interchange sender.
0051 Controlling agency	M an..2	M	*	EN = EAN International UN = UN/ECE/TRADE/WP.4, United Nations Standard Messages (UNSM)
S008 MESSAGE VERSION	M	M		
0052 Message type version number	M an..3	M	*	D = Draft directory
0054 Message type release number	M an..3	M		The value of this data element depends on the message type.
0057 Association assigned code	C an..6	R		The value of this data element depends on the message type.
0058 Application password	C an..14	D		The use of this data element depends on agreements between the trading partners.
<u>Segment Notes.</u>				
Within EANCOM the use of the UNG..UNE segments is not recommended as the grouping of same message types is not considered to add significant value to simply including multiple same message types within one interchange, i.e. between UNB..UNZ.				

Segment Layout - UNE segment.

UNE - C 1 - FUNCTIONAL GROUP TRAILER				
Function :		To end and check the completeness of a functional group.		
Segment number :				
	EDIFACT	EAN	*	Description
0060	Number of messages	M n..6	M	Number of messages in the group.
0048	Functional group reference number	M an..14	M	Identical to DE 0048 in UNG segment.
<u>Segment Notes.</u>				
Within EANCOM the use of the UNG..UNE segments is not recommended as the grouping of same message types is not considered to add significant value to simply including multiple same message types within one interchange, i.e. between UNB..UNZ.				

Segment Layout - UNZ segment.

UNZ - M 1 - INTERCHANGE TRAILER				
Function :		To end and check the completeness of an interchange.		
Segment number :				
	EDIFACT	EAN	*	Description
0036	Interchange control count	M n..6	M	Number of messages or functional groups within the interchange.
0020	Interchange control reference	M an..14	M	Identical to DE 0020 in UNB segment.
<u>Segment Notes.</u>				
This segment is used to provide the trailer of an interchange.				
DE 0036: If functional groups are used this is the number of functional groups within the interchange. If functional groups are not used this is the number of messages within the interchange.'				

Example of an interchange:

An interchange contains two sets of messages: three despatch advices and two invoices. The interchange is sent on 2 January 1997 by a company identified by the EAN location number 5412345678908 to a company identified by the EAN location number 8798765432106.

```

UNA:+ .?'
UNB+ UNOA:3+ 5412345678908:14+ 8798765432106:14+ 970102:1000+ 12345555+ + + + EANCOMREF52'
....
UNH+ 66025+ DESADV:D:96A:UN:EAN005'
....
....
UNT+ 35+ 66025'
UNH+ 66420+ DESADV:D:96A:UN:EAN005'
....
....
UNT+ 26+ 66420'
UNH+ 1588+ INVOIC:D:96A:UN:EAN008'
....

```

....

UNT+ 46+ 1588'

UNH+ 2063+ INVOIC:D:96A:UN:EAN008'

....

....

UNT+ 87+ 2063'

UNH+ 67020+ DESADV:D:96A:UN:EAN005'

.....

.....

UNT+ 102+ 67020'

....

UNZ+ 5+ 12345555'

3 IMPLEMENTATION OF EANCOM

The implementation of an EDI project involves many detailed steps. These steps, along with helpful advice, are documented in an EAN International publication called '**An Introduction to EDI**'. In addition to the basic EDI introduction, EAN International has published more detailed documents introducing scenarios for each EANCOM message and guidelines on how they should interact. Currently available in this series are the documents '**An Introduction to EANCOM in Trade and Transport**' and '**An Introduction to EANCOM in Trade and Finance**'.

These publications, which are all available from all EAN Numbering Organisations, are ideal documents to explain EDI and EANCOM in simple to understand language and may be used and understood by people at all levels in your company.

3.1 EANCOM manual

The EANCOM manual is distributed via the EAN Numbering Organisations. Interested companies should contact their local Numbering Organisation to obtain additional copies of the documentation and further information.

It is important that EANCOM users are properly identified so that they can be informed on a continuous basis about the evolution of the standard and get all relevant documentation.

3.2 Message versions

A condition for a successful implementation of EDI is the stability of the standard used, including the syntax, the messages, the data elements and codes definition. The shortest period between two versions of EANCOM messages has been set to two years.

User companies are asked to migrate from one version to the new one as soon as possible and not later than one year after the publication of a new version.

As it is unlikely that all trading partners will migrate to the next version at the same time, users should be able to handle concurrently two versions of the same messages, i.e. the latest and preceding versions.

3.3 Codes list

The EANCOM codes list will be issued annually and will contain codes added as a result of successful change requests.

3.4 Change requests

When implementing EANCOM, user companies might find that some business requirements are not met. They might wish to enhance the standard and draft proposals for new codes, data elements, segments or messages, covering their genuine requirements. These **requirements must be stated clearly and supported by coherent business reasons** to support the acceptance of the requested change.

It should be noted that change requests to EANCOM will only be considered when made against the current published version (no maintenance of previous versions).

The following procedure is applicable when changes or additions to EANCOM are requested.

1. A change request drafted by a user company must be addressed to the Numbering Organisation where the company is registered. It is recommended, for administration purposes, that each change request be uniquely numbered by the requesting party. When reporting back the status of any individual change request the secretariat will always quote the requesting party's change request identity number.
2. All change requests **must conform** to the following criteria before being submitted to the Numbering Organisation ;

Type of change	Requirements
Addition of new segment.	<p>Identification of the message and the position within the message where the segment is to be added.</p> <p>Changes requesting the addition of new segments to an EANCOM message MUST be supported by a proposal as to the data elements required in the segment and their status's, and the code values required for use with the data elements.</p>
Addition of a new code value to the code list for use in all messages.	<p>Identification of the data element against which the code is to be added and the segment in which the code is proposed for use.</p> <p>Changes requesting the addition of new codes to EANCOM (i.e. ones that do not exist in the D.96A EDIFACT directory) MUST be supported by a clear definition of the code. Under no circumstances will a code with a definition of 'self explanatory' be accepted for inclusion in EANCOM.</p>
Addition of a new code value to the code list for use in a specific segment within a specific message.	<p>Identification of the message, segment, and data element in which the change applies.</p> <p>Changes requesting the addition of new codes to EANCOM (i.e. ones that do not exist in the D.96A EDIFACT directory) MUST be supported by a clear definition of the code. Under no circumstances will a code with a definition of 'self explanatory' be accepted for inclusion in EANCOM.</p>
All change requests.	MUST be supported by business justifications explaining the concept of the change and how the acceptance of the change request will facilitate this business justification.

3. The Numbering Organisation will acknowledge receipt and make an initial assessment of the request.

4. If it has not been resolved, the change request will be forwarded, in a typed format, by the Numbering Organisation to the EAN secretariat where it will be registered and classified.
5. As a matter of course, requests for change can be addressed directly by Numbering Organisations.
6. Change requests must be submitted by numbering organisations to, and received by the EAN secretariat, at least 30 days before a meeting of the Communication Systems Committee (CSC) to ensure that they are processed at the next CSC meeting.
7. The EAN secretariat will submit the change request to the Communication Systems Committee. Incomplete or not properly documented change requests (see points 2, 3, and 4 above) will be returned to the originator.
8. The Communication Systems Committee will accept or reject the request, or ask for more information. **Accepted changes will be consolidated and incorporated in the next release of the EANCOM manual or the codes list.** There will be no interim release of the manual to incorporate accepted change requests. Users may, bi-laterally agree to include the functionality of an accepted change request into their EANCOM procedures as soon as the change request is accepted by the Communication Systems Committee.
9. The EAN secretariat will advise the Numbering Organisation of the decision of the committee and a justification of that decision.
10. The issuer of the change request will be informed by the Numbering Organisation about its status within a maximum of twelve weeks of the request being received by EAN.

The change request form follows. Please make copies of the original provided.

EANCOM CHANGE REQUEST

EAN Ref #:

A. ORIGINATOR

Originator Reference

Number :

Name :

Title :

Company :

Phone :

Address :

Fax :

E-Mail address :

EAN location number :

Numbering Organisation :

B. OBJECT OF THE REQUEST

Message Tag (e.g. INVOIC):

EANCOM Version number:

Segment Tag (e.g. NAD):

Segment Number:
(for existing segments)

Data Element Tag (e.g. 1153):

C. BUSINESS REASON FOR CHANGE

Explain in detail the problem and the business case that will be satisfied by the change.

D. PROPOSED CHANGE

Provide details of the proposed change, e.g. data element and segment of change.

Date:Signature:

Attach any additional information and supporting documentation, such as proposed layout of segments, proposed branching diagram of the message, impact on other EANCOM messages, etc.

4 SPECIFIC RULES

4.1 Identification of trade items

A basic element of EANCOM is the EAN numbering system. Each trade item, "item" being defined in the widest possible sense, is uniquely identified by a standard number. This number is part of the common vocabulary adopted by the partners who are exchanging standard messages.

The format of the trade item identification number in EANCOM is defined as numeric, variable length, up to 14 digits (n..14). EAN article numbers are unique with respect to all others if considered right justified with leading zeros.

Summary of EAN article numbers:

Numbering Structure	Digit Position	Check Digit
EAN-14	P ₁₄ P ₁₃ P ₁₂ P ₁₁ P ₁₀ P ₉ P ₈ P ₇ P ₆ P ₅ P ₄ P ₃ P ₂	C
EAN-13	0 P ₁₃ P ₁₂ P ₁₁ P ₁₀ P ₉ P ₈ P ₇ P ₆ P ₅ P ₄ P ₃ P ₂	C
U.P.C.	0 0 P ₁₂ P ₁₁ P ₁₀ P ₉ P ₈ P ₇ P ₆ P ₅ P ₄ P ₃ P ₂	C
EAN-8	0 0 0 0 0 0 P ₈ P ₇ P ₆ P ₅ P ₄ P ₃ P ₂	C

It should be noted that, when EAN-13, U.P.C. or EAN-8 numbers are used to identify trade items in EANCOM, the leading zero(s) should not be transmitted.

The choice of the numbering structure used to identify a trade item is determined by a number of factors. The General EAN Specifications (or the manual issued by your EAN Numbering Organisation) gives the full details. However, the choice is largely determined by the packaging level of the trade item and the channel of distribution. The following may be used as a rule of thumb:

EAN-8 numbers may be assigned to very small trade items. The eight digit identification number may be encoded in an EAN-8 symbol which takes up less packaging space than the larger EAN-13 or U.P.C-A symbol. Due to the limited capacity, EAN-8 number are usually assigned on a one-by-one basis by EAN Numbering Organisations.

EAN-13 or **U.P.C.** numbers may be assigned to any trade item (a single unit of use, a case containing 12 units, a traded pallet, etc.) and may be encoded in any of the EAN/UCC endorsed bar code symbologies.

EAN-14 numbers are available to identify standard and stable grouping of trade units already identified with an EAN/UCC identification number made up to facilitate the operations of handling, storing, order preparation, shipping, etc (for example a case containing 24 tins of baked beans). The EAN-14 number can not be encoded into a EAN/U.P.C. bar code symbol and is therefore not intended for units intended to cross a retail point of sale.

The relationship between different packaging levels of trade units is recommended to be expressed in either the Price/Sales Catalogue or Product Data message.

4.1.1 Variable quantity trade items

A number of products are purchased and sold in variable quantity. In scanning applications, an internal numbering structure is generally used by the retailers for marking those products. This structure includes either the price or the weight of the item, making it possible to charge the correct price to the customer at a retail check-out.

In EDI messages, it is however necessary to identify those items in a generic form for ordering, delivering and invoicing. The recommendation in EANCOM is to assign to each variable quantity product a standard EAN number and to refer to this number in data interchanges.

The facility to indicate the actual quantity and price in the appropriate unit of measure is provided in the EANCOM messages.

A specific code - "VQ = Variable quantity product" - can be used in the IMD segment (Item Description) to specify this type of product. It is especially recommended to indicate this product characteristic in either the Price/Sales Catalogue or Product Data message.

4.1.2 Standard grouping of trade items

It is a common business practice to sell and purchase some products in mixed assortments. Mixed assortments contain a standard grouping of different products. According to the EAN rules, mixed assortments are identified by a standard EAN number.

It is recommended to first describe mixed assortments using the Price/Sales Catalogue message by indicating in the LIN/PIA/QTY/PRI segment the identity of the mixed assortment and in the IMD segment the coded description of a standard group of products.

For the Purchase Order and Invoice messages, two alternative solutions are available:

1. Indicate the standard number of the assortment in a combination of LIN/PRI/QTY segments. In this case prices and quantities refer to the assortment, not to individual products.
2. Use a different combination of LIN/PRI/QTY segments for each individual product which is part of the assortment. Prices and quantities refer to the individual products. In segment PIA (Additional product ID), the standard number of the assortment can be indicated for information, using the appropriate qualifiers (DE 4347 = 1 and DE 7143 = ADU).

The first approach is recommended for use in EANCOM.

4.1.3 Product variants

Product variants can be used in communications to identify promotional or other actions which do not require the allocation of a different EAN product number. In this case, a 2-digit product variant is used in addition to the main EAN article number.

In EANCOM, the promotional variant number is indicated in segment PIA, using the appropriate code value of the article number identifier (DE 7143 = PV).

4.2 Identification of logistic units

Tracking and tracing of logistic units in the supply chain is a major application of the EAN system. Scanning the standard identification number, marked on each logistic unit, allows the physical movement of units to be individually tracked and traced by providing a link between the physical movement of items and the associated information flow provided by EANCOM messages.

Logistic units are defined as physical units established for transport and storage of goods of any kind which need to be tracked and traced individually in a supply chain. The requirement for logistic units is that they are identified with a standard EAN identification number known as the Serial Shipping Container Code (SSCC). The SSCC enables the unrestricted circulation of the units, as the construction of the SSCC ensures that they are identified with a number that is unique world-wide.

Serial Shipping Container Code			
Indicator	Company prefix ----->	serial reference number <-----	Check digit
I	N ₁ N ₂ N ₃ N ₄ N ₅ N ₆ N ₇ N ₈ N ₉ N ₁₀ N ₁₁ N ₁₂ N ₁₃ N ₁₄ N ₁₅ N ₁₆		C

The **packaging indicator** (I) should, for simplicity, always have the value 3 which means undefined packaging type. Packaging indicators are used by some sectors of North American industry. The full list of indicators used in North America is as follows:

- 0 = case or carton
- 1 = pallet (larger than case)
- 2 = container (larger than pallet)
- 3 = undefined
- 4 = internal (intra-company) use
- 5-9 = reserved for future use

The **company prefix** is allocated to an EAN system user by a Numbering Organisation. It is a component of the SSCC to make the number unique world-wide. It has no significance as regards the origin of the unit it denotes.

The **serial reference number** is the serial number assigned by the system user and structured at their discretion. It is entered right justified in the positions remaining after the representation of the company prefix. It is important to ensure that at least twelve months have elapsed before a particular reference number is repeated.

The **check digit** is calculated according to the EAN standard algorithm

4.3 Identification of locations

The identification of the trading partners is a critical issue when using Electronic Data Interchange. It is even more important to identify locations precisely and unambiguously with EDI than with traditional paper documents.

The EAN location number is a 13 digit non-significant reference number used to identify:

- * Legal entities, e.g. registered companies;
- * Functional entities, e.g. specific department within a legal entity;

* Physical entities, e.g. a door of a warehouse, a particular room in a building.

Details associated with the EAN location number, e.g. name and address, location type, contact persons, communication numbers, banking information, delivery requirements or restrictions, etc, are stored in the computer files of the system users for later retrieval.

Although the EAN location number is strictly a reference key and does not carry any information on the location it identifies, it has a standard format and is structured to allow each location number to be unambiguous and unique world-wide. The format and structure are specified as follows:

1. The format of an EAN location number is n13, i.e. a 13 digit, fixed length, numeric field.
2. EAN location numbers always start (left justified) with the EAN prefix, assigned to the Numbering Organisation concerned.
3. The digits following the EAN prefix are structured at the discretion of each Numbering Organisation, making possible a unique and unambiguous identification of each party and each location of a party.
4. The last digit of an EAN location number is a check digit, calculated on the basis of the preceding 12 digits and using the standard EAN check digit algorithm.

EAN location numbers are mainly used in Electronic Data Interchanges (EDI) to identify the sender and recipient of an electronic transmission and any party relevant to the transaction, e.g. buyer, seller, carrier, etc.

EAN location numbers can also be used in Automatic Data Capture (ADC) applications to identify a physical location or to encode the identification of relevant parties in logistic applications, e.g. "ship to" location number. In ADC applications, the EAN-128 bar code symbology and the appropriate Application Identifier shall be used, according to the rules specified in the UCC/EAN Application Identifier Standard.

4.3.1 EAN Location Numbers - User Guide Introduction

On a daily basis information related to parties and locations is generated and communicated throughout the business world in vast quantities. Names and addresses are put on envelopes for the mail, the point to which a delivery is to be made is put on transport documentation, EDI network addresses are provided in EDI messages, etc. These are just a few examples of the many applications in existence today which identify parties or locations in trade or other communications.

With the advent of electronic communication, and particularly EDI, the need for coded identification of parties and locations has become more acute. The use of coded identification instead of full alpha numeric names and addresses is key to the successful implementation of an EDI project.

EDI has developed at a steadily growing rate from the early days where EDI projects were set up internally in large companies, and externally between several large trading partners, to today's level where large EDI groups have been set up both at national and international levels. The identification of locations and parties using an international coding scheme is particularly important for EDI users who trade internationally. Picture the scenario, and the possibilities for complexity and confusion, where a

company which has many trading partners each of which uses a different format code with different rules.

EAN location numbers offer an internationally recognised standard solution to the identification of parties and locations.

4.3.2 What are EAN location numbers ?

EAN location numbers are reference keys to computer files which are used to direct entities (i.e. goods, paper based information, electronic information, etc) to locations (whether they be physical or functional) or parties.

EAN location numbers, like EAN article numbers, are unique, non-significant, and international in their application and have strictly defined rules assigned to them. In short, an EAN location number must always be numeric and have a fixed length of thirteen digits. Each location number contains, in the thirteenth position, a digit known as the 'check digit' which ensures the correctness of the number, i.e. it has been keyed correctly. The formula for calculating this check digit is exactly the same as that used to calculate the check digit for EAN article numbers.

Once assigned at source, i.e. in general by the party owning the location, the EAN location number becomes a unique and universal reference which can be used by all.

4.3.3 What can EAN location numbers identify ?

EAN location numbers can be used to identify anything which is, or can be addressed. Some examples of this would include companies, departments, rooms, factories, shelves, delivery points, EDI network addresses, etc.

4.3.4 What information is associated with an EAN location number ?

The attributes of a party or location should be established on a computer file using the EAN location number as the key to the information. An example of the type of information held would be the full name and address of the party, bank details and account number, sales department dealing with the party, profile of a company, etc.

4.3.5 Can EAN location numbers be bar coded and scanned ?

EAN location numbers may be represented in bar code format and, if required, be physically marked onto the location being identified. This bar code may then be scanned to capture automatically the details concerning the location. Note that the EAN/UPC symbology is reserved to encode EAN article numbers. EAN location numbers prefixed by the appropriate Application Identifier may be represented using the EAN-128 symbology.

4.3.6 How are EAN location numbers used in EDI ?

The EDIFACT Interchange Header segment (UNB) is used in all EDI interchanges complying with the EDIFACT syntax rules. The identity of the sender and receiver of the interchange must be specified in this segment. The use of EAN location numbers is mandatory in EANCOM for the identification of EDI parties at this level.

The identification of parties and locations within EDI messages is the primary application for EAN location numbers. Within EANCOM, the EAN International UN/EDIFACT implementation guideline, a message and some segments exist for the purpose of identifying parties.

The Party Information (PARTIN) message is the first message exchanged between trading partners at the beginning of a commercial relationship. It is used to associate EAN location numbers with location information and the related operational, administrative, commercial and financial data to the trading partner such as name and address, contact persons, financial accounts, etc.

This message is used to establish the EAN location number on a trading partners files. Subsequent messages to the PARTIN message must use the EAN location number to identify parties and locations.

4.3.7 What happens if my location moves or closes ?

From time to time the details related to an EAN location number may change. The address identified by the EAN location number may change ownership or the address may close and the business carried out at that address may be transferred to a new address. The following are general cases on the use (re-use) of location numbers due to a change in the circumstances in which the number was originally set up.

If a company sells (possibly because of liquidation) a location to another party who may or may not be using EAN location numbers, the EAN location number for the address which is associated with the previous owner should be de-allocated. If the new owner of the address wishes to identify the location with an EAN location number, a new number needs to be assigned.

If a company closes one address and opens up a similar operation at a new address the company may either transfer the existing EAN location number to the new address, or assign a new EAN location number for the new address. The reason for requesting a new location number may be because the owner wants to maintain records on his computer files which show the performance of the old location. At a later date this performance may be compared with the performance of the new location.

If a function identified by an EAN location number changes, the details associated with the EAN location number should be changed by the party responsible for the location number on the related computer file record.

A location number which has been de-allocated should remain so for at least three years before being reallocated (the figure of three years is a minimum period which may be increased by individual numbering organisations depending on national requirements). The delay must allow time for all references of the old number to be removed from trading partners files. When the number is being re-used the details relating to the new party and/or location must be re-transmitted using a PARTIN EDI message.

4.3.8 How to obtain an EAN location number

EAN location numbers are available through any one of the EAN Numbering Organisations world-wide. Details on policy regarding membership, costs and allocation of EAN location numbers is available directly from the EAN Numbering Organisations.

4.4 Identification of Assets (including returnable assets)

The identification of returnable containers (e.g. empty bottle, crate) may be identified by trading parties in the same manner as a product or service within EANCOM through the use of EAN numbers allocated by the trading parties. However, some Numbering Organisations have allocated unique numbers for generic types of returnable containers at national level, in order to facilitate the operations of ordering, delivering and invoicing. EANCOM users should ask their Numbering Organisation about these specific rules.

The identification of returnable containers within the trading cycle will need to be agreed between the trading partners involved in this cycle. The returnable container may be identified at every level of the trade cycle, i.e. when ordering a product delivered in a returnable container a separate line is required to order the returnable container, a separate line on the despatch advice, a separate line on the receiving advice, a separate line on the invoice, and so on. Users may decide to simplify the issue by agreeing that goods which are delivered in returnable containers do not need to have the containers identified explicitly at all stages of the trade cycle. Instead, the containers could be identified at the price/sales catalogue or product data level, and the invoice level with an agreement that anywhere else the product is identified the returnable container is also implied.

EAN Numbering Organisations support two structures for identifying assets depending upon whether the identification of the *type* of asset is required by the application (see General EAN Specifications for full details).

4.4.1 EAN/U.P.C. number & serial number of returnable asset

The EAN/U.P.C. number & serial number of returnable asset data identified by AI 8003 allows for the identification of the type of asset. It is structured as follows:

- One filler character, value „0“;
- 13-digit EAN number, unique for a given asset type of a given owner;
- Serial number of the asset, variable length, maximum 16 characters. It is assigned by the owner and is unique for a given asset number. This field is optional.

4.4.2 EAN serial asset identification number

The EAN serial asset identification number associated with AI 8004 is used when only a unique serial number is required to identify the asset. It is structured as follows:

- The company prefix assigned by the relevant UCC/EAN numbering authority. UCC company prefix numbers are filled by adding a leading zero. EAN Numbering Organisations issue company prefix numbers with a variable length and the company prefix number is left justified.
- The serial number identifying the item, assigned by the company issuing the number.

4.5 Date, time and period

Date, time, and period information is provided in the DTM segment which appears in all EANCOM messages. The EANCOM recommended format for dates is CCYYMMDD. In addition EANCOM recommends that all dates which include a year element (YY) be preceded by the century element (CC).

Various formats may be indicated through the use of the qualifier in data element 2379 of the DTM segment.

Time is indicated always in the local time of the sender of the message.

To indicate a period of time only one occurrence of the DTM segment with appropriate code values in data elements 2005 and 2379 is required. When indicating the actual dates of the period they should be represented in the format CCYYMMDDCCYYMMDD with the first occurrence of CCYYMMDD indicating the start date of the period.

Examples:

DTM+ 2:19970201:102'	-	Indicates the requested delivery date as being the 1st of February 1997.
DTM+ 134:199702151300:203'	-	Indicates the fact that the rate of exchange was quoted on the 15th of February 1997 at 1pm.
DTM+ 325:1994020119970210:718'	-	Indicates the tax period as being from the 1st of February 1994 to the 10th of February 1997 inclusive.

4.6 Free text

Generally free text should be avoided in EDI messages. In computer to computer exchanges, such text will normally require the receiver to process these data manually.

However, it is acknowledged that free text will be required in some instances and provision has been made in EANCOM messages for such free text. This allows the sender to include general information in the EDI messages. The free text should never replace missing coded data nor contain instructions on how the message should be processed.

Within EANCOM it is possible to replace frequently transmitted free text information with coded references to this frequently exchanged text. This is achieved through the use of code values agreed on a bi-lateral basis between trading partners and communicated in the composite data element C107 in the FTX segment. The use of coded references to free text will reduce the possibility for errors in the free text and enhance the automatic processing possibilities of such information.

It is recommended to limit as much as possible the usage of free text in EANCOM interchanges.

4.7 Product descriptions

Within EANCOM it is possible to provide product descriptions in two formats; free text descriptions, or coded free text descriptions. Wherever possible the use of coded descriptions is recommended in EANCOM as they will reduce the possibility for error in the description and enhance the automatic processing possibilities of such information.

If the description is a free text description;

then data element 7077 of the IMD segment will equal 'F', 'FL', 'FP', or 'FS'. Data element 7081 can be used optionally to further clarify using code values the type of description provided, e.g. colour, pattern, etc, and data element 7008 is used to provide the actual description.

If the description is a coded description;

then data element 7077 = 'C'. Data element 7081 can be used optionally to further clarify using code values (see examples above) the type of coded description provided. Data element 7009 is used to

provide the actual coded description, and data element 3055 should be used to identify the source of the code, e.g. EAN International.

For international exchanges it is possible within EANCOM to provide product descriptions in multiple languages using data element 3453 in the IMD segment.

4.8 Currencies

Provision has been made in EANCOM messages to indicate where relevant the currency in which the amounts are expressed. When using EANCOM nationally, the currency information may be omitted from the messages.

For international interchanges, it is recommended to indicate explicitly the currency used in each message. The CUX segment serves this purpose. Only one occurrence of the CUX segment is required to indicate both the reference currency, the currency in which all amounts are expressed, and the target currency, the currency into which the reference currency will be converted. The rate of exchange between the reference and target currencies is also detailed in the single occurrence of the CUX segment.

Example :

CUX+ 2:GBP:8'

Indicates that the reference currency, Pounds Sterling is the pricing currency.

CUX+ 2:GBP:8+ 3:BEF:4+ 48.50'

Indicates that the reference currency, Pounds Sterling is the pricing currency and that the target currency, Belgian Francs, is the invoicing currency. The rate of exchange between the two is 1 Pound Sterling to 48.50 Belgian Francs.

Currency codes to be used are the ones defined in the ISO 4217 standard and defined in the code list for data element 6345.

4.9 Standard Allowances and charges

The specification of multiple levels of allowance and charge information is possible in the EANCOM commercial messages at message, group (only PRICAT), and product detail levels. This is achieved through the use of the ALC segment group which normally will contain additional segment groups in which the actual allowances or charges are specified (e.g. QTY-RNG, MOA-RNG, etc).

Where a message, product group, or individual product is subject to multiple levels of allowances or charges, e.g. 10% on purchases between 1000 and 2000 units, 10000 BEF for handling charges, etc, it is recommended that each individual allowance or charge is expressed in separate repeats of the ALC group, with the actual allowance or charge details specified in the sub-groups beneath the ALC segment.

In addition it is vitally important where multiple levels of allowances or charges exist that the sequence in which they are to be processed is indicated in order to ensure the correct result of the application of the allowances and charges. This is achieved through the use of data element 1227 in the ALC segment.

For example;

ALC+ A+ + 1+ PDE'

. Allowance for pallet discount is to be processed first

PCD+ 3:15'

. Percentage discount of 15

ALC+ A+ + 2+ TD'

. Allowance for trade discount is to be processed second

MOA+ 204:4000:BEF'

. Discount amount of 4000 Belgian Francs

....

....

4.10 Complex Promotions

In addition to the expression of simple allowances or charges EANCOM also caters for the expression of complex, or multi-buy, promotions. Complex promotions are situations where the activation of the allowance is triggered only by the completion of a set of criteria, e.g. 10% reduction when 10 items from a list of 20 are purchased. Below you will find some information and guidelines on the use of the complex promotions facility in EANCOM.

The expression of complex promotions in EANCOM relies on the use of the sub-lines (see section 4.11 for complete details on sub-lines) facility in the PRICAT message. The promotion and the discount (percent, quantity, or monetary) being offered are identified in the main line LIN in the message. No EAN article numbers are provided in the LIN segment and the LIN segment group at the top level would simply consist of the LIN, PIA, and IMD segments, and the ALC segment group.

The products which make up the promotion are categorised in two ways; **category 1** are those which you **must buy** (and their values/quantities) to activate the promotion; and **category 2** are those which the promotion (or discount) is **offered against**, when different to the 'must buys'. These product types are identified in data element 4347 of the PIA segment using the EAN code values '98, Multi-buy promotions must buy' and '99, Multi-buy promotions offered against product' respectively.

Where two or more products must be bought (category 1) and each product has a different quantity or value which must be bought, then these products (EAN article numbers) are listed individually as sub-lines of the promotion. Where the promotion is simply 'buy 3 from list of 20' (category 2) then only one sub-line level is required with the list of category 1 products listed in multiple repeats of the PIA segment. Category 2 products (if they are required) must always be specified as a separate sub-line of the promotion, i.e. category 1 and 2 products must never be mixed on the same sub-line.

The discount specified in the ALC segment group at the main line level always applies to category 2 products, if they exist. If there are no category 2 products then the discount applies to the category 1 products by default.

Following you will find a set of examples of the type of possible complex promotions catered for in EANCOM.

Example 1.

```
BUY  1 Kilo Steak
AND  250 Grams of Onions
GET  1 Packet of Steak Sauce Free (list of five sauces different flavours)
```

.....

.....

```
LIN+ 1+ 1'
```

```
IMD+ F+ + :::MULTIBUY STEAK / ONIONS'
```

```
ALC+ A+ MB122+ + MB'
```

. Code in DE 7161 ('MB') to identify

. multi-buy allowance.

```
QTY+ 192:1'
```

. Promotion free quantity of 1 (product offered

. free identified later).

```
LIN+ 2+ 1+ + 1:1'
```

. Link the product details of the promotion with

. the actual promotion.

```
PIA+ 98+ 5012345000015:EN'
```

. Code in DE 4347 ('98') to identify

QTY+ 44E:1:KGM'

LIN+ 3+ 1+ + 1:1'

PIA+ 98+ 5012345000022:EN'

QTY+ 44E:250:GRM'

LIN+ 4+ 1+ + 1:1'

PIA+ 99+ 5012345000107:EN'

PIA+ 99+ 5012345000114:EN'

PIA+ 99+ 5012345000121:EN'

PIA+ 99+ 5012345000138:EN'

PIA+ 99+ 5012345000145:EN'

QTY+ 192:1'

.....

.....

.....

UNT.....

. the products which must be purchased to
 . activate the promotion.
 . Code in DE 6063 ('44E') to identify
 . quantity of current product which must be
 . purchased to activate the promotion.
 . Link the product details of the promotion with
 . the actual promotion.
 . Code in DE 4347 ('98') to identify
 . the products which must be purchased to
 . activate the promotion.
 . Code in DE 6063 ('44E') to identify
 . quantity of current product which must be
 . purchased to activate the promotion.
 . Link the product details of the promotion with
 . the actual promotion.
 . Code in DE 4347 ('99') to
 . identify the product against which the
 . promotion is offered (i.e. being given free,
 . monetary/ percentage given against).
 .
 .
 .
 .
 . 1 Packet of sauce free.

Example 2.

BUY ANY 3 ITEMS FROM A LIST OF 10
 GET 20% REDUCTION ON THE COST OF 3.

.....

LIN+ 1+ 1'

IMD+ F+ + :::MULTIBUY 3 FROM 10'

ALC+ A+ MB132+ + MB'

PCD+ 3:20'

LIN+ 2+ 1+ + 1:1'

PIA+ 98+ 5012345000404:EN'

PIA+ 98+ 5012345000411:EN'

PIA+ 98+ 5012345000428:EN'

.....

..... products 43 to 48

.....

PIA+ 98+ 5012345000497:EN'

PIA+ 98+ 5012345000503:EN'

QTY+ 44E:3'

....

....

UNT....

. Code in DE 7161 ('MB') to identify
 . multi-buy allowance.
 . Promotion 20% discount
 . Link the product details of the promotion with
 . the actual promotion.
 . Code in DE 4347 ('98') to identify
 . the products which must be purchased to
 . activate the promotion.
 .
 .
 .
 .
 . Code in DE 6063 ('44E') to identify
 . quantity of current product which must be
 . purchased to activate the promotion.

Example 3.

BUY 2 SHIRTS
GET 25% OFF THE COST OF A TIE.

.....

.....

LIN+ 1+ 1'

IMD+ F+ + :::MULTIBUY SHIRT / TIE'

ALC+ A+ MB421+ MB'

. Code in DE 7161 ('MB') to identify
. multi-buy allowance.

PCD+ 3:25'

. Promotion 25% discount

LIN+ 2+ 1+ + 1:1'

. Link the product details of the promotion with
. the actual promotion.

PIA+ 98+ 5012345004006:EN'

. Code in DE 4347 ('98') to identify
. the products which must be purchased to
. activate the promotion.

QTY+ 44E:2'

. Code in DE 6063 ('44E') to identify
. quantity of current product which must be
. purchased to activate the promotion.

LIN+ 3+ 1+ + 1:1'

. Link the product details of the promotion with
. the actual promotion.

PIA+ 99+ 5012345004013:EN'

. Code in DE 4347 ('99') to identify
. the product against which the promotion is
. offered (i.e. being given free, monetary/
. percentage given against).

....

....

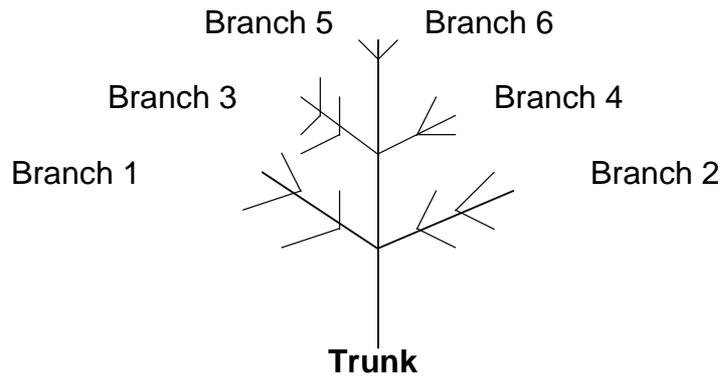
UNT....

4.11 Sub-lines

WHERE EVER POSSIBLE, ALL PRODUCTS OR SERVICES SHOULD BE UNIQUELY IDENTIFIED BY MEANS OF AN EAN ARTICLE NUMBER AND TRANSMITTED USING A SIMPLE LIN SEGMENT.

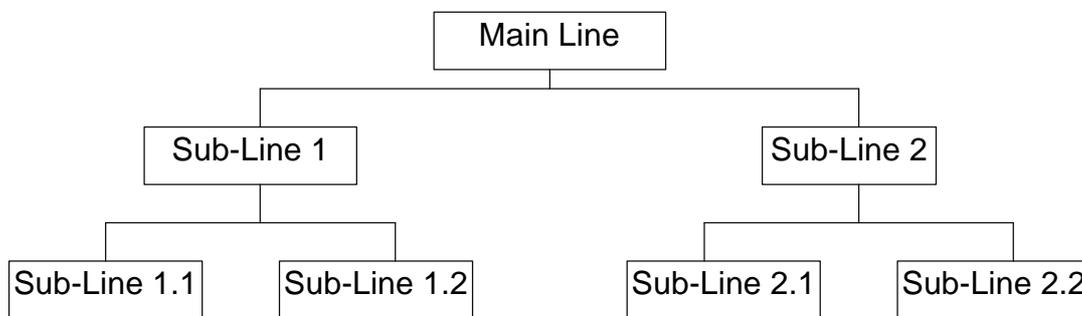
That being said however, it is possible within EANCOM to identify the constituent parts of a product through the use of sub-lines, e.g. hamper containing multiple different products identified using sub-lines.

All product lines identified as sub-lines must first have been identified as main product lines in their own right. Identification of products is carried out through the use of the EANCOM Price/Sales Catalogue (PRICAT) message. Sub-lines should be used only to identify the relationship between a number of products, not the complete product itself.



The sub-line facility enables a party to communicate a complete product configuration as a tree like structure. As with physical trees there is always only one trunk, in this instance the base article, with many branches containing many smaller branches. The branches in this analogy could relate to components and sub-components of a product.

In this simple representation of a tree there is one trunk and 6 main branches. On branches 1, 2, 3, and 4 there are sub-branches. It is not possible to get to any of the sub-branches without going first via the trunk and parent branch. The same restriction is true when using sub-lines in the EANCOM messages, you can not access a sub-line without first accessing the line at the level immediately above.



Every EANCOM message contains a message reference and a line number which are unique to that message and enable the recall of information in subsequent EANCOM messages and the creation of application databases. Within the EANCOM messages the creation of complex configurations is achieved through the linking of EANCOM main line numbers using the sub-line function within the LIN segment. Within EANCOM it is recommended that the line numbers used in the first occurrence of data element 1082 in the LIN segment be sequential and start at one for each new message. A simple example which details the structure presented above follows;

LIN+ 1+ + 5012345000015:EN'	. Line number 1 = Main Line identified by EAN Article . Number 5012345000015
LIN+ 2+ + 5012345000022:EN+ 1:1'	. Line number 2 = Sub- Line 1 identified by EAN . Article Number 5012345000022 and linked to the main line (line number 1)
LIN+ 3+ + 5012345000039:EN+ 1:1'	. Line number 3 = Sub- Line 2 identified by EAN . Article Number 5012345000039 and linked to the main line (line number 1)
LIN+ 4+ + 5012345000114:EN+ 1:2'	. Line number 4 = Sub- Line 1.1 identified by EAN . Article Number 5012345000114 and linked to the sub-line 1 (line number 2)
LIN+ 5+ + 5012345000121:EN+ 1:2'	. Line number 5 = Sub- Line 1.2 identified by EAN . Article Number 5012345000121 and linked to the sub-line 1 (line number 2)
LIN+ 6+ + 5012345000213:EN+ 1:3'	. Line number 6 = Sub- Line 2.1 identified by EAN . Article Number 5012345000213 and linked to the sub-line 2 (line number 3)
LIN+ 7+ + 5012345000220:EN+ 1:3'	. Line number 7 = Sub- Line 2.2 identified by EAN . Article Number 5012345000220 and linked to the sub-line 2 (line number 3)

The information which may be provided for a sub-line is limited to the following :

- a line number (LIN);
- a sub-line indicator (LIN);
- a main-line number to which the sub-line is linked (LIN);
- the configuration coded indicator (LIN);
- an EAN article number and/or other product identity code (LIN/PIA);
- a quantity and/or the measurement of the sub-lined product if required (QTY/MEA);
- the price of the sub-lined product if required (PRI).

A brief description of the data elements which identify the sub-line follows:

Sub-line information (C829): The composite data element C829 is used to group the sub-line indicator (5495) and line item number (1082).

Sub-line indicator (5495): This data element is a coded data element with just one code value, 1, which must be used to indicate the fact that sub-lines are in use.

Line item number (1082): This data element is used to identify the Line Item Number (DE 1082, first occurrence) of the higher level line product to which the current sub-line is linked.

Configuration coded (7083): Indicates whether the price of the sub-line is included in the price of the main line or not.

4.11.1 Sub-line amendment

Amendment of products which are used as sub-lines is handled in two ways:

- Amendment of non-identifying information (description, prices, etc) is carried out by means of sending a main LIN-PIA line.

- Amendment of identifying and/or relational information (article number, quantity contained) is carried out by means of sending the LIN-PIA segments for both the main line and the related sub-line.

Sub-lines may be used to establish the relationship within a product hierarchy, i.e. consumer unit to despatch unit. The same general rules apply when identifying a product hierarchy as for the identification of a mixed range or assortment product, i.e. all levels of the product must first be identified in their own right as main lines before identifying the relationship between the levels.

4.11.2 Examples of the use of sub-lines

Use of PRICAT to establish a product hierarchy between Consumer, Traded, and Despatch Units.

The following is an example of a Price/Sales Catalogue message providing the addition of a new despatch unit, traded unit, and consumer unit to a trading partners file. The relationship or hierarchy between the different product levels is detailed through the use of sub-lines.

Please note that only the segments relevant to the relationship of main lines and sub-lines are detailed here.

The first occurrence of LIN, with line number 1, is used to describe the consumer unit identified by the article number 5410738377131, being the code for a box of Healthiest Corn Crispies. No sub-lines are used since there is no reference to a smaller unit.

The second occurrence of LIN, with line number 2, is used to describe a traded unit identified by the article number 5410738377117, being the code for a case of Corn Crispies. There are 48 units contained at the next lowest level (i.e. consumer units) in the traded unit.

The third occurrence of LIN, with line number 3, is used to indicate that the consumer unit previously identified by the article number 5410738377131 is a sub-line of the traded unit identified by the article number 5410738377117.

The fourth occurrence of LIN, with line number 4, is used to describe the despatch unit identified by the article number 5410738251028, being the code for a pallet of Corn Crispies. There are 24 units contained at the next lowest level (i.e. traded units) in the despatch unit.

The fifth occurrence of LIN, with line number 5, is used to indicate that the traded unit previously identified by the article number 5410738377117 is a sub-line of the despatch unit identified by the article number 5410738251028.

```
UNH+ ME000001+ PRICAT:D:96A:UN:EAN006'
BGM+ 9+ PC32458+ 2'
```

....

```
LIN+ 1+ 1+ 5410738377131:EN'
```

```
. LIN 1, consumer unit identified by EAN article number
. 5410738377131
```

```
IMD+ C+ + CU::9'
```

```
IMD+ F+ + :::HEALTHIEST CORN CRISPIES:BOX'
```

....

```
PAC+ + + BX'
```

```
LIN+ 2+ 1+ 5410738377117:EN'
```

```
. LIN 2, traded unit identified by EAN article number
. 5410738377117
```

```
IMD+ C+ + TU::9'
```

IMD+ F+ + ::CORN CRISPIES:CASE'
QTY+ 17E:48'

. The traded unit contains 48 units of the next lower level unit, i.e.
. consumer units

....

PAC+ + + CT'
LIN+ 3+ 1+ 5410738377131:EN+ 1:2'
QTY+ 45E:48'

. LIN 3, sub-line of LIN 2, contains consumer unit 5410738377131
. There are 48 consumer units in the current packaging hierarchy,
. i.e., traded unit

LIN+ 4+ 1+ 5410738251028:EN'

. LIN 4, despatch unit identified by EAN article number
. 5410738251028

IMD+ C+ + DU::9'
IMD+ F+ + ::CORN CRISPIES:PALLET'
QTY+ 17E:24'

. The despatch unit contains 24 units of the next lower level unit,
. i.e. traded units

....

PAC+ + + 201::9'
LIN+ 5+ 1+ 5410738377117:EN+ 1:4'
QTY+ 45E:24'

. LIN 5, sub-line of LIN 4, contains traded unit 5410738377117
. There are 24 traded units in the current packaging hierarchy,
. i.e., despatch unit

....

UNT+'

Ordering a mixed pack or assortment.

The following is an example of a Purchase Order message ordering a set or mixed pack already known by the recipient of the information. The mixed pack contains multiple products of which three are being ordered in this instance.

The buyer sending the message is identified by the EAN location number 4012345500004. The supplier is identified by the EAN location number 5412345000020.

The message sent the first of January 1997 has been given the reference number PO12123, is ordering the product, First Aid Kit, consisting of three products with different quantities.

The first aid kit is configured as follows;

First aid kit (article being ordered)	Quantity ordered	Articles contained within the first aid kit	Quantity of each article contained in first aid kit (quantities communicated only in a previous PRICAT message)
5410738251028	5000	8711112000001	4
		8711111000002	8
		8711113000000	1

In this example, where 5000 units of the first aid kit are ordered, it must be remembered that the ordering of the first aid kit will by default pick up the contents of the kit, and that the quantity of each of the products contained in the kit will be multiplied by the order quantity.

UNH+ ME000055+ ORDERS:D:96A:UN:EAN008'
BGM+ 220+ PO12123+ 9'
DTM+ 137:19970101:102'
NAD+ BY+ 4012345500004::9'
NAD+ SU+ 5412345500020::9'
LIN+ 1+ + 5410738251028:EN'
QTY+ 21:5000'
UNS+ S'

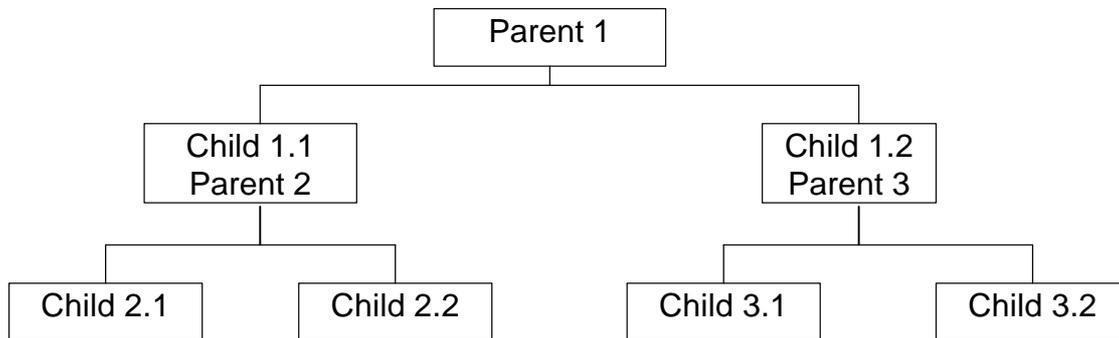
. Main line 1: mixed pack
. quantity ordered 5000

CNT+ 2:1'
 UNT+ 10+ ME000055'

4.12 Hierarchies in PRODAT.

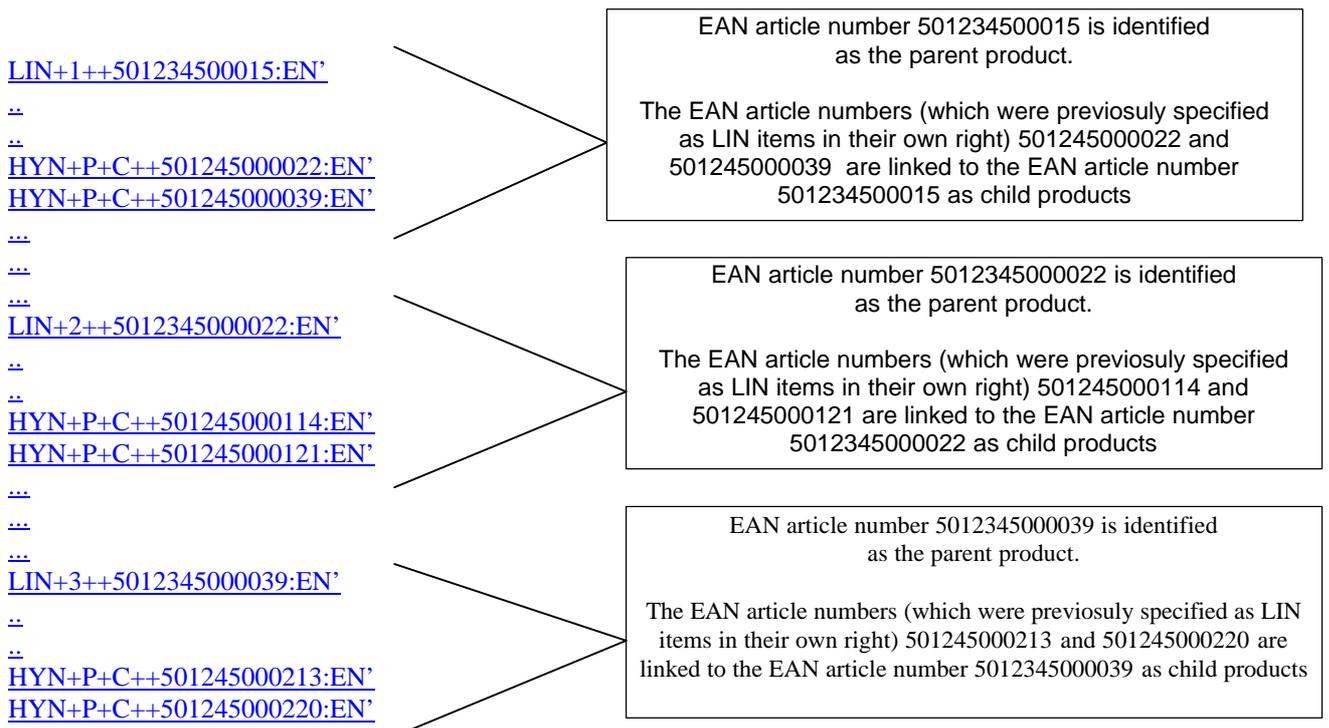
A hierarchy in the EANCOM Product Data (PRODAT) message is a facility which allows products to be linked together in a parent-child relationship. Unlike sub-lines, hierarchies provide an explicit indication as to whether an article is a parent or a child in a relationship.

The hierarchy structure in PRODAT essentially takes the same format as that detailed earlier for sub-lines, i.e. the tree structure. The minimum requirement of any hierarchy relationship in EANCOM is that there must be at least one parent. However having said that, a child product may also act as a parent to another child at the next level down in the hierarchy.



When using EANCOM to provide product configurations using the hierarchy facility in PRODAT all constituent members of the hierarchy parts of the configuration must first be communicated as main lines in the PRODAT message. When this has been done the hierarchy relationships can be specified.

A simple example which details the structure presented above follows;



4.13 Referencing in EANCOM.

The effective use of EANCOM depends on the use of referencing to reduce the quantity of data required to be transmitted in any message. Referencing provides the opportunity to link messages with multiple pieces of external information which may or may not have been transmitted using EDI. A comparison with manual systems would be a situation where, for example in an invoice, references are provided to the order and the delivery docket but paper copies of both of these documents are not normally provided with the paper invoice. EDI works on a similar basis using the RFF segment which allows references to other documents to be transmitted without a need to transmit the actual documents.

Within the EANCOM messages several references exist which can be used to link the information exchanged between the trading partners with the physical movement of goods or data.

Of primary importance in a trade transaction is the order number which is usually assigned by the buyer and which provides a unique reference to the transaction. In the EANCOM messages the order number is quoted in several messages which follow the actual EANCOM order (e.g. the order response, the despatch advice, the receiving advice, the invoice, the remittance advice) as a means of linking information from different messages in the EANCOM message flow. Together with the order number, line numbers are used to uniquely identify an order line for referencing purposes.

It is important to note that it is not recommended to use EAN article numbers for unique message line referencing within EANCOM messages. This is because it is possible for EAN article numbers to be repeated within the same message, e.g. the same article ordered many times for different delivery points.

The only method available within EANCOM, to uniquely identify a previous EANCOM message, is to put the message number (generated in DE 1004 of the BGM segment of the original message) in data element 1153 of the RFF segment. Should it be required to identify an individual line (identified by Line Item Number data element 1082 in the LIN segment of the original message) then this should be put in data element 1156 alongside the message number in data element 1153, of the RFF segment.

A simple example follows;

A buyer sends 3 orders requesting the supply of the product identified by the EAN article number 5012345000220 to the locations as detailed below;

Order Number (DE 1004 BGM segment)	Order Line Number (DE 1082 LIN segment)	Product EAN Article Number	Delivery Location
181	1	5012345000220	5012345000015
201	1	5012345000220	5012345000121
201	2	5012345000220	5012345000015
190	1	5012345000220	5012345000213

To access each of the lines above, perhaps in a following message like a despatch advice, the following RFF segments would be used;

RFF+ ON:181:1'	. Order number 181, line number 1
RFF+ ON:201:1'	. Order number 201, line number 1
RFF+ ON:201:2'	. Order number 201, line number 2
RFF+ ON:190:1'	. Order number 190, line number 1



4.14 Package Marking in EANCOM.

Within EANCOM it is possible to specify marks and numbers which are to be, or have been, marked on the physical packaging of a product or a consignment. This functionality is provided in the PCI and GIN segments which normally are nested below a PAC segment. The following guidelines should be observed when deciding which segment to use, and its data content, for package marking;

Markings for human readable purposes.

It is recommended that markings which are to be read by humans are provided as free text in the PCI segment using as many repeats of data element 7102 as are required.

While such markings may also have been specified as formatted information in another segment in the LIN group, these formats are not considered to be human readable, e.g. in a DTM segment a date would have the following format '011096', while a translation into a human readable format would be as follows '1st of October 1996'.

Qualification of the type of marking specified (e.g. mark expiry date) in data element 7102 is provided in data element 4233.

Markings for identification purposes.

It is recommended that markings which are to be used for identification, automatic data capture, or tracking purposes (e.g. a batch number or a serial shipping container code) be specified in the GIN segment using data element 7402. Qualification of the type of identification code used is provided in data element 7405.

5 USER PROFILES

EANCOM user profiles are complementary documents to the EANCOM manual which describe in detail aspects of implementing EANCOM in a specific industry sector. They must always be used in conjunction with the full EANCOM set of documentation.

The development of user profiles of EANCOM messages by external groups (e.g. other industry groups) is subject to a policy which must be agreed by the developing external group with EAN International before any reference to the name EANCOM can be made or any certification concerning compliance with EANCOM can be carried out by EAN International. The policy governing such developments is as follows;

The following are the minimum criteria to which external user groups must agree to before the secretariat may become involved in any certification process. At a national level additional criteria may be defined in order to conform to existing numbering organisation policy.

If an external international EDI user group wants to declare that its guidelines (user profiles) are fully compatible with EANCOM then they must agree;

- * To require to their membership that they join the EAN Numbering Organisation within their country and that they use EAN coding for the identification of products and locations when using EANCOM user profiles;*
- * Agree to base their document on the latest version of the EANCOM manual;*
- * Agree that only additional codes (industry specific) and explanation notes may be added to their document;*
- * Agree that both parties, i.e. the international user group and national numbering organisations, are free to distribute the document to their own membership.*
- * Inform numbering organisations of all parties from their communities who have received copies of the document;*
- * That publication of the guidelines do not take place before EAN International have completed a process certifying that they conform to EANCOM.*

To date user profiles of EANCOM exist in four areas:

- the invoicing of metered services (gas, electricity, telephones, etc);
- the use of EANCOM in the health sector (medical supplies);
- the specification and ordering of customer specific articles (e.g. furniture);
- the use of EANCOM in the book trade sector (published by EDItEUR).

Users wishing to implement EANCOM in these sectors should consult their local numbering organisation with a view to getting more information on the sector and obtaining the relevant user profile.

6 ADDITIONAL DOCUMENTS

In addition to the EANCOM manual, the EAN General Specifications, and the sector specific user profiles a number of publications exist which provide additional non-technical support on the subject of EANCOM/EDI in particular, and the EAN standards in general. Additional EAN International documents are today available on the following subjects;

Title	Subject
An Introduction to EDI	A general introduction to the subject of EDI. Includes information on the EDIFACT standard, the background to EANCOM, and guidelines on how to implement an EDI project.
An Introduction to EANCOM in Trade and Transport	A non-technical introduction to the EANCOM messages in trade and transport. In particular this document examines the links and inter-dependencies between the messages from the trade and transport sectors looking at such issues as data flows, referencing between the messages, the trade and transport parties, and a glossary of terms from both environments.
An Introduction to EANCOM in Trade and Finance	A non-technical introduction to the EANCOM messages in trade and finance. In particular this document examines the links and inter-dependencies between the messages from the trade and finance sectors looking at such issues as data flows, referencing between the messages, the trade and finance parties, a high level guide to the issues related to the security of EDI messages, and a glossary of terms from both environments.
An Introduction to the Serial Shipping Container Code	An introduction to the EAN Serial Shipping Container Code.
Vital in Communications - EAN Location Numbers	An introduction to EAN location numbers including information on the benefits of using the EAN location number, answers to some frequently asked questions about the EAN location number, and a set of case studies from EAN member companies which have implemented EAN location numbering.
EAN International Annual EDI Survey Results	EAN International surveys its numbering organisations each year to evaluate the development of EDI usage, and in particular EANCOM usage, world-wide. This document is revised and re-released in March of each year.

All of the above publications are available in English from the EAN numbering organisations. In addition several numbering organisations have translated one or more of the above documents into their local language. For copies of any of the above or any general information on other non-EDI publications available from EAN International please contact your local numbering organisation.

7 INTERNATIONAL RECOMMENDATIONS

Within data elements in several EANCOM segments reference is made to international (i.e. United Nations (UN) and International Standards Organisation (ISO)) recommendations. These recommendations provide codes for use in multiple sectors and applications which include, but are not restricted to, EDI (for examples, the ISO country codes).

Below you will find a table detailing the international recommendations catered for in EANCOM and the EANCOM segments where they are communicated. At the time of publication the codes listed in EANCOM for international recommendations are based on the latest available version. The identification of the year of release or latest version of each recommendation listed below may be obtained from your national standards or trade facilitation body.

International Recommendation	Deal with what	EANCOM Segment
UN REC 20	Measure units	DGS - MEA - PRI - QTY
UN REC 19	Modes of transport	FTX - IMD
ISO 3166	Country codes	EQD - FII - NAD - SGP
ISO 4217	Currency codes	CUX - MOA
ISO 639	Languages	CNI - DOC - FTX - IMD
UN REC 24	Harmonisation of transport status codes	STS

8 GLOSSARY OF EDIFACT TERMINOLOGY

Character set	A finite set of different characters that is considered complete for a given purpose.
Code	(a) A character string used as an abbreviated means of recording or identifying information. (b) To represent or identify information using a specific symbolic form that can be recognised by a computer.
Component data element	A simple data element which is a subordinate portion of a composite data element and in an interchange is identified by its position within the composite data element.
Component data element separator	A character used to separate component data elements in a composite data element.
Composite data element	A data element containing two or more component data elements.
Conditional	A statement in a segment or message directory of a condition for the use of a segment, a data element, a composite data element, or a component data element.
Data	A representation of facts, concepts or instructions in a formalised manner suitable for communication, interpretation or processing by human beings or by automatic means.
Data element	A unit of data for which the identification, description and value representation have been specified.
Data element name	One or more words in a natural language identifying a data element concept.
Data element separator	A character used to separate data elements in a segment.
Data element tag	A unique identifier for a data element in a data element directory.
Data element value	The specific entry of an identified data element represented as specified in a data element directory.
Data element representation	The format (e.g. numeric, alphabetic, variable length etc.) of a data item.
Detail section	The portion of the message between the header and the detail section which relates to detail information only.

EDIFACT	Electronic Data Interchange for Administration, Commerce and Transport.
Explicit representation	The technique used to give an absolute identification of the location of a data segment within a message.
Functional group	One or more messages of the same type headed by a functional group header service segment and ending with a functional group trailer service segment
Functional group header	The service segment heading [and identifying] the functional group.
Functional group trailer	The service segment ending a functional group.
Group of segments	Identified, usually repeatable, grouping of related segments.
Header section	The portion of the message which precedes the actual body and trailer of the business transaction, and which contains information which relates to the entire message.
Identifier	A character or group of characters used to identify or name an item of data and possibly to indicate certain properties of that data.
Interchange	Communication between partners in the form of a structured set of messages and service segments starting with an interchange control header and ending with an interchange control trailer.
Interchange agreement	Document, usually in the form of a user manual, which describes, e.g., level of syntax, messages, legal and security requirements, etc.
Level	Relative hierarchical position of a data segment within a message.
Mandatory	A statement in a segment or message directory which specifies that a segment, a data element, a composite data element or a component data element must be used.
Message	A set of segments in the order specified in a message directory starting with the message header and ending with the message trailer.
Message structure diagram	A graphic representation of the sequence of segments within a message.
Message header	The service segment starting and uniquely identifying a message.

Message trailer	The service segment ending a message.
Message type	An identified and structured set of data elements covering the requirements for a specified type of transaction, e.g. invoice.
Nested segment	A segment which directly relates to another segment in an identified and structured group of segments covering the requirements for a specific message type.
Omission	Exclusion in an actual message of one or more units of data which are defined as conditional in a message type specification.
Qualified data element	A data element whose precise meaning is conveyed by an associated qualifier.
Qualifier	A data element whose value shall be expressed as a code that gives specific meaning to the function of another data element or a segment.
Release character	A character used to restore to its original meaning any character used as a syntactical separator.
Repeating segment	A segment which may repeat in a message as specified in the relevant message type specification.
Section control segment	A service segment used to separate header, detail and summary sections of a message where necessary to avoid ambiguities in the message segment content.
Segment	A pre-defined and identified set of functionally related data elements values which are identified by their sequential positions within the set. A segment starts with a segment tag and ends with a segment terminator. It can be a service segment or a user data segment.
Segment code	A code which uniquely identifies each segment as specified in a segment directory.
Segment directory	A listing of identified, named, described and specified segments.
Segment name	One or more words in a natural language identifying a data segment concept.
Segment table	A table showing the sequential order of segments, their arrangements in segment groups and the status and allowed repetitions of the segments and groups in a message.

Segment tag	A composite data element in which the first component data element contains a code which uniquely identifies a segment as specified in the relevant segment directory. Additional component data elements can be conditionally used to indicate the hierarchical level and nesting relation in a message and the incidence of repetition of the segment.
Segment terminator	A syntax character indicating the end of a segment.
Separator character	A character used for syntactical separation of data.
Service data element	A data element used in service segments.
Service segment	A segment required to service the interchange of user data.
Service string advice	A character string at the beginning of an interchange defining syntactically delimiting characters and indicators used in the interchange.
Simple data element	A data element containing a single value.
Status	Specifies whether an element or segment is mandatory or conditional.
Summary section	The portion of the message which follows the body of the message and which contains summary information relating to the entire message.
Syntax rules	Rules governing the structure of an interchange and its functional groups, messages, segments and data elements.
Tag	A unique identifier for a segment or data element.
Trading partners	The sending and/or receiving parties involved in exchanging electronic business messages.
UNSM	United Nations Standard Message, an EDIFACT message type approved for international use. A UNSM is a message which: I. has been registered, published and which is maintained by the United Nations Economic Commission for Europe; II. has the values contained in the Controlling Agency, Message Type, Message Version Number and Message Release Number fields (the requirements for the use of which are specified in ISO 9735), allocated and controlled by the UN/ECE; III. always has the code value "UN" in the Controlling Agency field.

UNSM Sub-set

A sub-set of a UNSM is a message which is directly derived from an approved UNSM, has the same function as the UNSM from which it is derived, and which:

- I. contains all of the groups and segments defined as having a mandatory status within the message, and the mandatory data elements within them. There shall be no change to the status, order or content of the groups, segments and composite data elements and data elements contained within the segments. (It should be noted, however, that although many UNSMs contain Conditional Groups of segments which may contain one or more mandatory segments, providing the complete conditional group is omitted from the sub-set, this does not break the rule regarding the inclusion of mandatory segments);
- II. does not change the status, order or content of the Segments, composite data elements and data elements in the conditional segments chosen for use from the UNSM.
- III. does not add any segments, composite data elements or data elements to the message;
- IV. contains the identical values specified for use in the Message Type, Controlling Agency, Message Version Number and Message Release Number fields, as are specified for the UNSM from which the sub-set is derived.

User data segment

A segment which, in contrary to a service segment, contains the information itself.

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