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Electronic data interchange for administration, commerce and transport (EDIFACT) — Application level syntax rules

*Échange de données informatisé pour l'administration, le commerce et le transport
(EDIFACT) — Règles de syntaxe au niveau de l'application*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9735 was prepared by UN/ECE *Trade Division* (as EDIFACT) and was adopted, under a special "fast-track procedure" by Technical Committee ISO/TC 154, *Documents and data elements in administration, commerce and industry*, in parallel with its approval by the ISO member bodies.

Annexes A and B form an integral part of this International Standard. Annex C is for information only.

Amended reprint, 1990

This amended reprint has been prepared to correct two ambiguities in the original text.

These concern segments UNG, S008, and UNH, S009. The convention for assigning message version number and message release number includes the last two digits of the year. In order to avoid compression of leading zeroes in these fields, which is a normal procedure in many computer programs when the data type is specified to be numeric, and which would consequently distort the data, the data types for message version number and message release number have been changed from numeric (n) to alphanumeric (an). Additionally, experience has shown that the footnote which appeared on page 17 of the 1988 edition has been misunderstood and in order to provide clarification, the footnote has now been deleted and the status of the message release number (0054) and controlling agency (0051) has been changed from conditional to mandatory.

In order to allow time for users to change their systems, and to provide a specific date for implementation of the changes, this amended and reprinted first edition will become effective six months after the date of publication, i.e. 1 May 1991.

Introduction

This international Standard includes, in a condensed form, the rules on application level for the structuring of the user data and of the associated service data in the interchange of messages in an open environment. These rules have been agreed by the United Nations Economic Commission for Europe (UN/ECE) as syntax rules for Electronic Data Interchange For Administration, Commerce and Transport (EDIFACT) and are part of the ECE Trade Data Interchange Directory which also includes Message Design Guidelines^{*)}. The Guidelines should be used in conjunction with this International Standard.

The service specifications and protocols for Open Systems Interconnection (OSI) based on the Reference Model in ISO 7498 and issued by ISO, CCITT, CEN/CENELEC etc. may be followed for the communication of messages based on this International Standard. Such specifications and protocols are outside the scope of this International Standard.

Functional error indication/correction can be handled by special service messages following the syntax rules in this International Standard.

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^{*)} Presently ECE Draft.

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Electronic data interchange for administration, commerce and transport (EDIFACT) – Application level syntax rules

1 Scope

This International Standard gives syntax rules for the preparation of messages to be interchanged between partners in the fields of administration, commerce and transport.

NOTE – Users of this International Standard should note that the syntax rules specified herein are part of the United Nations Trade Data Interchange Directory (UNTDID). They may be used in any application, but messages using these syntax rules may only be referred to as EDIFACT messages if they comply with other rules and directories in UNTDID and if they have been approved by the United Nations Economic Commission for Europe (UN/ECE).

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 31-0 : 1981, *General principles concerning quantities, units and symbols*.

ISO 646 : 1983, *Information processing – ISO 7-bit coded character set for information interchange*.

ISO 2382-1 : 1984, *Data processing – Vocabulary – Part 01: Fundamental terms*.

ISO 2382-4 : 1987, *Data processing – Vocabulary – Part 04: Organization of data*.

ISO 6523 : 1984, *Data interchange – Structures for the identification of organizations*.

ISO 6937-2 : 1983, *Information processing – Coded character sets for text communication – Part 2: Latin alphabetic and non-alphabetic graphic characters*.

ISO 7372 : 1986, *Trade data interchange – Trade Data Elements Directory*.

ISO 7498 : 1984, *Information processing systems – Open Systems Interconnection – Basic Reference Model*.

ISO 8859 : 1987, *Information processing – 8 bit single-byte coded graphic character sets –*

Part 1: Latin alphabet No. 1.

Part 2: Latin alphabet No. 2.

3 Definitions

For the purpose of this International Standard, the definitions in annex A apply.

4 Syntax levels

This International Standard specifies syntax levels A and B which are identical in all respects except for the character sets used. As requirements for additional syntactical features appear, further levels may be added.

Unless interchange partners agree to use other or additional characters, level A shall use only the character set specified in 5.1, and level B only the character set specified in 5.2.

The conditional Service String Advice, UNA, (see annex B) provides the capability to specify the separator and other service characters used in the interchange in case they differ from those in clause 5.

5 Character sets

For the characters in the sets below, the 7-bit codes in the basic code table in ISO 646 shall be used, unless the corresponding 8-bit codes in ISO 6937 and ISO 8859 or other bit codes are specifically agreed between the interchanging partners. See clause 4.

5.1 Level A character set

Letters, upper case	A to Z
Numerals	0 to 9
Space character	
Full stop	.
Comma	,
Hyphen/minus sign	-
Opening parenthesis	(
Closing parenthesis)
Oblique stroke (slash)	/
Equals sign	=
Apostrophe	' Reserved for use as segment terminator
Plus sign	+ Reserved for use as segment tag and data element separator
Colon	: Reserved for use as component data element separator
Question mark	? Reserved for use as release character

? immediately preceding one of the characters ' + : ? restores their normal meaning. For example, 10? + 10 = 20 means 10 + 10 = 20. Question mark is represented by ??.

The following characters are part of the level A character set but cannot be used internationally in telex transmissions.

Exclamation mark	!
Quotation mark	''
Percentage sign	%
Ampersand	&
Asterisk	*
Semi-colon	;
Less-than sign	<
Greater-than sign	>

5.2 Level B character set

This character set is not intended for transmission to telex machines.

Letters, upper case	A to Z
Letters, lower case	a to z
Numerals	0 to 9
Space character	
Full stop	.
Comma	,
Hyphen/minus sign	-
Opening parenthesis	(
Closing parenthesis)
Oblique stroke (slash)	/
Apostrophe	'
Plus sign	+
Colon	:
Equals sign	=
Question mark	?
Exclamation mark	!
Quotation mark	"
Percentage sign	%
Ampersand	&
Asterisk	*
Semi-colon	;
Less-than sign	<
Greater-than sign	>

Information separator	IS 4	segment terminator
Information separator	IS 3	data element separator
Information separator	IS 1	component data element separator

6 Structures

6.1 Interchange structure

The Service String Advice, UNA, and the service segments UNB to UNZ shall appear in the order stated below in an interchange. There may be several functional groups or messages within an interchange and several messages in a functional group. A message consists of segments. The structures for segments and for data elements therein are shown in 6.2 and 6.3. The contents of the service segments are shown in annex B. See also figure 1.

An interchange consists of:

Service String Advice	UNA	Conditional
Interchange Header	UNB	Mandatory
Functional Group Header	UNG	Conditional
Message Header	UNH	Mandatory
User Data Segments		As required
Message Trailer	UNT	Mandatory
Functional Group Trailer	UNE	Conditional
Interchange Trailer	UNZ	Mandatory

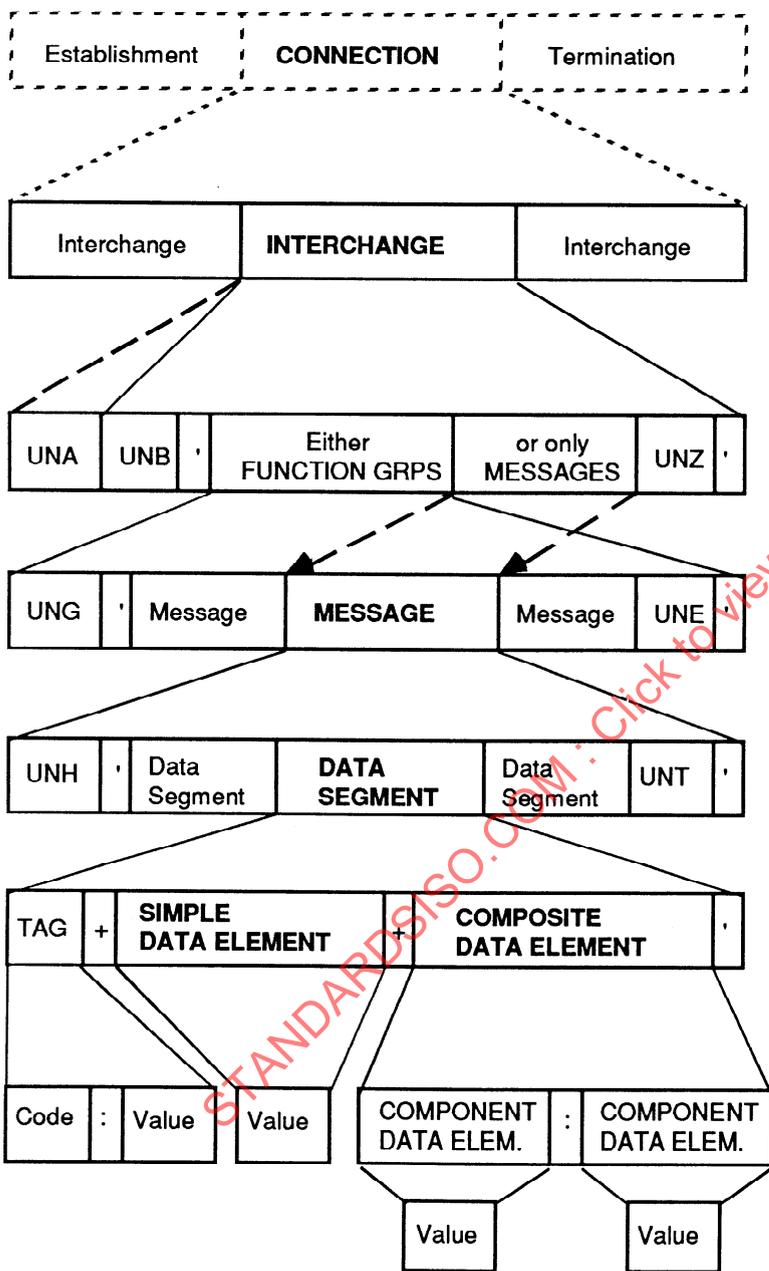
In addition to the above service segments, the service segment UNS can, when required, be used to divide a message into sections. See annex B.

EXAMPLES illustrating segment sequences:

a) A single message within a functional group: UNA UNB UNG UNH... Data Segments...UNT UNE UNZ

b) A single message without functional grouping: UNA UNB UNH... Data Segments...UNT UNZ

c) A single message without functional grouping and without UNA: UNB UNH ... Data Segments...UNT UNZ



A CONNECTION contains one or more interchanges. The technical protocols for establishment, maintenance and termination etc. are not part of this International Standard.

An INTERCHANGE contains:

- UNA, Service String Advice, if used
- UNB, Interchange Header
- Either only Functional Groups, if used, or only Messages
- UNZ, Interchange Trailer

A FUNCTIONAL GROUP contains:

- UNG, Functional Group Header
- Messages of the same type
- UNE, Functional Group Trailer

A MESSAGE contains:

- UNH, Message Header
- Data Segments
- UNT, Message Trailer

A SEGMENT contains:

- A segment Tag
- Simple data elements or
- Composite data elements or both as applicable

A SEGMENT TAG contains:

- A segment code and, if explicit indication, repeating and nesting value(s). See 8.1 and clause 9.

A SIMPLE DATA ELEMENT contains:

- A single data element value

A COMPOSITE DATA ELEMENT contains:

- Component data elements

A COMPONENT DATA ELEMENT contains:

- A single data element value

--- means alternative to ---

UNA, UNB, UNZ, UNG, UNE, UNH and UNT are Service Segments; see 6.1 and annex B. In the diagram, the level A separators/terminators have been used; see 5.1.

Figure 1 – Hierarchical structure of an Interchange

6.2 Order of segments and groups of segments within a message

A message structure diagram and the order of the segments following the processing rules in the ECE Message Design Guidelines is shown in annex C.

6.3 Segment structure

Segment Tag, composed of	Mandatory
Segment Code	Mandatory component data element
Component data element separator	Conditional
Nesting and repeating indication	Conditional component data element(s)
Data element separator	Mandatory
Simple or composite data elements	Mandatory or conditional as specified in the relevant segments directory; see 6.4
Segment Terminator	Mandatory

6.4 Data element structure

Simple Data Element, or Composite Data Element with Component data elements and Component data element separators	Mandatory or conditional as specified in the relevant segments directory
Data element separator	Mandatory (see restriction below)
	Mandatory (see restriction below)

There shall be no component data element separator after the last component data element in a composite data element and no data element separator after the last data element in a segment.

7 Compressing

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

Note, however, that a single zero before a decimal sign is significant (see 10.1) and that a zero may be significant (e.g. to indicate a temperature) if so stated in the data elements specification.

When compressing messages, the rules below shall be followed.

In the following examples of the rules, "Tag" represents a segment tag, "DE" a data element and "CE" a component data element. The separators in level A in 5.1 are used.

7.1 Exclusion of segments

Conditional segments containing no data shall be omitted (including their segment tags).

7.2 Exclusion of data elements by omission

Data elements are identified by their sequential positions within the segment as stated in the Segment Directory. If a conditional data element is omitted and is followed by another data element, its position shall be indicated by retention of its data element separator.

Tag+DE+DE+++DE+DE+DE '

||_____ These two data elements are omitted

7.3 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, i.e. contiguous trailing data element separators are not required to be transmitted.

Tag+DE+DE+++DE '  Using the example from 7.2, the last two data elements have been omitted and the segment truncated

7.4 Exclusion of component data elements by omission

Component data elements are identified by their given sequential positions within a composite data element. If a conditional component data element is omitted and is followed by another component data element, its given position must be represented by its component data element separator.

Tag+DE+CE:CE+CE : : : CE '  Two component data elements omitted in the last composite data element

7.5 Exclusion of component data elements by truncation

One or more conditional component data elements at the end of a composite data element may be excluded by truncation by the data element separator or, if at the end of a segment, by the segment terminator.

Tag+DE+CE+CE '  Using the example from 7.4, the last component data element in the first composite data element has been omitted and also three component data elements in the last composite data element. In both cases the composite data elements have been truncated, indicated in the first case by the data element separator and in the second case by the segment terminator.

8 Repetition

8.1 Repetition of segments

Within a given message type, either explicit or implicit repetition techniques shall be used and this decision shall be taken during message design. The two techniques shall not be mixed within the same message.

Indication of repetition shall either be explicit as a component data element being part of the segment tag composite data element that heads a segment (see 8.1.1 and 9.1) or be implicitly understood from the sequence of the segments as stated in the relevant message specification (see 8.1.2).

Segments at level 0 (see annex C) shall not be repeated and their tags include no repeating indication.

Service segments (see annex B), excluding TXT, shall not be repeated and their tags include no repeating indication.

8.1.1 Explicit indication of repetition

In the segment tag, the first component data element shall be the segment code and the last of the subsequent component data elements shall indicate the incidence of repetition of the segment. See 9.1.

8.1.2 Implicit indication of repetition

The segments within a message shall appear in the order stated in the message type specification. Therefore it can be implicitly understood which segments are repeated, identified by their ordinal positions.

8.2 Repetition of data elements

Data elements (DE) shall not be repeated within a segment more than the number of times prescribed in the relevant segment directory. If less, the exclusion rules in 7.2 to 7.5 shall apply.

Tag+...+DE1+DE1+...'

└── 2 of prescribed up to 4 repeats of DE1 omitted.

It is, however, sometimes practical to structure repeatable elements as component data elements (CE) in composite elements, thereby allowing truncation by the data element separator. This may also apply to specified repeatable sequences of data elements, e.g. the sequence CE1:CE2:CE3.

Tag+...+CE1:CE2:CE3:CE1:CE2:CE3+...'

└── Truncation by the data element separator after 2 sequences.

9 Nesting of segments

A segment may depend on a segment on a higher hierarchical level in the message structure and consequently be nested in that segment.

Within a given message type, either explicit or implicit nesting techniques shall be used and this decision shall be taken during message design. The two techniques shall not be mixed within the same message.

Indication of nesting shall either be explicit as component data elements being part of the segment tag composite data element that heads a segment (see 9.1) or be implicitly understood from the sequence of the segments as stated in the relevant message specification*) (see 9.2).

Service segments (see annex B) and other segments at level 0 (see annex C) shall not be nested and their tags include no nesting indication.

9.1 Explicit indication of nesting

In the segment tag, the first component data element shall be the segment code and be followed by conditional component data elements indicating both the level and the incidence of repetition of the segment as stated in 8.1.1.

The number of component data elements used for this purpose depends upon the hierarchical level in which the segment appears in the message structure diagram. See annex C. After the segment code, the next component data element (which is for the first control count) shall be used if the segment appears at level one, the second as well if it appears at level two, the third as well at level 3, etc.

When a conditional segment on a higher level is not used in an application, the level indication shall show component data element separators for the levels not used and the segment shall appear before segments which include an indication at that level. See examples below.

*) See ECE Message Design Guidelines

EXAMPLES of messages using explicit repeating and nesting indication

Level A separators have been used in the examples.
See annex C for further diagram explanations.

EXAMPLE 1. Message with one level of mandatory segment nesting:

Level	Message	Segments	Explanations		
0	UNH AAA M 1 M 1	UNH+data' AAA+data'			
1	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> BBB M 2 </td> <td style="padding: 5px;"> CCC M 1 </td> </tr> </table>	BBB M 2	CCC M 1	BBB : 1+data' BBB : 2+data' CCC : 1+data' DDD : 1 : 1+data' DDD : 1 : 2+data' CCC : 2+data' DDD : 2 : 1+data' EEE+data' UNT+data'	Item 1 of BBB Item 2 of BBB Item 1 of CCC Item 1 of DDD in CCC(1) Item 2 of DDD in CCC(1) Item 2 of CCC Item 1 of DDD in CCC(2)
BBB M 2	CCC M 1				
2	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> DDD M 9 </td> </tr> </table>	DDD M 9			
DDD M 9					
	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> M 2 </td> </tr> </table>	M 2			
M 2					

In string form:

UNH+data' AAA+data' BBB : 1+data' BBB : 2+data' CCC : 1+data' DDD : 1 : 1+data' DDD : 1 : 2+data' CCC : 2+data' DDD : 2 : 1+data' EEE+data' UNT+data'

EXAMPLE 2. Message with two levels of conditional segment nesting which could be containers (CCC), boxes (DDD) and goods items (EEE):

Level	Message	Segments	Explanations		
0	UNH AAA M 1 M 1	UNH+data' AAA+data'			
1	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> BBB M 2 </td> <td style="padding: 5px;"> CCC C 1 </td> </tr> </table>	BBB M 2	CCC C 1	BBB : 1+data' BBB : 2+data' EEE :: 1+data' EEE :: 2+data' CCC : 1+data' DDD : 1 : 1+data' EEE : 1 : 1 : 1+data' EEE : 1 : 1 : 2+data' DDD : 1 : 2+data' EEE : 1 : 2 : 1+data' CCC : 2+data' EEE : 2 :: 1+data' UNT+data'	Item 1 of BBB Item 2 of BBB Item 1 of EEE without DDD and CCC Item 2 of EEE without DDD and CCC 1st occurrence of CCC 1st occurrence of DDD within CCC(1) EEE(1) within DDD(1) within CCC(1) EEE(2) within DDD(1) within CCC(1) DDD(2) within CCC(1) EEE(1) within DDD(2) within CCC(1) CCC(2) EEE(1) within CCC(2) without DDD
BBB M 2	CCC C 1				
2	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> DDD C 9 </td> </tr> </table>	DDD C 9			
DDD C 9					
3	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> EEE M 9 </td> </tr> </table>	EEE M 9			
EEE M 9					
	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="padding: 5px;"> M 20 </td> </tr> </table>	M 20			
M 20					

In string form:

UNH+data' AAA+data' BBB : 1+data' BBB : 2+data' EEE :: 1+data' EEE :: 2+data' CCC : 1+data' DDD : 1 : 1+data' EEE : 1 : 1 : 1+data' EEE : 1 : 1 : 2+data' DDD : 1 : 2+data' EEE : 1 : 2 : 1+data' CCC : 2+data' EEE : 2 :: 1+data' UNT+data'

9.2 Implicit nesting indication

The order of the segments specified in the message structure diagram (top to bottom, left to right) shall be followed strictly. Thereby the nesting relation between the segments is implicitly evident and no further indication is required for processing.

10 Representation of numeric data element values

10.1 Decimal sign

The ISO representation for a decimal sign is the comma (,) but a point on the line (.) is allowed. See ISO 31-0 : 1981. Both these characters are part of the Level A and B sets in clause 5 and both alternatives are allowed.

When the Service String Advice, UNA, is used, its third character specifies the one character used in the interchange to represent a decimal sign and thus overrides the above alternative use.

The decimal sign shall not be counted as a character of the value when computing the maximum field length of a data element. However, allowance has to be made for the character in transmission and reception.

When a decimal sign is transmitted, there shall be at least one digit before and after the decimal sign. For values represented by integers only, neither a decimal sign nor decimal zeroes are used unless there is a need to indicate the degree of precision.

Preferred: 0,5 and 2 and 2,0 Not allowed: ,5 or .5 or 2, or 2.
Allowed: 0.5 and 2 and 2.0

10.2 Triad separator

Triad separators shall not be used in interchange.

Allowed: 2500000 Not allowed: 2,500,000 or 2,500.000 or 2 500 000

10.3 Sign

Numeric data element values shall be regarded as positive. Although conceptually a deduction is negative, it shall be represented by a positive value and such cases shall be indicated in the data elements directory.

If a value is to be indicated 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 of the value when computing the maximum field length of a data element. However, allowance has to be made for the character in transmission and reception.

Annex A (normative)

Definitions

Some terms in this International Standard have been defined in other ISO standards and have been included for the benefit of the reader. The responsibility for these terms, indicated by the number of the standard, rests with the committee concerned. In cases where the definitions pertinent for this standard are restrictions of such terms with a wider concept, the indication "EDIFACT" is used.

- A.1 alphabetic character set:** A character set that contains letters and may contain control characters and special characters but not digits (ISO 2382/4)
- A.2 alphanumeric character set:** A character set that contains both letters and digits and may contain control characters and special characters (ISO 2382/4)
- A.3 application message type:** A basic message type adapted to suit a certain application area
- A.4 character set:** A finite set of different characters that is considered complete for a given purpose (ISO 2382/4)
- A.5 common access reference:** Key to relate all subsequent transfers of data to the same business file
- A.6 component data element:** A simple data element which is a subordinate portion of a composite data element and in interchange identified by its position within the composite data element
- A.7 component data element separator:** A character used to separate the component data elements in a composite data element
- A.8 composite data element:** A data element containing two or more component data elements
- A.9 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 (cf. mandatory)
- A.10 connection:** An established link for transmission of data
- A.11 data:** A representation of facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing by human beings or by automatic means (ISO 2382/1)
- A.12 data element:** A unit of data which in a certain context is considered indivisible (ISO 2382/4)
EDIFACT: A unit of data for which the identification, description and value representation have been specified
- A.13 data elements directory:** A listing of identified, named and described data element attributes, with specifications as to how the corresponding data element values shall be represented
- A.14 data element name:** One or more words in a natural language identifying a data element concept
- A.15 data element separator:** A character used to separate data elements in a segment
- A.16 data element tag:** A unique identifier for a data element in a data elements directory
- A.17 data element value:** The specific entry of an identified data element represented as specified in a data elements directory
- A.18 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
- A.19 functional group header:** The service segment heading and identifying the functional group

- A.20 functional group trailer:** The service segment ending a functional group
- A.21 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 (ISO 2382/4)
- A.22 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
- A.23 interchange control header:** The service segment starting and identifying an interchange
- A.24 Interchange control trailer:** The service segment ending an interchange
- A.25 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 (cf. conditional)
- A.26 message:** An ordered series of characters intended to convey information (ISO 2382/16)
EDIFACT: A set of segments in the order specified in a Message directory starting with the Message header and ending with the Message trailer
- A.27 message directory:** A listing of identified, named, described and specified message types
- A.28 message header:** The service segment starting and uniquely identifying a message
- A.29 message trailer:** The service segment ending a message
- A.30 message type:** An identified and structured set of data elements covering the requirements for a specified type of transaction, e.g. invoice.
- A.31 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
- A.32 numeric character set:** A character set that contains digits and may contain control characters and special characters but not letters (ISO 2382/4)
- A.33 omission:** Exclusion in an actual message of one or more units of data which are defined as conditional in a message type specification
- A.34 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
- A.35 release character:** A character used to restore to its original meaning any character used as a syntactical separator
- A.36 repeating segment:** A segment which may repeat in a message as specified in the relevant message type specification
- A.37 segment:** A predefined 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
- A.38 segment code:** A code which uniquely identifies each segment as specified in a segment directory
- A.39 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
- A.40 segment terminator:** A syntax character indicating the end of a segment
- A.41 segments directory:** A listing of identified, named, described and specified segments

- A.42 **separator character:** A character used for syntactical separation of data
- A.43 **service data element:** A data element used in service segments
- A.44 **service segment:** A segment required to service the interchange of user data
- A.45 **service string advice:** A character string at the beginning of an interchange defining the syntactically delimiting characters and indicators used in the interchange
- A.46 **simple data element:** A data element containing a single value
- A.47 **syntax rules:** Rules governing the structure of an interchange and its functional groups, messages, segments and data elements
- A.48 **transfer:** A communication from one partner to another
- A.49 **user data segment:** A segment containing application data

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Annex B (normative)

Service segments specifications

The full description of the data elements in the service segments is part of ISO 7372 Trade Data Elements Directory (UNTDED)*).

Legend:

Ref.	The numeric reference tag for the data element as stated in ISO 7372/UNTDED and, when preceded by S, reference for a composite data element used in service segments
Name	Name of COMPOSITE DATA ELEMENT in capital letters Name of DATA ELEMENT in capital letters Name of Component data element in small letters
Repr.	<p>Data value representation:</p> <p>a alphabetic characters</p> <p>n numeric characters</p> <p>an alphanumeric characters</p> <p>a3 3 alphabetic characters, fixed length</p> <p>n3 3 numeric characters, fixed length</p> <p>an3 3 alphanumeric characters, fixed length</p> <p>a..3 up to 3 alphabetic characters</p> <p>n..3 up to 3 numeric characters</p> <p>an..3 up to 3 alphanumeric characters</p> <p>M Mandatory element</p> <p>C Conditional element</p> <p>Note that a mandatory component data element in a conditional composite data element must appear when the composite data element is used</p>
Remarks	IA Interchange Agreement between interchanging partners

*) Service data elements is presently an ECE Draft

UNA, Service String Advice

Function: To define the characters selected for use as delimiters and indicators in the rest of the interchange that follows:

The specifications in the Service String Advice take precedence over the specifications for delimiters etc. in segment UNB. See clause 4.

When transmitted, the Service String Advice must appear immediately before the Interchange Header (UNB) segment and begin with the upper case characters UNA immediately followed by the six characters selected by the sender to indicate, in sequence, the following functions:

<u>Repr.</u>		<u>Name</u>	<u>Remarks</u>
an1	M	COMPONENT DATA ELEMENT SEPARATOR	
an1	M	DATA ELEMENT SEPARATOR	
an1	M	DECIMAL NOTATION	Comma or full stop
an1	M	RELEASE INDICATOR	If not used, insert space character
an1	M	Reserved for future use	Insert space character
an1	M	SEGMENT TERMINATOR	

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Segment: **UNB, Interchange Header**

Function: To start, identify and specify an interchange

<u>Ref.</u>	<u>Repr.</u>	<u>Name</u>	<u>Remarks</u>
S001		M SYNTAX IDENTIFIER	
0001	a4	M Syntax identifier	a3, upper case, Controlling Agency (e.g. UNO = UN/ECE) and a1 stating level (e.g. A) (which together give UNOA)
0002	n1	M Syntax version number	Increments 1 for each new version. Shall be 2 to indicate this version
S002		M INTERCHANGE SENDER	
0004	an..35	M Sender identification	Code or name as specified in IA
0007	an..4	C Identification code qualifier	Used with sender identification code
0008	an..14	C Address for reverse routing	
S003		M INTERCHANGE RECIPIENT	
0010	an..35	M Recipient Identification	Code or name as specified in IA
0007	an..4	C Identification code qualifier	Used with recipient identification code
0014	an..14	C Routing address	If used, normally coded sub-address for onward routing
S004		M DATE/TIME OF PREPARATION	
0017	n6	M Date	YYMMDD
0019	n4	M Time	HHMM
0020	an..14	M INTERCHANGE CONTROL REFERENCE	Unique reference assigned by sender
S005		C RECIPIENTS REFERENCE, PASSWORD	
0022	an..14	M Recipient's reference/password	As specified in IA. May be password to recipient's system or to third party network
0025	an2	C Recipient's reference/password qualifier	If specified in IA
0026	an..14	C APPLICATION REFERENCE	Optionally message identification if the interchange contains only one type of message
0029	a1	C PROCESSING PRIORITY CODE	Used if specified in IA
0031	n1	C ACKNOWLEDGEMENT REQUEST	Set = 1 if sender requests acknowledgement, i.e. UNB and UNZ segments received and identified
0032	an..35	C COMMUNICATIONS AGREEMENT ID	If used, to identify type of communication agreement controlling the interchange, e.g. Customs or ECE agreement. Code or name as specified in IA
0035	n1	C TEST INDICATOR	Set = 1 if the interchange is a test. Otherwise not used

Segment: **UNZ, Interchange Trailer**

Function: To end and check the completeness of an interchange

<u>Ref.</u>	<u>Repr.</u>		<u>Name</u>	<u>Remarks</u>
0036	n..6	M	INTERCHANGE CONTROL COUNT	The count of the number of messages or, if used, the number of functional groups in the interchange. One of these counts shall appear
0020	an..14	M	INTERCHANGE CONTROL REFERENCE	Shall be identical to 0020 in UNB

Segment: **UNG, Functional Group Header**

Function: To head, identify and specify a Functional Group

<u>Ref.</u>	<u>Repr.</u>		<u>Name</u>	<u>Remarks</u>
0038	an..6	M	FUNCTIONAL GROUP IDENTIFICATION	Identifies the one message type in the functional group
S006		M	APPLICATION SENDER'S IDENTIFICATION	
0040	an..35	M	Sender identification	Code or name identifying the division, department etc. within the originating sender's organization
0007	an..4	C	Sender identification qualifier	May be used if sender identification is a code
S007		M	APPLICATION RECIPIENT'S IDENTIFICATION	
0044	an..35	M	Recipient's identification	Code or name identifying the division, department etc. within the recipient's organization for which the group of messages is intended
0007	an..4	C	Recipient's identification qualifier	May be used if recipient identification is a code
S004		M	DATE/TIME OF PREPARATION	
0017	n6	M	Date	YYMMDD
0019	n4	M	Time	HHMM
0048	an..14	M	FUNCTIONAL GROUP REFERENCE NUMBER	Unique reference number assigned by sender's division, department etc.
0051	an..2	M	CONTROLLING AGENCY	Code to identify the agency controlling the specification, maintenance and publication of the message type
S008		M	MESSAGE VERSION	
0052	an..3	M	Message version number	Version number of the message type in the functional group
0054	an..3	M	Message release number	Release number within current version number
0057	an..6	C	Association assigned Code	A code assigned by the association responsible for the design and maintenance of the type of message concerned
0058	an..14	C	APPLICATION PASSWORD	Password to recipient's division, department or sectional system (if required)