



REWE INTERNATIONAL STANDARD

INVOIC – Invoice and
Security segments for Digital Signature

Definition
EANCOM 2002 Syntax 4

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1. Introduction

This document describes the electronic exchange of invoices with digital signature based on the Header/Trailer approach in EANCOM format for the company REWE International.

The intention is to transmit the invoice data and the digital signature in one Interchange using Syntax Version 4.

For this purpose first the invoice itself is generated in EANCOM format. After that the first 4 security segments are added and then through these segments the digital signature is generated.

This document begins with description of INVOIC message, followed by a detailed description of the security segments. The document ends with an example of a whole interchange.

Before legislative regulations regarding electronic invoicing were created for pre-tax allowance purposes only invoices in paper form and handed over personally, per fax or by mail were allowed.

It was already possible to exchange invoices electronically but only for the purposes of the automatic data processing. By this reason the electronic exchange of invoices was practised mostly only by long term business partners.

By this approach it was necessary at the end of each invoicing period to create one additional collective invoice in paper form. According to the EU regulations it is also allowed to provide invoices in electronic form on condition that the receiver accepts this. However authenticity and integrity of the data must be ensured.

The digital signature serves in this legal context as a seal for digital data generated by using a private key. Through a related public signature key marked with a signature key certificate of the security party it lets recognize the authenticity of the signature key holder and the integrity of the data.

The purpose of the digital signature is therefore to protect the electronic data against manipulations or to make eventual changes recognizable.

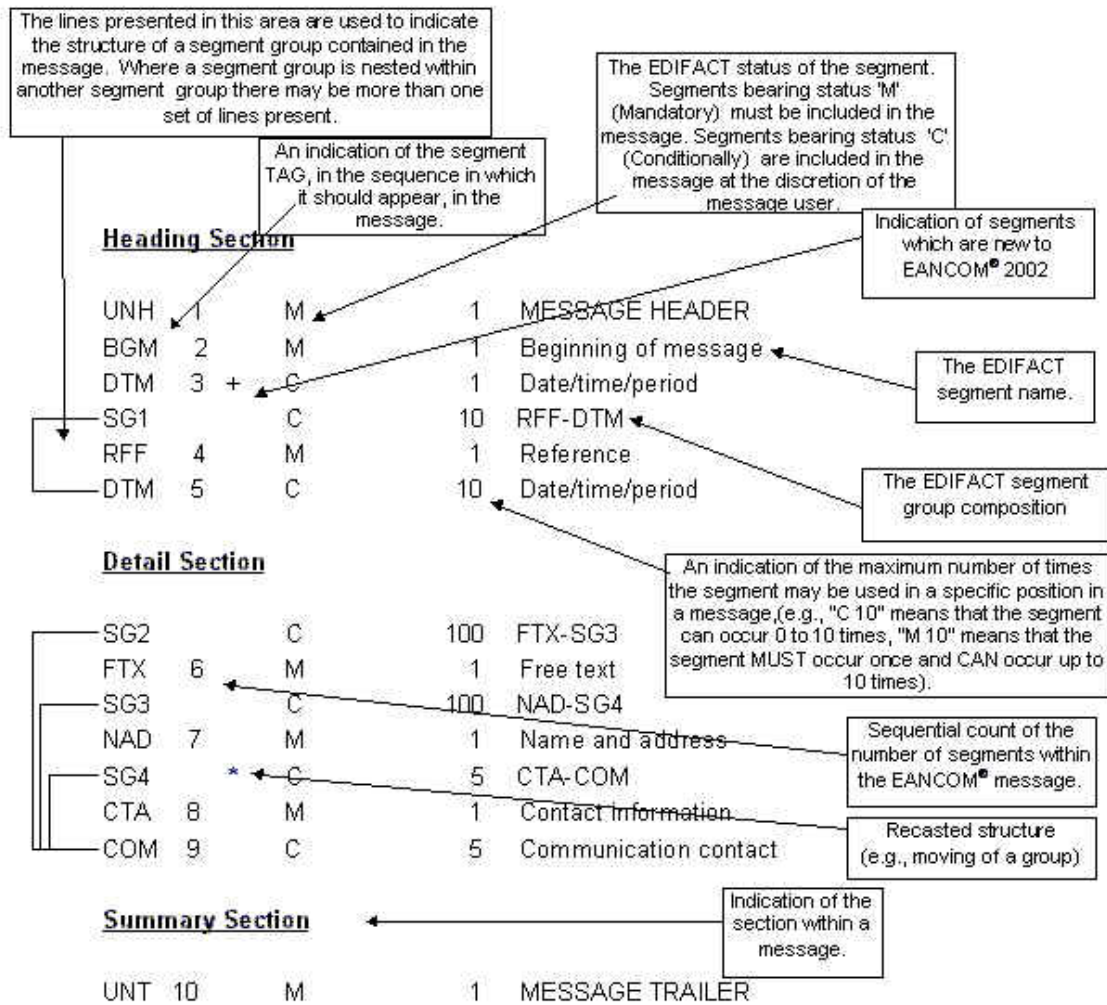
Document structure

1. Message structure
2. Business Terms
3. Segment description

Message Structure Chart

Within every EANCOM® message a diagram is presented which explains the structure of the message.

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 and consists of three sections; a header, detail, and summary section. An example of a message structure chart follows:



2. Message structure INVOIC

Invoice message

	UNA	1	C	1	Service string advice
	UNB	2	M	1	Interchange header
	UNH	3	M	1	Message header
	BGM	4	M	1	Beginning of message
	DTM	5	M	2	Date/time/period
	FTX	6	C	6	Free text
	SG1		M	6	RFF-DTM
	RFF	7	M	1	REference
	DTM	8	C	1	Date/time/period
	SG2		M	7	NAD-SG3
	NAD	9	M	1	Name and address
	SG3		C	1	RFF
	RFF	10	M	1	Reference
	SG7		M	1	CUX
	CUX	11	M	1	Currencies
	SG26		M	999999	LIN-IMD-QTY-SG27-SG29-SG34
	LIN	12	M	1	Line item
	IMD	13	M	4	Item description
	QTY	14	M	2	Quantity
	SG27		M	1	MOA
	MOA	15	M	1	Monetary amount
	SG29		M	2	PRI
	PRI	16	M	1	Price details
	SG34		M	3	TAX-MOA
	TAX	17	M	1	Duty/tax/fee details
	MOA	18	C	1	Monetary amount
	UNS	19	M	1	Section control
	SG50		M	5	MOA
	MOA	20	M	1	Monetary amount
	SG52		M	10	TAX-MOA
	TAX	21	M	1	Duty/tax/fee details
	MOA	22	M	9	Monetary amount
	UNT	23	M	1	Message trailer
	UNZ	24	M	1	Interchange trailer

3. BUSINESS TERMS

Business term	Description	Status	Format	Segment		Data element	
Commercial invoice/credit note		M	A/N 3	BGM		C002 1001	Document name code
Invoice or credit note number		M	A/N 16	BGM		C106 1004	Document identifier
Message date		M	D 8	DTM		C507 2380	Date or time or period value
Delivery date		M	D 8	DTM		C507 2380	Date or time or period value
Coded text references	average tax rate, intra-community delivery, tax exempt export delivery etc.	O	A/N 3	FTX		C107 4441	Free text value code
Order number assigned by the buyer		M	A/N 16	SG1	RFF	C506 1154	Reference identifier
Delivery note number		M	A/N 16	SG1	RFF	C506 1154	Reference identifier
Invoice number	Invoice reference number (only by credit note)	O	A/N 16	SG1	RFF	C506 1154	Reference identifier
Receiving advice number		O	A/N 16	SG1	RFF	C506 1154	Reference identifier
Instruction for returns number		O	A/N 16	SG1	RFF	C506 1154	Reference identifier
Organic control number	Organic control number of the supplier	O	A/N 35	SG1	RFF	C506 1154	Reference identifier
Reference date		O	D8	SG1	DTM	C507 2380	Date or time or period value

Business term	Description	Status	Format	Segment		Data element		
Buyer	GLN	M	N 13	SG2	NAD	C082	3039	Party identifier
Supplier	GLN	M	N 13	SG2	NAD	C082	3039	Party identifier
Delivery party	GLN	M	N 13	SG2	NAD	C082	3039	Party identifier
Ultimate consignee	GLN, only if not identical with the delivery party (Cross-Docking)	K	N 13	SG2	NAD	C082	3039	Party identifier
Ordered by	GLN, only if not identical with the buyer	O	N 13	SG2	NAD	C082	3039	Party identifier
Invoicee	GLN, only if not identical with the buyer	O	N 13	SG2	NAD	C082	3039	Party identifier
Issuer of invoice	GLN, only if not identical with the supplier	K	N 13	SG2	NAD	C082	3039	Party identifier
Company name	Mandatory for SU,BY, II and IV	M	A/N 3X35	SG2	NAD	C080	3036	Party name
Street	Optional for DP	M	A/N 2X35	SG2	NAD	C059	3042	Street and number or post office b
	Mandatory for SU, BY, II and IV	M						
City	Optional for DP	M	A/N 35	SG2	NAD		3164	City name
	Mandatory for SU, BY, II and IV	M						
Postal code	Optional for DP	M	A/N 17	SG2	NAD		3251	Postal identification code
	Mandatory for SU, BY, II and IV	M						

Business term	Description	Status	Format	Segment	Data element
Country name code		O	A/N 3	SG2 NAD	3207 Country name code
VAT registration number		M	A/N 20	SG3 RFF	C506 1154 Reference identifier
Currency		M	A/N 3	SG7 CUX	C504 6345 Currency identification code
Article	EAN	M	N 14	SG26 LIN	C212 7140 Item identifier
Identification of display article		O	A/N 3	SG26 IMD	C273 7009 Item description code
Identification of returnable containers		O	A/N 3	SG26 IMD	C273 7009 Item description code
Identification of consumer units		O	A/N 3	SG26 IMD	C273 7009 Item description code
Article description		M	A/N70	SG26 IMD	C273 7008 Item description
Invoiced quantity	Delivered quantity that is being invoiced, related to EAN	M	N 7+3	SG26 QTY	C186 6060 Quantity
Free goods quantity	Delivered quantity that is not being invoiced, related to EAN	M	N 7+3	SG26 QTY	C186 6060 Quantity
Number of units in higher packaging or configuration level (EAN-code)		O	N 7+3	SG26 QTY	C186 6060 Quantity
Measurement unit	Only used for variable quantity products (unit is not equal piece)	O	A/N 3	SG26 QTY	C186 6411 Measurement unit code
Line item amount		M	N 10+3	SG27 MOA	C516 5004 Monetary amount

Business term	Description	Status	Format	Segment	Data element
Net price		M	N 7+3	SG29 PRI	C509 5118 Price amount
VAT rate	In percentage	M	N 2+2	SG34 TAX	C243 5278 Duty or tax or fee rate
Producer fees as percentage	Beer, sparkling wine	O	N 2+2	SG34 TAX	C243 5278 Duty or tax or fee rate
Tax amount	Producer fees (beer, sparkling wine) as a monetary amount	O	N 7+3	SG34 MOA	C516 5004 Monetary amount
Total line items amount	Sum of all line item amounts	M	N 11+2	SG50 MOA	C516 5004 Monetary amount
Goods and services total amount		M	N 11+2	SG50 MOA	C516 5004 Monetary amount
Total retournable items deposit amount		M	N 11+2	SG50 MOA	C516 5004 Monetary amount
Message total duty/tax/fee amount		O	N 11+2	SG50 MOA	C516 5004 Monetary amount
Invoice amount		M	N 11+2	SG50 MOA	C516 5004 Monetary amount
VAT		M	N 2+2	SG52 TAX	C243 5278 Duty or tax or fee rate
Producer fees	As percentage	M	N 2+2	SG52 TAX	C243 5278 Duty or tax or fee rate
Taxable amount		M	N 11+2	SG52 MOA	C516 5004 Monetary amount
Tax amount		M	N 11+2	SG52 MOA	C516 5004 Monetary amount

4. Segment description INVOIC

UNA - C 1 - Service string advice				
Function : The service string advice shall begin with the upper case characters UNA immediately followed by six characters in the order shown below. The space character shall not be used in positions 010, 020, 040, 050 or 060. The same character shall not be used in more than one position of the UNA.				
Segment number : 1				
Data element group/Data element	EDIFACT	ANW	*	Description
UNA1 Component data element separator	M an1	M	*	Used as a separator between component data elements contained within a composite data element (default value: ":")
UNA2 Data element separator	M an1	M	*	Used as a separator between two simple or composite data elements (default value: "+")
UNA3 Decimal mark	M an1	M	*	Used to indicate the character used for decimal notation (default value: ".")
UNA4 Release character	M an1	M	*	Used to restore separator and terminator signs to their normal meaning (value: "?").
UNA5 Repetition separator	M an1	M	*	Separator sign ("*")
UNA6 Segment terminator	M an1	M	*	Used to indicate the end of a segment (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 characters, the UNA segment need not be sent. If it is sent, it must immediately precede the UNB segment and contain the four service string characters (positions UNA1, UNA2, UNA4 and UNA6) 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 together with user-defined values then both the default and the 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.				
The use of the UNA segment is required when a character set other than level A is being used.				
Example: UNA: +. ?*'				

UNB - M 1 - Interchange Header				
Function : To identify an interchange.				
Segment number : 2				
Data element group/Data element	EDIFACT	ANW	*	Description
S001 Syntax identifier	M	M		
0001 Syntax-Kennung	M a4	M	*	See code list
0002 Syntax version number	M an1	M	*	4 = Version 4
0080 Service code list directory version number	C an..6	N		
0133 Character encoding, coded	C an..3	N		
S002 Interchange sender	M	M		
0004 Interchange sender identification	M an..35	M		GLN (n13)
0007 Identification code qualifier	C an..4	R	*	14 = EAN International.
0008 Interchange sender internal identification	C an..35	N		
0042 Interchange sender internal sub-identification	C an..35	N		
S003 Interchange recipient	M	M		
0010 Interchange recipient identification	M an..35	M		GLN (n13)
0007 Identification code qualifier	C an..4	R	*	14 = EAN International.
0014 Interchange recipient internal identification	C an..35	N		
0046 Interchange recipient internal sub-identification	C an..35	N		
S004 Date and time of preparation	M	M		
0017 Date	M n8	M		CCYYMMDD
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 reference/password details	C	N		
0022 Recipient reference/password	M an..14			
0025 Recipient reference/password qualifier	C an2			
0026 Application reference	C an..14	O		

0029	Processing priority code	C a1	N	
0031	Acknowledgement request	C n1	N	
0032	Interchange agreement identifier	C an..35	M	EANCOM-DISI = Indicator for Digital Signature
0035	Test indicator	C n1	O	1 = Interchange is a test

Segment Notes

The UNB 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, an agreement on which set to use should be reached on a bilateral basis before communications begin.

DE 0004 and 0010: Within EANCOM® the Global Location Number (GLN) 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 the GLN be used for this purpose.

DE 0014: The address for routing, formerly provided by the interchange recipient, is used by the interchange sender to inform the recipient of the internal address within the recipient's system, to which the interchange should be routed. It is recommended that the GLN be used for this purpose.

DE S004: The date and time at which the 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 identify uniquely each interchange. Should the sender wish to re-use interchange control reference numbers, it is recommended that each number is held for a period of at least three months before being re-used. In order to guarantee uniqueness, the interchange control reference number should always be linked to the sender's identification (DE 0004).

DE S005: Any use of passwords must first be agreed bilaterally by the parties to the exchange.

DE 0026: This data element is used to identify the application on the recipient's system to which the interchange is directed. This data element may be used if, and only if, the interchange contains only one type of message, e.g. 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® APERAK or 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 contains an indicator for Digital Signature in order to facilitate the automatic processing of the interchange.

Example:

UNB+UNOC:4+9099999300314:14+8798765432106:14+20060102:1000+12345555++++EANCOM-DISI'

UNH - M 1 - Message header				
Function : To head, identify and specify a message.				
Segment number : 3				
Data element group/Data element	EDIFACT	ANW	*	Description
0062 Message reference number	M an..14	M		Sender's unqu message reference. Sequence number of the messages in the interchange. DE 0062 in the UNT will be exactly the same. Sender generated.
S009 Message identifier	M	M		
0065 Message type	M an..6	M	*	INVOIC = Invoice message
0052 Message version number	M an..3	M	*	D = Draft version
0054 Message release number	M an..3	M	*	01B = Release 2001 - B
0051 Controlling agency, coded	M an..3	M	*	UN = UN/CEFACT
0057 Association assigned code	C an..6	R	*	EAN010 = EAN version control number
0110 Code list directory version number	C an..6	O		Code list version
0113 Message type sub-function identification	C an..6	N		
0068 Common access reference	C an..35	N		
S010 Status of the transfer	C	N		
0070 Sequence of transfers	M n..2			
0073 First and last transfer	C a1			
S016 Message subset identification	C	N		
0115 Message subset identification	M an..14			
0116 Message subset version number	C an..3			
0118 Message subset release number	C an..3			
0051 Controlling agency, coded	C an..3			
S017 Message implementation guideline identification	C	N		
0121 Message implementation guideline identification	M an..14			
0122 Message implementation guideline version number	C an..3			
0124 Message implementation guideline release number	C an..3			

0051	Controlling agency, coded	C an..3			
S018	Scenario identification	C	N		
0127	Scenario identification	M an..14			
0128	Scenario version number	C an..3			
0130	Scenario release number	C an..3			
0051	Controlling agency, coded	C an..3			

Segment Notes

Example:

UNH+ME00001+INVOIC:D:01B:UN:EAN010'

BGM - M		1 - Beginning of message			
Function :		To indicate the type and function of a message and to transmit the identifying number.			
Segment number : 4					
Data element group/Data element	EDIFACT	ANW	*	Description	
C002 Document/message name	C	R			
1001 Document name code	C an..3	R	*	380 = Commercial invoice 381 = Credit note – goods and services	
1131 Code list identification code	C an..17	N			
3055 Code list responsible agency code	C an..3	N			
1000 Document name	C an..35	N			
C106 Document/message identification	C	R			
1004 Document identifier	C an..35	R		Invoice number/credit note number, assigned by the document sender	
1056 Version identifier	C an..9	N			
1060 Revision identifier	C an..6	N			
1225 Message function code	C an..3	R	*	9 = Original 1 = Cancellation	
4343 Response type code	C an..3	N			
<u>Segment Notes</u>					
<p>- Message type - Invoice (DE1001 = 380), Mandatory *); A/N 3 - Invoice number (DE1004); Mandatory; A/N 16 BGM+380+200099+9'</p> <p>- Message type – Credit note (DE1001 = 381); Mandatory *); A/N 3 - Credit note number (DE1004); Mandatory; A/N 16 BGM+381+300200+9'</p> <p>*) One of these message types (together with the message number) must be set. The INVOIC serves as both: Invoice and Credit note.</p>					

DTM - M 2 - Date/time/period				
Function : To specify date and/or time or period				
Segment number : 5				
Data element group/Data element	EDIFACT	ANW	*	Description
C507 Date/time/period	M	M		
2005 Date or time or period function code qualifier	M an..3	M	*	137 = Document/message date/time 35 = Delivery date/time, actual
2380 Date or time or period value	C an..35	R		
2379 Date or time or period format code	C an..3	R	*	102 = CCYYMMDD
<u>Segment Notes</u>				
- Message Date (DE2005 = 137); Mandatory; D 8 DTM+137:20060522:102'				
- Delivery date (DE2005 = 35); Mandatory; D 8 DTM+35:20060615:102'				

FTX - C 6 - Free text				
Function : To provide free form or coded text information				
Segment number : 6				
Data element group/Data element	EDIFACT	ANW	*	Description
4451 Text subject code qualifier	M an..3	M	*	REG = Regulatory information
4453 Free text function code	C an..3	M	*	1 = Text for subsequent use
C107 Text reference	C	M		
4441 Free text value code	M an..17	M	*	DSS = Average tax rate according to § 22 paragraph 1 / Value Added Tax Act S67 = Tax exempt according to § 6 paragraph 1 Z 27 / Value Added Tax Act S69 = Tax exempt according to § 6 paragraph 1 Z 9 / Value Added Tax Act IGL = Intra-community deliveries according to article 6 paragraph 1 / Value Added Tax Act RCH = Reverse Charge according to § 19 paragraph 1 / Value Added Tax Act SA7 = Tax-exempt export delivery according to § 7 / Value Added Tax Act
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	M	*	294 = GS1 Austria
C108 Text literal	C	N		
4440 Free text value	M an..512			
4440 Free text value	C an..512			
4440 Free text value	C an..512			
4440 Free text value	C an..512			
4440 Free text value	C an..512			
3453 Language name code	C an..3	N		
4447 Free text format code	C an..3	N		

Segment Notes

Use of this segment in free form is not recommended since in most cases it inhibits automatic processing of the Invoice.

Coded references to standard texts is an available functionality which enables automatic processing and reduces transmission and processing overheads. Standard texts should be mutually defined among trading partners and can be used to cover legal and other requirements.

The codes in DE 4451 are maintained by GS1 Austria (DE3055 = 294) and are defined as following:

DSS = Average tax rate according to § 22 paragraph 1 / Value Added Tax Act

Average tax rate (12%) applied by flat rate farmers

FTX+REG+1+DSS::294'

S67 = Tax exempt according to § 6 paragraph 1 Z 27 / Value Added Tax Act

Tax exempt (below the VAT threshold): According to § 6 paragraph 1 Z 27 the delivery/service is tax exempt

FTX+REG+1+S67::294'

S69 = Tax exempt according to § 6 paragraph 1 Z 9 / Value Added Tax Act

Tax exempt (gambling turnovers, brake-open tickets): According to § 6 paragraph 1 Z 9 the delivery/service is tax exempt

FTX+REG+1+S69::294'

IGL = Intra-community deliveries according to article 6 paragraph 1 / Value Added Tax Act

Intra-community delivery: Tax exempt intra-community delivery according to article 6 paragraph 1 Value Added Tax Act

FTX+REG+1+IGL::294'

RCH = Reverse Charge according to § 19 paragraph 1 / Value Added Tax Act

FTX+REG+1+RCH::294'

SA7 = Tax-exempt export delivery according to § 7 / Value Added Tax Act

By export in third country (outside the EU)

FTX+REG+1+SA7::294'

SG1	- M	6 - RFF-DTM			
RFF	- M	1 - Reference			
Function : To specify a reference.					
Segment number : 7					
Data element group/Data element	EDIFACT	ANW	*	Description	
C506 Reference	M	M			
1153 Reference code qualifier	M an..3	M	*	ON = Order number (buyer) DQ = Delivery note number IRN = Instruction for returns number (EAN-Code) XC1 = Product certification number (EAN-Code)	
1154 Reference identifier	C an..70	R			
1156 Document line identifier	C an..6	N			
4000 Reference version identifier	C an..35	N			
1060 Revision identifier	C an..6	N			
<u>Segment Notes</u>					
- Order number (buyer) (DE1153 = ON); Mandatory; A/N 16 RFF+ON:4711'					
- Delivery note number (DE1153 = DQ); Mandatory; A/N 16 RFF+DQ:1234'					
- Instruction for returns number (DE1153 = IRN); Optional; A/N 16 RFF+IRN:5664'					
- Organic control number of the supplier (DE1153 = XC1); Optional; A/N 35 RFF+XC1:AT-N-01-BIO'					

SG1 - M 6 - RFF-DTM				
DTM - C 1 - Date/time/period				
Function : To specify date and/or time or period				
Segment number : 8				
Data element group/Data element	EDIFACT	ANW	*	Description
C507 Date/time/period	M	M		
2005 Date or time or period function code qualifier	M an..3	M	*	171 = Reference date/time
2380 Date or time or period value	C an..35	R		
2379 Date or time or period format code	C an..3	R	*	102 = CCYYMMDD
<u>Segment Notes</u>				
- Reference date; Optional; D 8 DTM+171:20060602:102'				

SG2	- M	7 -	NAD-SG3		
NAD	- M	1 -	Name and address		
Function	:	To specify the name/address and their related function, either by C082 only and/or unstructured by C058 or structured by C080 thru 3207.			
Segment number	:	9			
Data element group/Data element	EDIFACT	ANW	*	Description	
3035 Party function code qualifier	M an..3	M	*	BY = Buyer SU = Supplier DP = Delivery Party UC = Ultimate consignee OB = Ordered by IV = Invoicee II = Issuer of invoice	
C082 Party identification details	C	R			
3039 Party identifier	M an..35	M		GLN - Format n13	
1131 Code list identification code	C an..17	N			
3055 Code list responsible agency code	C an..3	R	*	9 = EAN (International Article Numbering Association)	
C058 Name and address	C	N			
3124 Name and address description	M an..35				
3124 Name and address description	C an..35				
3124 Name and address description	C an..35				
3124 Name and address description	C an..35				
3124 Name and address description	C an..35				
C080 Party name	C	D			
3036 Party name	M an..35	M			
3036 Party name	C an..35	O			
3036 Party name	C an..35	O			
3036 Party name	C an..35	N			
3036 Party name	C an..35	N			
3045 Party name format code	C an..3	N			
C059 Street	C	D			
3042 Street and number or post office box identifier	M an..35	M			

3042	Street and number or post office box identifier	C an..35	O	
3042	Street and number or post office box identifier	C an..35	N	
3042	Street and number or post office box identifier	C an..35	N	
3164	City name	C an..35	D	
C819	Country sub entity details	C	N	
3229	Country sub-entity name code	C an..9		
1131	Code list identification code	C an..17		
3055	Code list responsible agency code	C an..3		
3228	Country sub-entity name	C an..70		
3251	Postal identification code	C an..17	D	
3207	Country name code	C an..3	D	

Segment Notes

- Buyer (DE3035 = BY); Mandatory *); N 13

NAD+BY+901234500004::9++Buyer-Name: Buyer -Name: Buyer -Name+MUSTERPLATZ 5+WIEN++1190+AT'

***) For invoices with digital signature the indication of buyer GLN and invoice address in structured form is mandatory.**

- Supplier (DE3035 = SU); Mandatory **); N 13

NAD+SU+9012345000011::9++Supplier-Name: Supplier -Name: Supplier -Name+MUSTERPLATZ
12+WIEN++1160+AT'

*****) For invoices with digital signature the indication of supplier GLN and invoice address in structured form is mandatory.**

- Delivery Party (DE3035 = DP); Mandatory ***); N 13

NAD+DP+9012345000028::9++Delivery P-Name: Delivery P -Name: Delivery P -Name+MUSTERPLATZ
12+WIEN++1160+AT''

******) For invoices with digital signature the delivery party is identified by GLN + optional address in structured form.**

- Ultimate consignee (DE3035 = UC); Optional; N 13

NAD+UC+9012345000035::9'

- Ordered by (DE3035 = OB); Optional; N 13

NAD+OB+9012345000042::9'

- Invoicee (DE3035 = IV); Optional; N 13

NAD+IV+9012345000059::9++Invoicee-Name: Invoicee -
Name+MUSTERPLATZ 5+WIEN++1190+AT'

This qualifier is only used, if the invoicee is not the buyer.

- Issuer of invoice (DE3035 = II); Optional; N 13

NAD+II+9099999300414::9++Issuer of invoice-Name: Issuer of invoice -Name: Issuer of invoice -
Name+MUSTERPLATZ
5+WIEN++1190+AT'

This qualifier is only used, if the issuer of the invoice is not the supplier.

Remark to Cross-Docking:

The field delivery party (DE3035 = DP) should contain the Cross-Docking-Point. The data field Ultimate consignee (DE3035 =UC) is used to identify the address for which the goods are picked.

DE3039: For partner identification use exclusively the GLN.

SG2 - M	7 - NAD-SG3			
SG3 - C	1 - RFF			
RFF - M	1 - Reference			
Function :	To specify a reference			
Segment number :	10			
Data element group/Data element	EDIFACT	ANW	*	Description
C506 Reference	M	M		
1153 Reference code qualifier	M an..3	M	*	VA = VAT registration number
1154 Reference identifier	C an..70	R		
1156 Document line identifier	C an..6	N		
4000 Reference version identifier	C an..35	N		
1060 Revision identifier	C an..6	N		
<u>Segment Notes</u>				
- VAT registration number, in connection with BY, SU, IV, II (DE1154); Mandatory; A/N 20				
RFF+VA:AT3929292'				

SG7	- M	1 - CUX		
CUX	- M	1 - Currencies		
Function	:	To specify currencies used in the transaction and relevant details for the rate of exchange.		
Segment number	:	11		
Data element group/Data element	EDIFACT	ANW	*	Description
C504 Currency details	C	R		
6347 Currency usage code qualifier	M an..3	M	*	2 = Reference currency
6345 Currency identification code	C an..3	R		EUR = Euro (EAN-Code)
6343 Currency type code qualifier	C an..3	R	*	4 = Invoicing currency
6348 Currency rate value	C n..4	N		
C504 Currency details	C	N		
6347 Currency usage code qualifier	M an..3			
6345 Currency identification code	C an..3			
6343 Currency type code qualifier	C an..3			
6348 Currency rate value	C n..4			
5402 Currency exchange rate	C n..12	N		
6341 Exchange rate currency market identifier	C an..3	N		
<u>Segment Notes</u>				
- Currency; Mandatory; A/N 3 CUX+2:EUR:4'				

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
LIN - M 1 - Line item				
Function : To identify a line item and configuration				
Segment number : 12				
Data element group/Data element	EDIFACT	ANW	*	Description
1082 Line item identifier	C an..6	R		Application generated number of the count of the order lines. The number must be unique and ascending within the message.
1229 Action request/notification description code	C an..3	N		
C212 Item identification number	C	R		
7140 Item identifier	C an..35	R		
7143 Item type identification code	C an..3	R	*	
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
C829 Sub-line information	C	N		
5495 Sub-line indicator code	C an..3			
1082 Line item identifier	C an..6			
1222 Configuration level number	C n..2	N		Format n..14
7083 Configuration operation code	C an..3	N		SRV = EAN.UCC Global Trade Item Number
<u>Segment Notes</u>				
- Article identification by EAN (DE7140); Mandatory; N 14 LIN+1++9012345000103:SRV'				
The LIN-segment indicates the beginning of the detail section within the Invoice and is used to identify the item being invoiced.				

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
IMD - M 4 - Item description				
Function : To describe an item in either an industry or free format				
Segment number : 13				
Data element group/Data element	EDIFACT	ANW	*	Description
7077 Description format code	C an..3	M	*	A = Free form long description C = Code (from industry code list)
C272 Item characteristic	C	N		
7081 Item characteristic code	C an..3			
1131 Code list identification code	C an..17			
3055 Code list responsible agency code	C an..3			
C273 Item description	C	M		
7009 Item description code	C an..17	O	*	SG = Standard group of products (mixed assortment) (EAN-Code) RC = Returnable container (EAN-Code) CU = Consumer unit (EAN-Code)
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	D	*	9 = EAN (International Article Numbering Association)
7008 Item description	C an..256	O		Max. 70 symbols
7008 Item description	C an..256	N		
3453 Language name code	C an..3	N		
7383 Surface or layer code	C an..3	N		

Segment Notes

- Indicator for display article (mixed assortment) (DE7009=SG); Optional; A/N 3
IMD+C++SG::9'

- Article description (DE7008); Mandatory; A/N 70
IMD+A++:::ARTIKELTEXT1'

Representation of returnable containers in INVOIC:

Basically there are 2 types of returnable containers to be differed:

1) bounded returnable container: the returnable container is sent together with content (full item)

Approach:

- Both content (full item) and returnable container should be represented as main positions
- Returnable container is additionally identified by the qualifier RC
 - all returnable containers related to the full item should be sent immediate after the full item and not as a sum of all positions at the end

2) unbounded returnable container: the returnable container is sent without content (full item), e.g. by ordering of an „empty“ case

Approach:

- Returnable container is represented as a normal article
- The qualifier RC is not set

- Identification of Returnable container/empties (DE7009=RC); Optional; A/N 3
IMD+C++RC::9'

- Identification of Consumer unit (DE7009=CU); Optional; A/N 3
IMD+C++CU::9'

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
QTY - M 2 - Quantity				
Function : To specify a pertinent quantity				
Segment number : 14				
Data element group/Data element	EDIFACT	ANW	*	Description
C186 Quantity details	M	M		
6063 Quantity type code qualifier	M an..3	M	*	47 = Invoiced quantity 192 = Free goods quantity 45E = Number of units in higher packaging or configuration level (EAN-Code)
6060 Quantity	M an..35	M		
6411 Measurement unit code	C an..3	D		KGM = Kilogram
<u>Segment Notes</u>				
- Invoiced quantity (DE6063 = 47); Mandatory*); N 7+3 QTY+47:250'				
- Free goods quantity (DE6063 = 192); Mandatory*); N 7+3 QTY+192:100'				
- Number of units in higher package or configuration level (Display article); Optional; N 7+3 In the qualifier 45E must be displayed the total quantity of the sub-positions (Quantity main position x number of the sub-positions within the main position = total quantity) QTY+45E:10'				
DE 6411: Measurement unit for quantity variable products (unit not equal piece); for further codes see the code list.				

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
SG27 - M 1 - MOA				
MOA - M 1 - Monetary amount				
Function : To specify a monetary amount.				
Segment number : 15				
Data element group/Data element	EDIFACT	ANW	*	Description
C516 Geldbetrag	M	M		
5025 Monetary amount type code qualifier	M an..3	M	*	203 = Line item amount
5004 Monetary amount	C n..35	R		
6345 Currency identification code	C an..3	N		
6343 Currency type code qualifier	C an..3	N		
4405 Status description code	C an..3	N		
<u>Segment Notes</u>				
- Line item amount; Mandatory; N 10+3 MOA+203:3500'				
Note: The line item amount is calculated on the base of the net price(AAA), specified in the PRI-Segment X Quantity!				

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
SG29 - M 2 - PRI				
PRI - M 1 - Price details				
Function : To specify price information				
Segment number : 16				
Data element group/Data element	EDIFACT	ANW	*	Description
C509 Price information	C	R		
5125 Price code qualifier	M an..3	M	*	AAA = Calculation net
5118 Price amount	C n..15	R		
5375 Price type code	C an..3	N		
5387 Price specification code	C an..3	N		
5284 Unit price basis value	C n..9	O		
6411 Measurement unit code	C an..3	O		
5213 Sub-line item price change operation code	C an..3	N		
<u>Segment Notes</u>				
- Net price (DE5125 = AAA); Mandatory; N 7+3 PRI+AAA:55'				
The net price ist he price information without taxes and within all discounts valid fort his article.				

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
SG34 - M 3 - TAX-MOA				
TAX - M 1 - Duty/tax/fee details				
Function : To specify relevant duty/tax/fee information				
Segment number : 17				
Data element group/Data element	EDIFACT	ANW	*	Description
5283 Duty or tax or fee function code qualifier	M an..3	M	*	7 = Tax 6 = Fee
C241 Duty/tax/fee type	C	D		
5153 Duty or tax or fee type name code	C an..3	R	*	VAT = Value added tax GST = Goods and Service tax
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5152 Duty or tax or fee type name	C an..35	N		
C533 Duty/tax/fee account detail	C	D		
5289 Duty or tax or fee account code	M an..6	M		BIE = Beer fees TAB = Tobacco fees BRA = Brandy fees GLA = Gambling fees
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5286 Duty or tax or fee assessment basis value	C an..15	N		
C243 Duty/tax/fee assessment basis value	C	D		
5279 Duty or tax or fee rate code	C an..7	N		
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5278 Duty or tax or fee rate	C an..17	R		Actual tax rate/fee rate
5273 Duty or tax or fee rate basis code	C an..12	N		
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5305 Duty or tax or fee category code	C an..3	O		E = Exempt from tax S = Standard rate
3446 Party tax identifier	C an..20	N		

1227 Calculation sequence code	C an..3	N		
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Segment Notes

- Value added tax for the actual position; Mandatory; N 2+2
TAX+7+VAT+++:::20+S'

- Producer fees(e.g. beer) as percentage; Optional; N 2+2; (the respective amounts are displayed in the following MOA segment)
TAX+6+GST+BIE'

Remark to DE 5278 and 5305:
By exempt from tax amounts or tax free amounts DE 5278 must always be filled with value 0 (Zero).

It is allowed to se tone VAT rate and two fees for one article.

SG26 - M 9999999 - LIN-IMD-QTY-SG27-SG29-SG34				
SG34 - M 3 - TAX-MOA				
MOA - C 1 - Monetary amount				
Function : To specify a monetary amount.				
Segment number : 18				
Data element group/Data element	EDIFACT	ANW	*	Description
C516 Monetary amount	M	M		
5025 Monetary amount type code qualifier	M an..3	M	*	124 = Tax amount
5004 Monetary amount	C n..35	R		
6345 Currency identification code	C an..3	N		
6343 Currency type code qualifier	C an..3	N		
4405 Status description code	C an..3	N		
<u>Segment Notes</u>				
This segment is exclusively used to specify in monetary terms the amount of tax due on the current line item, except VAT! Vat is not to be displayed as a monetary amount!				
- Tax amount; Optional; N 7+3 MOA+124:250'				

UNS - M 1 - Section control				
Function : To separate header, detail and summary sections of a message.				
Segment number : 19				
Data element group/Data element	EDIFACT	ANW	*	Description
0081 Section identification	M a1	M		S = Detail/summary section separation
<u>Segment Notes</u>				
This segment is used to separate the detail and summary sections of the message.				
Example: UNS+S'				

SG50 - M		5 - MOA	
MOA - M		1 - Monetary amount	
Function : To specify a monetary amount.			
Segment number : 20			
Data element group/Data element	EDIFACT	ANW	* Description
C516 Monetary amount	M	M	
5025 Monetary amount type code qualifier	M an..3	M	* 36E = Goods and services total amount (EAN Code) 35E = Total returnable items deposit amount (EAN Code) 79 = Total line items amount 176 = Message total duty/tax/fee amount 77 = Invoice amount
5004 Monetary amount	C n..35	R	
6345 Currency identification code	C an..3	N	
6343 Currency type code qualifier	C an..3	N	
4405 Status description code	C an..3	N	
<u>Segment Notes</u>			
<p>- Total line items amount, the sum of goods and services total amount and total returnable items deposit amount (DE5025 = 79); Mandatory *); N 11+2: MOA+79:4000'</p> <p>- Goods and services total amount (DE5025 = 36E); Mandatory *); N 11+2 MOA+36E:3500'</p> <p>- Total returnable items deposit amount (DE5025 = 35E); Mandatory *); N 11+2 MOA+35E:500'</p> <p>- Message total duty/tax/fee amount (DE5025 = 176); Optional; N 11+2 MOA+176:4000'</p> <p>- Invoice amount (Total line items amount plus charges and VAT, minus allowances) (DE5025 = 77); Mandatory; N 11+2 MOA+77:4000'</p> <p>*) The total line item amount is obligatory. Goods and services total amount and total returnable items deposit amount should be always displayed when the invoice contains returnable items. Otherwise they can be skipped..</p>			

SG52 - M 10 - TAX-MOA				
TAX - M 1 - Duty/tax/fee details				
Function : To specify relevant duty/tax/fee information.				
Segment number : 21				
Data element group/Data element	EDIFACT	ANW	*	Description
5283 Duty or tax or fee function code qualifier	M an..3	M	*	7 = Tax 6 = Fee
C241 Duty/tax/fee type	C	R		
5153 Duty or tax or fee type name coded	C an..3	R	*	VAT = Value added tax GST = Goods and services tax
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5152 Duty or tax or fee type name	C an..35	N		
C533 Duty/tax/fee account detail	C	D		
5289 Duty or tax or fee account code	M an..6	M		BIE = Beer fees TAB = Tobacco fees BRA = Brandy fees GLA = Gambling fees
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5286 Duty or tax or fee assessment basis value	C an..15	N		
C243 Duty/tax/fee details	C	D		
5279 Duty or tax or fee rate code	C an..7	N		
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5278 Duty or tax fee rate	C an..17	R		Aktueller Steuersatz
5273 Duty or tax or fee rate basis code	C an..12	N		
1131 Code list identification code	C an..17	N		
3055 Code list responsible agency code	C an..3	N		
5305 Duty or tax or fee category code	C an..3	O		E = Steuerbefreit S = Einheitssatz
3446 Party tax identifier	C an..20	N		
1227 Calculation sequence code	C an..3	N		

Segment Notes

- VAT – tax rate; Mandatory; N 2+2 (to be repeated for each tax rate)
TAX+7+VAT++++:::20'

- Producer fees (beer) as percentage; Mandatory – when fees are available; N 2+2; (to be repeated for each fee type)
TAX+6+GST+BIE'

Remark to DE 5278 and 5305:

By exempt from tax amounts or tax free amounts DE 5278 must always be filled with value 0 (Zero).

Tax rate, taxable amount and tax amount should be defined for each tax respectively fee type.

SG52 - M 10 - TAX-MOA				
MOA - M 9 - Monetary amount				
Function : To specify a monetary amount				
Segment number : 22				
Data element group/Data element	EDIFACT	ANW	*	Description
C516 Monetary amount	M	M		
5025 Monetary amount type code qualifier	M an..3	M	*	125 = Taxable amount 124 = Tax amount
5004 Monetary amount	C n..35	R		Amount
6345 Currency identification code	C an..3	N		
6343 Currency type code qualifier	C an..3	N		
4405 Status description code	C an..3	N		
<u>Segment Notes</u>				
- Taxable amount (DE5025 = 125); Mandatory; N 11+2 MOA+125:8000'				
- Tax amount (DE5025 = 124); Mandatory; N 11+2 MOA+124:800'				

UNT - M					1 - Message trailer				
Function :					To end and check the completeness of a message				
Segment number :					23				
Data element group/Data element		EDIFACT	ANW	*	Description				
0074	Number of segments in a message	M n..10	M		Sum of all segments				
0062	Message reference number	M an..14	M		Reference number from the UNH segment is to be repeated				
<u>Segment Notes</u>									
This segment is a mandatory UN/EDIFACT segment.									
Example: UNT+35+ME000001'									

UNZ - M	1 - Interchange trailer			
Function :	To end and check the completeness of an interchange			
Segment number :	24			
Data element group/Data element	EDIFACT	ANW	*	Description
0036 Interchange control count	M n..6	M		Number of messages or functional groups within an 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: UNZ+5+12345555'				

5. Example INVOIC

UNA:+.?*	Service string information
UNB+UNOC:4+9099999300476:14+9099999300414:14+20100112:1001+134++++EANCOM-DISI'	Interchange header
UNH+1+INVOIC:D:01B:UN:EAN010'	Message header
BGM+380+222+9'	Invoice number
DTM+137:20100112:102'	Document date
DTM+35:20100111:102'	Delivery date
RFF+ON:52400011'	Reference order number
DTM+171:20100111:102'	Order date
RFF+DQ:5489'	Delivery note number
NAD+BY+9004108000000::9++Name1:Name2+Straße 9+Wien++2355+AT'	Buyer, GLN and text address
RFF+VA:ATU111111111'	Buyer's VAT registration number

NAD+SU+9099999300476::9++Name1:Name2+Muster-gasse 3+Salzburg++2800+AT'	Supplier, GLN and text address
RFF+VA:1234567890123'	Supplier's VAT registration number
NAD+DP+9002233000043::9'	Delivery party, GLN
NAD+OB+9004108000000::9'	Ordered by, GLN
CUX+2:EUR:4'	Invoice currency
LIN+1++9099999026543:SRV'	1. article
IMD+A++::LIMO 1L'	Article description
QTY+47:50'	Quantity
MOA+203:300'	Line item amount
PRI+AAA:6'	Net price
TAX+7+VAT+++:::20+S'	VAT
UNS+S'	Begin of the summary section
MOA+79:450'	Total line items amount
MOA+176:90'	Message total duty/tax/fee amount
MOA+77:540'	Invoice amount
TAX+7+VAT+++:::20+S'	VAT
MOA+125:450'	Taxable amount
MOA+124:90'	Tax amount
UNT+28+1'	Message Trailer
UNZ+1+134'	Interchange Trailer

6. Message structure security segments

—	SG1		M	99	USH-USA-SG2
—	USH	2	M	1	Security header
—	USA	3	M	3	Security algorithm
—	SG2		M	2	USC-USA
—	USC	4	M	1	Certificate
—	USA	5	M	3	Security algorithm
—	SG4		M	99	UST
—	UST	6	M	1	Security trailer
—	SG4		M	99	UST
—	USR	7	M	1	Security result

7. BUSINESS TERMS Security Segmente

Business term	Description	Status	Format	Segment		Data element	
Security reference number		M	A/N 14	SG1	USH	0534	Security reference number
Filter function		M	A/N 3	SG1	USH	0505	Filter function, coded
Original character set encoding		M	A/N 3	SG1	USH	0507	Original character set encoding, coded
Creation date		M	D 8	SG1	USH	S501 0517	Date and time qualifier
Creation time		M	T 6	SG1	USH	S501 0338	Event date
Hash-Algorithm		M	A/N 3	SG1	USA	S502 0527	Algorithm, coded
Certificate serial number		M	A/N 35	SG2	USC	0536	Certificate reference
Security party identification, GLN		M	N 13	SG2	USC	S500 0511	Security party identification
Certificate-Syntax		M	A/N 3	SG2	USC	0545	Certificate syntax and version, coded
Signature-Algorithm		M	A/N 3	SG2	USA	S502 0527	Algorithm, coded
Padding mechanism		M	A/N 3	SG2	USA	S502 0591	Padding mechanism, coded
Security reference number (End)		M	A/N 14	SG4	UST	0534	Security reference number
Signature value		M	A/N 512	SG4	USR	S508 0560	Number of security segments

8. Segment description security segments

SG1	- M	99	- USH-USA-SG2				
USH	- M	1	- Security header				
Function	:	To specify a security mechanism applied to an EDIFACT structure (i.e. message/package, group or interchange)					
Segment number	:	2					
Data element group/Data element	EDIFACT	ANW	*	Description			
0501 Security service, coded	M an..3	M	*	1 = non-repudiation of origin			
0534 Security reference number	M an..14	M		Unique reference number assigned by the security originator to the security header group and security trailer group			
0541 Scope of security application, coded	C an..3	R	*	1 = Security header and message body			
0503 Response type, coded	C an..3	N					
0505 Filter function, coded	C an..3	R	*	7 = Base64			
0507 Original character set encoding, coded	C an..3	R	*	2 = ASCII 8 bit			
0509 Role of security provider, coded	C an..3	N					
S500 Security identification details	C	N					
0577 Security party qualifier	M an..3						
0538 Key name	C an..35						
0511 Security party identification	C an..512						
0513 Security party code list qualifier	C an..3						
0515 Security party code list responsible agency, coded	C an..3						
0586 Security party name	C an..35						
0586 Security party name	C an..35						
0586 Security party name	C an..35						
0520 Security sequence number	C an..35	N					
S501 Security date and time	C	R					
0517 Date and time qualifier	M an..3	M	*	1 = Security Timestamp 5 = EDIFACT-structure, creation date and time			
0338 Event date	C n..8	R		Creation date, CCYYMMDD			
0314 Event time	C an..15	R		Creation time, HHMMSS			
0336 Time offset	C n4	N					

Segment Notes

A segment specifying a security service applied to the referenced EDIFACT structure

- Security reference number (DE0534); Mandatory; A/N 14
- Filter function (DE0505 = 7); Mandatory; A/N 3
- Original character set encoding (DE0507); Mandatory; A/N 3
- Signature creation date (DE0338); Mandatory; D 8
- Signature creation time (DE0314); Mandatory; D 6

USH+1+323+1++7+2++++5:20060831:105531'

SG1	- M	99 - USH-USA-SG2			
USA	- M	3 - Security algorithm			
Function	:	To identify a security algorithm, the technical usage made of it, and to contain the technical parameters required			
Segment number	:	3			
Data element group/Data element	EDIFACT	ANW	*	Description	
S502 Security algorithm	M	M			
0523 Use of algorithm, coded	M an..3	M	*	1 = Owner hashing	
0525 Cryptografic mode of operation, coded	C an..3	N			
0533 Mode of operation code list identifier	C an..3				
0527 Algorithm, coded	C an..3	R	*	16 = SHA1	
0529 Algorithm code list identifier	C an..3	R	*	1 = UN/CEFACT	
0591 Padding mechanism, coded	C an..3	N			
0601 Padding mechanism code list identifier	C an..3	N			
S503 Algorithm parameter	C	N			
0531 Algorithm parameter qualifier	M an..3				
0554 Algorithm parameter value	M an..512				
<u>Segment Notes</u>					
This segment is used to identify a security algorithm, the technical usage made of it, and contains the technical parameters required in order to generate the hash value.					
- Hash Algorithm (DE0527); Mandatory; A/N 3					
USA+1:::16:1'					

SG1	- M	99	- USH-USA-SG2
SG2	- M	2	- USC-USA
USC	- M	1	- Certificate
Function	:	To convey the public key and the credentials of ist owner	
Segment number	:	4	
Data element group/Data element	EDIFACT	ANW	* Description
0536 Certificate referecne	C an..35	R	
S500 Security identification details	C	R	
0577 Security party qualifier	M an..3	M	* 4 = Authentication party
0538 Key name	C an..35	N	
0511 Security party identification	C an..512	R	Coded (see USH/DE5050) Distinguished Name (DN) of the security party
0513 Security party code list qualifier	C an..3	R	* ZZZ = Mutually agreed
0515 Security party code list responsible agency coded	C an..3	N	
0586 Security party name	C an..35	N	
0586 Security party name	C an..35	N	
0586 Security party name	C an..35	N	
0545 Certificate syntax and version, coded	C an..3	M	3 = X.509
0505 Filter function, coded	C an..3	N	
0507 Original character set encoding, coded	C an..3	N	
0543 Certificate original character set repertoire coded	C an..3	N	
0546 User authorisation level	C an..35	N	
S505 Service character for signature	C	N	
0551 Service character for signature, qualifier	M an..3		
0548 Service character for signature	M an..4		
S501 Security date and time	C	N	
0517 Date and time, qualifier	M an..3		
0338 Event date	C n..8		
0314 Event time	C an..15		
0336 Time offset	C n4		

0567	Security status, coded	C an..3	N		
0569	Revocation reason, coded	C an..3	N		

Segment notes

This segment identifies the security party, certificate serial number and certificate syntax.

- Certificate serial number (DE0536); Mandatory; A/N 35
- Coded distinguished name (DN) of Certification authority (CA) (DE0511); Mandatory; A/N 512
- Certificate syntax (DE0545); Mandatory; A/N 3

In this example the serial number is denoted hexadecimal and the distinguished name of the CA is denoted in Base64 as defined in the filter function of the USH segment.

```
USC+3053E29993FB+4::MIGpMQswCOYDVQOGEwJBVDFIMEYGA1UECgw/QS1UcnVzdCBHZXMuIGYuIFNpY2hlc
mhlaXRzc3lzdGVtZSBpbSBibGVrdHIuIERhdGVudmVya2VociBHbWJIMScwJQYDVQQLDB5hLXNpZ24tY29ycG9yY
XRILUxpZ2h0LVRLc3QtMDIxJzAIBgNVBAMMHmEtc2lnbi1jb3Jwb3JhdGUtTGlnaHQfVGVzdC0wMg==:ZZZ+3'
```

SG1	- M	99	- USH-USA-SG2
SG2	- M	2	- USC-USA
USA	- M	3	- Security algorithm
Function	:	Zur Identifizierung eines Sicherheits-Algorithmus, der entsprechend zugrundeliegenden technischen Anwendung und zur Angabe der erforderlichen technischen Parameter.	
Segment number	:	5	
Data element group/Data element	EDIFACT	ANW	* Description
S502 Security algorithm	M	M	
0523 Use of algorithm, coded	M an..3	M	* 6 = Owner signing
0525 Cryptografic mode of operation, coded	C an..3	R	* 16 = DSMR
0533 Mode of operation code list identifier	C an..3	R	* 1 = UN/CEFACT
0527 Algorithm, coded	C an..3	R	* 10 = RSA
0529 Algorithm code list identifier	C an..3	R	* 1 = UN/CEFACT
0591 Padding mechanism, coded	C an..3	R	* 11 = PKCS #1 signature padding 16 = RSASA-PKCS-v1_5 17 = Encryption Block Formatting
0601 Padding mechanism code list identifier	C an..3	R	* 1 = UN/CEFACT
S503 Algorithm parameter	C	O	
0531 Algorithm parameter qualifier	M an..3	M	14 = Modulus Length
0554 Algorithm parameter value	M an..512	M	
S503 Algorithm parameter	C	O	
0531 Algorithm parameter qualifier	M an..3	M	12 = Modulus
0554 Algorithm parameter value	M an..512	M	
S503 Algorithm parameter	C	O	
0531 Algorithm parameter qualifier	M an..3	M	13 = Exponent
0554 Algorithm parameter value	M an..512	M	

Segment Notes

This segment is used to identify a security algorithm and its specifications.

- Signature algorithm (DE0527); Mandatory; A/N 3
- Padding mechanism (DE=591); Mandatory; A/N 3

It is possible to send optionally also the public key.

- Modulus length (public key length DE0554); Optional; A/N 512
- Modulus (Parameter value of the algorithm as public key modulus, DE0554); Optional; A/N 512
- Exponent (Parameter value of the algorithm as public key exponent, DE0554); Optional; A/N 512

USA+6:16:1:10:1:16:1+14:1024*12: CF8516555*13:7E7406D7'

As the component data element group S503 appears 3 times, it must be separated by the repetition separator (*):

SG4 - M 99 - UST				
UST - M 1 - Security trailer				
Function : To establish a link between security header and security trailer segment groups.				
Segment number : 6				
Data element group/Data element	EDIFACT	ANW	*	Description
0534 Security reference number	M an..14	M		Security reference number from USH Segment
0588 Number of security segments	M n..10	M		The number of security segments in a security header/trailer group pair.
<u>Segment Notes</u>				
A segment establishing a link between security header and security trailer segment group.				
UST+323+6'				

SG4 - M 99 - UST				
USR - M 1 - Security result				
Function : Identification of the security result.				
Segment number : 7				
Data element group/Data element	EDIFACT	ANW	*	Description
S508 Inspection value	C	M		
0563 Inspection value, Qualifier	M an..3	M	*	1 = Unique inspection value
0560 Inspection value	C an..512	R		Value determined by the hash value and the private key of the sender.
<u>Segment Notes</u>				
This segment contains the digital signature respectively the result from the applied hash and signature algorithms in the referred interchange (USH,USA,USC, USA, BGM ...MOA).				
- Signature value (DE0560); Mandatory; A/N 512 USR+1:C7DIEW6655'				

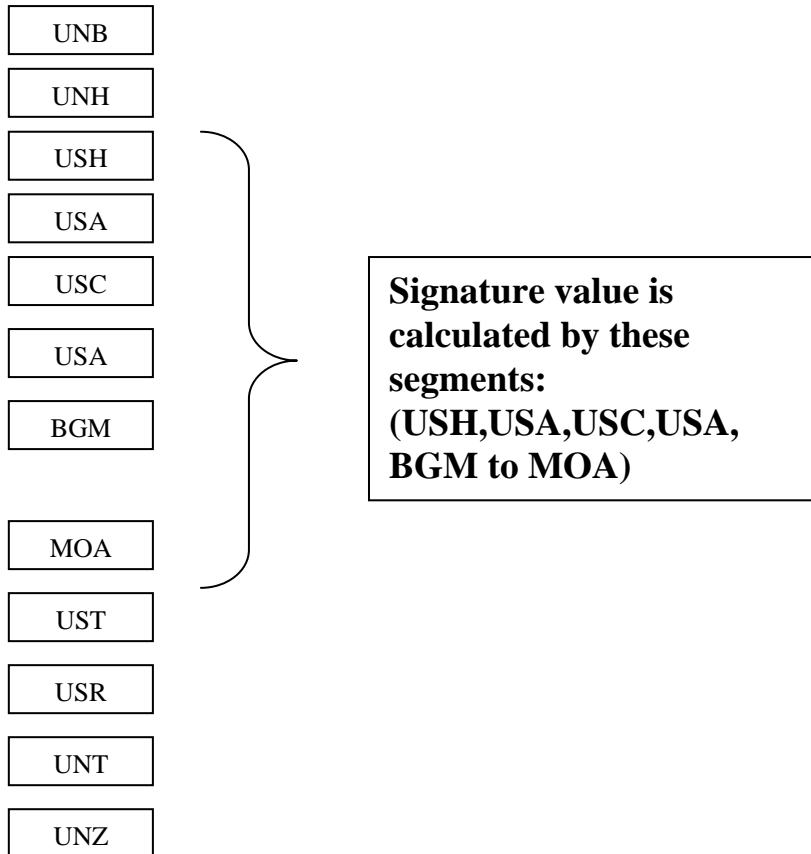
9. Example Security Segments

USH+1+323+1++7+2++++5:20060831:105531'	Filter, Date/Time
USA+1:::16:1'	Hash algorithm
USC+3053E29993FB+4:::MIGpMQswCOYDVQOGEwJB VDFIMEYGA1UECgw/QS1UcnVzdCBHZXMuIGYuIFNpY 2hlcmlhlaXRzc3lzdGVtZSBpbSBpbGVrdHluIERhdGVud mVya2VociBHbWJIMScwJQYDVQQLDB5hLXNpZ24tY2 9ycG9yYXRILUxpZ2h0LVRlc3QtMDIxJzAIBGNVBAMMH mEtc2lnbi1jb3Jwb3JhdGUtTGlnaHQvVGZzdC0wMg== :ZZZ+3'	Security party, certificate serial number, coded distinguished name of certification authority
USA+6:16:1:10:1:16:1'	Signature algorithm
UST+323+6'	Segment counter
USR+1:N3L7Ss5SLpQkrXt6gTny5V24lviWOO WeQu0bYcj1WOQBSeMyo5dthuDzTTU5i2TWsFSdMkb 9gBkOChyN8AnzCpIVdKTONQ?+xu?+BMPVDnkbMW Ef84nnSgSolp3w?+N3gpSEdq3ULiZSB6YyIPRjgkKNMp C?+xEtLUpkopunVa/5bnZSjveXry0iT3oh?+ZMix1gj/T Prv4Nq13 To1cim9XGuM1Xb4w?+S7g?+5VSOC6cuxP zcqqaLSh3ni8XfTN1Up?+XFWgpSfgeqOgM1 zCl13lp6vxR0diI3mnJ6YYp7jG2fxvwUsCS5r DPpX52fUb?+efX7jv/pvqaALaM4zSoNX/5JKG Q0ni7pY57T4Dk?+xtQvVsQ8S?+KjFD8pFneFXceLD7g ZTtsD/4oYHBvSleYFDRmtIfHRMXLpzeJ3reqQDI0bRZ2 7XIEx?+Ai8ThLwlwzMpqnP5an2pxhW3sm3nQ6pk9nc YTsnyOmnZBNASBYx6SKU?+O1uYT8?+r9L4fNQ1DTj gH8a/Hp3RrUAT2fW31K8qo2iNRVYsBxD2NnyHYFzffw g03TOAT0sir2nZAPk2rOiazuVOXnvXB8G3ytQfGh0OVg P8jp?+TWaMDDc7rpyZghX6VDAPm8X1L9P3MH/yjO TKC/jD84e71xgrBBnV/?+KiNao8gkUsvQt7XhzY4iL8q6 4TUJLU='	Signature value

10. Entire example Interchange (INVOIC and security segments)

After the INVOIC is created in the converter, the security segments are added and the signature value is generated, after which the INVOIC is sent to the business partner together with the security segments!

Signature value calculation (hash value calculation and application of the private key) is executed by the following segments:



UNA:+.?*	Service string information
UNB+UNOC:4+9099999300476:14+9099999300414:14+20060629:0801+134++++EANCOM-DISI'	Interchange header
UNH+1+INVOIC:D:01B:UN:EAN010'	Message header
USH+1+323+1++7+2+++5:20060831:105531'	Filter, date/time
USA+1:::16:1'	Hash algorithm
USC+3053E29993FB+4::MIGpMQswCOYDVQOGEwJBVDFIMEYGA1UECgw/QS1UcnVzdCBHZXMuIGYUuIFNpY2hlcmlhlaXRzc3lzdGVtZSBpbSBibGVrdHIuIERhdGVudmVya2VociBhbWJIMScwJQYDVQQLDB5hLXNpZ24tY29ycG9yYXRILUxpZ2h0LVRlc3QtMDIxJzAIBgNVBAMMHmEtc2lnbi1jb3Jwb3JhdGUtTGlnaHQvVGZzdC0wMg==:ZZZ+3'	Security party, certificate serial number, coded distinguished name of certification authority

USA+6:16:1:10:1:16:1'	Signature algorithm
BGM+380+222+9'	Invoice number
DTM+137:20100112:102'	Document date
DTM+35:20100111:102'	Delivery date
RFF+ON:52400011'	Order reference number
DTM+171:20100111:102'	Order date
RFF+DQ:5489'	Delivery note number
NAD+BY+9004108000000::9++Name1:Name2+Strasse 9+Wien++2355+AT'	Buyer, GLN and text address
RFF+VA:ATU11111111'	Buyer's VAT registration number
NAD+SU+9099999300476::9++Name1:Name2+Muster-gasse 3+Salzburg++2800+AT'	Supplier, GLN and text address
RFF+VA:1234567890123'	Supplier's VAT registration number
NAD+DP+9002233000043::9'	Delivery party, GLN
NAD+OB+9004108000000::9'	Ordered by, GLN
CUX+2:EUR:4'	Invoice currency
LIN+1++9099999026543:SRV'	1. article
IMD+A++::LIMO 1L'	Article description
QTY+47:50'	Quantity
MOA+203:300'	Line item amount
PRI+AAA:6'	Net price
TAX+7+VAT+++:::20+S'	VAT
UNS+S'	Begin of summary section
MOA+79:450'	Total line items amount
MOA+176:90'	Message total duty/tax/fee amount
MOA+77:540'	Invoice amount

TAX+7+VAT++++:20+S'	VAT
MOA+125:450'	Taxable amount
MOA+124:90'	Tax amount
UST+323+6'	Segment counter
USR+1:N3L7Ss5SLpQkrXt6gTny5V24lviW00 WeQu0bYcj1WOQBSeMyo5dthuDzTTU5i2TWsFSdMkb 9gBkOChyN8AnzCpIVdKTONQ?+xu?+BMPVDnkzbMW Ef84nnSgSolp3w?+N3gpSEdq3ULiZSB6YyIPRjgkKNMp C?+xEtLUpkopunVa/5bnZSjveXry0iT3oh?+ZMix1gj/T Prv4Nq13 To1cim9XGuM1Xb4w?+S7g?+5VSOC6cuxP zcqoaLSh3ni8XfTN1Up?+XFWgpSfgeqOgM1 zCI13lp6vxR0di13mnJ6YYp7jG2fxvwUsCS5r DPpX52fUb?+efX7jv/pvqaALaM4zSoNX/5JKG Q0ni7pY57T4Dk?+xtQvVsQ8S?+KjFD8pFneFXceLD7g ZTtsD/4oYHBvSleYFDRmtIfHRMXLpzeJ3reqQDI0bRZ2 7XIEx?+Ai8ThLwlwzMpqnP5an2pxhW3sm3nQ6pk9nc YTsnYomnZBNASBYx6SkU?+O1uYT8?+r9L4fNQ1DTj gH8a/Hp3RrUAT2fW31K8qo2iNRVYsBxD2NnyHYFzffw g03TOAT0sir2nZAPk2rOiazuVOXnvXB8G3ytQfGh0OVg P8jp7?+TWaMDDc7rpyZghX6VDAPm8X1L9P3MH/yjO TKC/jD84e71xgrBBnV/?+KiNao8gkUsvQt7XhzY4iL8q6 4TUJLU='	Signature value
UNT+34+1'	Message trailer
UNZ+1+134'	Interchange trailer