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(fifty-sixth session, 17-18 September 1997)

Electronic Data Interchange for Administration, Commerce and Transport (EDIFACT) - Application level syntax rules

Part 4 - Syntax and service report message for batch EDI (message type CONTRL)

* * *

Submitted by the Syntax Development Group *

As requested during the March 1997 sessions of GE.1 and CEFACT, this document presents part 4 of the revised EDIFACT syntax as prepared by the Syntax Development Group and will, upon approval, be submitted to ISO. It takes into account comments received on the previous version.
The Group of Experts is invited to: approve this document.

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

Part 4:
Syntax and service report message for batch EDI (message type - CONTRL)

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Foreword

(To be amended as necessary, according to ISO procedures)

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 approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75% approval by the member bodies voting.

International Standard ISO 9735 Version 4 was prepared by the UN/ECE Trade Division (as UN/EDIFACT) and was adopted, under the "fast-track procedure" as an existing standard, by Technical Committee ISO TC 154, *Documents and data elements in administration; commerce and industry.*

ISO 9735 consists (currently) of the following parts, under the general title *Electronic data interchange for administration, commerce and transport (EDIFACT) - Application level syntax rules:*

ISO 9735-1	-	*Syntax rules common to all parts, together with syntax service directories for each of the parts*
ISO 9735-2	-	*Syntax rules specific to batch EDI*
ISO 9735-3	-	*Syntax rules specific to interactive EDI*
ISO 9735-4	-	*Syntax and service report message for batch EDI (message type - CONTRL)*
ISO 9735-5	-	*Security rules for batch EDI (authenticity, integrity and non-repudiation of origin)*
ISO 9735-6	-	*Secure authentication and acknowledgement message (message type - AUTACK)*
ISO 9735-7	-	*Security rules for batch EDI (confidentiality)*
ISO 9735-8	-	*Associated data in EDI*
ISO 9735-9	-	*Security key and certificate management message (message type - KEYMAN)*

Further parts may be added in the future.

In this Part, annex A forms an integral part of this International Standard.

Introduction

This is a new part which has been added to ISO 9735.

It provides the capability for the automatic preparation of a message in response to a received interchange, group, message or package, to:

* acknowledge a correct syntactical structure; or
* to reject an incorrect syntactical structure.

In the case of rejection, the message lists any syntactical errors or unsupported functions encountered.

In addition to the above, the message may be used to indicate only the receipt of an interchange.

It is based upon a similar service message developed and published by UN/ECE for use with earlier versions of ISO 9735.

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

Part 4:
Syntax and service report message for batch EDI (message type - CONTRL)

1 Scope

This part of ISO 9735 defines the syntax and service report message for batch EDI, CONTRL.

2 Conformance

Conformance to a standard means that all of its requirements, including all options, are supported. If all options are not supported, any claim of conformance shall include a statement which identifies those options to which conformance is claimed.

Data that is interchanged is in conformance if the structure and representation of the data conforms to the syntax rules specified in this International Standard.

Devices supporting this International Standard are in conformance when they are capable of creating and/or interpreting the data structured and represented in conformance with the standard.

Conformance to this part of this International Standard shall include conformance to Part 1 and Part 2.

When identified in this International Standard, provisions defined in related standards shall form part of the conformance criteria.

3 References

3.1 Normative references

There are no other standards which, through reference in this text, constitute provisions of this part of this International Standard.

4 Message terms and definitions

For the purpose of this part of ISO 9735, the definitions in Part 1 annex A apply. In addition to those definitions, the following terms uniquely apply to CONTRL. (When a word or phrase appears in italics below, this means that a definition is one of the terms below or it exists in Part 1 annex A for this word or phrase):

acknowledgement

Acknowledgement implies that the recipient of the *subject interchange*

- has received the *referenced levels(s)* of the *subject interchange* acknowledged, and
- has checked that there are no fatal syntactic errors in the acknowledged *referenced-level* that prevents further processing of it, and
- has checked that all acknowledged (parts of) *service segments* are semantically correct (if no errors are reported), and
- will comply with the actions requested in the acknowledged (*referenced-levels* of the) *service segments*, and
- has accepted responsibility for notifying the sender by other means than sending a CONTRL *message* if
  - any syntactic or semantic errors as described above, are later detected in the relevant part, or
  - the part can not be processed for some other reason after the part has been acknowledged in a submitted CONTRL *message*,
- has taken reasonable precautions in order to ensure that such errors are detected and that the sender is notified.

indication of interchange receipt

Indication of interchange receipt implies that the recipient of the *subject interchange*

- has received the *subject interchange*, and
- acknowledges the parts of the *subject interchange* that have been checked in order to assure that the *data elements* copied into the reporting UCI *segment* are syntactically correct, and
- has accepted responsibility for notifying the sender of *acknowledgement* or *rejection* of the other parts of the *subject interchange*, and
- has taken reasonable precautions in order to ensure that the sender is so notified.

rejection

Rejection implies that the recipient of the *subject interchange*

- cannot acknowledge the *subject interchange*, or relevant part of it, for reasons indicated in the CONTRL *message*, and
- will not take any further action on business information contained in the rejected part of the *subject interchange*.

(to) report

To indicate the action (*acknowledgement* or *rejection*) taken for a *subject interchange* or part of it.

reporting-level

A reporting-level is a *segment* in CONTRL in which reporting of a corresponding *referenced-level* takes place. The reporting-levels are UCI, UCF, UCM, UCS and UCD.

referenced-level

The structure of CONTRL is based on five *segments* (UCI, UCF, UCM, UCS and UCD) that contain a reference to a part of the *subject interchange*. The parts of the *subject interchange* are:

- the UNA, UNB and UNZ segments and any security segments used to secure the *subject interchange* referenced in the UCI segment
- the UNG and UNE segments and any security segments used to secure the group referenced in the UCF *segment*
- a complete *message* or a complete *package* and any security segments used to secure the *message* or *package* referenced in the UCM *segment*
- a *segment* in a *message body*, referenced in the UCS *segment*
- a *stand-alone, composite or component data element*, referenced in the UCD *segment*

These parts of the *subject interchange* are called referenced-levels.

subject interchange

The *interchange* that a CONTRL *message* is returned in response to.

5. Rules for the use of the syntax and service report message for batch EDI

5.1 Functional definition

CONTRL is a message syntactically acknowledging or rejecting, with error indication, a received interchange, group, message, or package.

A CONTRL message shall be used to:

a) acknowledge or reject a received interchange, group, message, or package and list any syntactical errors or unsupported functionality contained therein, or

b) indicate only the receipt of an interchange.

5.2 Field of application

This specification of CONTRL shall be used for version 4 of the EDIFACT syntax (ISO 9735), and for response to interchanges created using Parts 1, 2, 5, 6, 7, 8 and/or 9 of ISO 9735/Version 4 only.

5.3 Principles

Support for submission and receipt of the CONTRL message type shall be agreed between partners, as shall the functionalities to be supported. Support for receipt of CONTRL messages shall be indicated either by the acknowledgement request in the subject interchange UNB segment or in an interchange agreement.

The sender (A) of an EDIFACT interchange can in segment UNB request a response from the recipient (B) that the interchange has been received, is syntactically correct, that the service segments are semantically correct and that the recipient supports those functions requested in the service segments. Alternatively, the request can be specified in an Interchange Agreement (IA) between the interchanging partners.

The interchange sent from A to B is called the subject interchange.

The response shall be sent from the recipient (B) of the subject interchange to the sender of the subject interchange (A) as one or two CONTRL messages.

A CONTRL message provides:
- indication of the action taken by the recipient as the result of a syntactical check of the subject interchange, or alternatively,
- only indication of interchange receipt.

In the first case, the action (acknowledgement or rejection) indicates the result of a syntactical check of the complete received interchange. An action may be indicated for the complete interchange, or it may be indicated for individual parts of it. Thus, some messages, packages, or groups may be acknowledged and others may be rejected. The CONTRL message shall indicate the action for all parts of the subject interchange.

In the second case, there is indication of interchange receipt only.

During a syntactical check, the interchange, or part of it, shall be checked for compliance with:
- the EDIFACT syntax rules (ISO 9735),including rules for use of service segments and
- the syntactical aspects in specifications for the message type(s) received.

CONTRL shall not be used to report errors, or the action taken, at the application level, i.e. reports related to the semantic information contained in user segments. Thus, acknowledgement indicated by means of CONTRL does not imply that the business content of a message or package has been accepted or can be complied with.

A recipient may choose to acknowledge an interchange, or part of it, even if it contains syntactical errors. These errors may also be reported. The definition of a non-fatal error shall be determined by the recipient. The recipient may for example, choose to acknowledge a data element exceeding the specified maximum length.

An interchange containing a CONTRL message generated by the recipient of the subject interchange shall contain the same sender and receiver identifications in its UNB segment as was in the subject interchange, only reversed.

Partners may agree that a CONTRL message rejecting an erroneous subject interchange, or part of it, shall always be sent even if acknowledgement has not been requested in the subject interchange UNB segment. A CONTRL message shall never be sent in a group.

5.3.1 Relationship between CONTRL and the subject interchange

A maximum of two CONTRL messages may be sent in response to a received interchange. The first, which is optional, provides indication of interchange receipt. The second reports the action taken after the syntax check of the subject interchange. The action code in the UCI segment shall indicate if the message is of the first or second type.

If a request for acknowledgement is indicated in the subject interchange UNB, then the second type of CONTRL message shall be sent to report the results of a syntax check of the subject interchange (unless the subject interchange contains only a CONTRL message or messages). The optionality of the first message implies that, if any CONTRL message is sent at all, the second type of CONTRL message shall always be sent, (unless the subject interchange contains only a CONTRL message or messages). The UCI segment in CONTRL messages of the first type shall not be used to report any errors, i.e. only a message of the second type shall be sent when there is a need to report errors by means of the UCI segment.

A CONTRL message shall only report the action taken for one subject interchange, i.e. it shall not refer to several subject interchanges, or to parts of several subject interchanges.

Segment groups 1 and 3 shall not be used in a CONTRL message which provides indication of interchange receipt. If the subject interchange contains groups (of messages and/or packages), only segment group 3 shall be used in the CONTRL message. If groups are not used in the subject interchange, only segment group 1 shall be used in the CONTRL message.

When there is a need to send a UCM-group (segment group 1 or 4), no more than one UCM-group shall be sent per received message or per received package.

All reporting-levels shall be in the same order as their corresponding referenced-levels in the subject interchange.

5.3.2 Action codes usage

The referenced-levels of the subject interchange that may be acknowledged or rejected are those referenced by the UCI, UCF and UCM segments.

The CONTRL message also provides the means to acknowledge or reject a complete interchange or a complete group, without referencing messages, packages, or groups contained in it.

The action (acknowledgement or rejection) shall be indicated by the action code in the UCI, UCF and UCM. This code may indicate the action for the corresponding referenced-level, and in some cases also for its lower levels.

A referenced-level in the subject interchange is said to be explicitly reported if the CONTRL message contains a corresponding segment that references that level. Explicit reporting of a lower referenced-level requires that all referenced-levels above are acknowledged.

A referenced-level is said to be implicitly reported if the action taken for the level is reported by a UCI or UCF segment referencing a higher level in the subject interchange. Thus, for example, a group and all messages or packages within it are implicitly rejected if the action code in the UCI segment indicate rejection of the complete subject interchange. Also, a message or package is implicitly acknowledged when the action code in UCI or UCF indicates acknowledgement of messages and packages at the next lower level, and no UCM rejecting the message or package is present.

Action codes 4 and 7 shall only be used in CONTRL messages reporting the action after complete check of the interchange. Action code 8 shall only be used in CONTRL messages which provide indication of interchange receipt. Codes are specified in element 0083 Action, coded.

5.3.3 Reporting of syntactical errors

Errors can be reported at all reporting-levels of CONTRL by means of data elements in the segment constituting the reporting-level. These data elements identify the error's position in the subject interchange and indicate its nature.

Each reporting-level (i.e. the UCI, UCF, UCM, UCS and UCD segments) can only report one error. If more than one error is detected at a level referenced by one of these segments, the receiver of the subject interchange shall be free to choose which error to report. Several CONTRL messages shall not be sent in order to report several errors, and no more than one reporting-level shall be present for each instance of a referenced-level.

Errors may be reported even if the referenced-level (including erroneous parts) is acknowledged. Users should be aware that some syntactical errors could change the semantics of data, and that the receiver of the subject interchange shall be responsible for any consequences when data with syntactic errors are acknowledged.

It is recommended that errors are identified as precisely as possible. If a precise error code is defined, a more general (and imprecise) error code should not be used. Similarly, the position of the error should be identified as precisely as possible by using the lowest possible reporting-level.

No "copying" of error codes from a lower to a higher reporting-level shall occur. It would otherwise, for example, be possible to report a data element error by an error code in UCD, and repeat the same error code in UCM. In this case, the error code identifying the error shall only appear in UCD. The same rule applies at all reporting-levels.

Identification of an error's exact position and nature on receipt of the CONTRL message will often require access to the subject interchange in the format it was transferred.

5.3.4 Errors in data elements that are copied from the subject interchange to the CONTRL message

The CONTRL message contains several mandatory data elements that shall be copied from the subject interchange. If the data element in the subject interchange is missing or is syntactically invalid, a syntactically valid CONTRL message can not be generated. The error shall then be reported by other means than CONTRL, unless all parties processing the CONTRL message have agreed in an IA that copying of erroneous data elements into the CONTRL message is permitted.

5.3.5 Redundant reporting of action

If action code 7 is used in UCI, it is not an error if UCM or UCF segments are sent acknowledging a message, package, or group. Similarly, redundant UCM segments may acknowledge messages or packages in a group when the code is used in UCF.

5.3.6 Re-transmission

The conditions which determine the requirements to re-send an interchange, group, message, or package shall be agreed between the interchanging partners outside the scope of CONTRL.

5.3.7 Acknowledgement or rejection of CONTRL messages

No CONTRL message of the second type (acknowledgement or rejection) shall be sent in response to received interchanges containing only a CONTRL message, or messages. Errors in received CONTRL messages shall be reported by other means than CONTRL.

If one or more CONTRL messages are contained in an interchange being responded to, the CONTRL messages generated as a response to that received interchange shall be generated as if no CONTRL messages were contained in the received interchange.

If CONTRL messages are mixed with other message types in an interchange, an implicit acknowledgement or rejection received for parts of that interchange does not apply to the CONTRL messages.

5.4 Message definition

5.4.1 Data segment clarification

This section should be read in conjunction with the Segment Table which indicates mandatory, conditional and repeating requirements.

The corresponding information for data elements in the segments is given in Part 1 annex C section 1.5.

0010 UNH, Message header
A service segment starting and uniquely identifying a message. The message type code for Syntax and service report message is CONTRL.

Note: Syntax and service report messages conforming to this document shall contain the following data in segment UNH, composite S009:

Data element	0065	CONTRL
	0052	4
	0054	1
	0051	UN

0020 UCI, Interchange response
A segment identifying the interchange being responded to (the subject interchange). It also indicates interchange receipt, acknowledgement or rejection (action taken) of the UNA, UNB and UNZ segments, and identifies any error related to these segments. It can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the interchange level. Depending on the action code, it may also indicate the action taken on the groups, messages, and packages within that interchange.

The subject interchange shall be identified by copying its Interchange Sender, Interchange Recipient, and Interchange Control Reference data elements into the identical data elements in this segment. An erroneous or missing UNA, UNB, UNZ, USA, USC, USD, USH, USR, UST, or USU segment may be identified. If no segment is identified, the error relates to the complete interchange.

0030 Segment Group 1: UCM-SG2
A group of segments sent in response to a message or package in the subject interchange identified in the UCI segment. This segment group shall only be used if the subject interchange does not contain groups.

0040 UCM, Message/package response
A segment identifying a message or package in the subject interchange, indicating that message's or package's acknowledgement or rejection (action taken), and identifying any error related to the UNH, UNT, UNO, and UNP segments. It can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the message or package level.

A message shall be identified by copying its Message Identifier and Message Reference Number data elements into the identical data elements in this segment. An erroneous or missing UNH, UNT, USA, USC, USD, USH, USR, UST, or USU segment may be identified. If no segment is identified, the error relates to the complete message.

A package shall be identified by copying its Reference Identification and Package Reference Number data elements into the identical data elements in this segment. An erroneous or missing UNO, UNP, USA, USC, USD, USH, USR, UST, or USU segment may be identified. If no segment is identified, the error relates to the complete package.

0050 Segment Group 2: UCS-UCD
A group of segments sent in response to a segment containing one or more errors, and which was part of the message identified by the UCM segment in segment group 1.

0060 UCS, Segment error indication
A segment identifying a segment in the message, indicating that this segment contains an error, and identifying any error related to the complete segment.

0070 UCD, Data element error indication
A segment identifying an erroneous stand-alone, composite or component data element in the segment identified by the UCS segment in segment group 2, and identifying the nature of the error.

0080 Segment Group 3: UCF-SG4
A group of segments sent in response to a group in the subject interchange identified in the UCI segment. This segment group shall only be used if the subject interchange contains groups.

0090 UCF, Group response
A segment identifying a group in the subject interchange. It also indicates acknowledgement or rejection (action taken) of the UNG and UNE segments, and identifies any error related to these segments. It can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the group level. Depending on the action code, it may also indicate the action taken on the messages and packages within that group.

The group shall be identified by copying its Application Sender's Identification, Application Recipient's identification, and Group Reference Number data elements into the identical data elements in this segment. An erroneous or missing UNG, UNE, USA, USC, USD, USH, USR, UST, or USU segment may be identified. If no segment is identified, the error relates to the complete group.

0100 Segment Group 4: UCM-SG5
A group of segments sent in response to a message or package in the group identified in segment group 3.

0110 UCM, Message/package response
A segment identifying a message or package in the subject interchange, indicating that message's or package's acknowledgement or rejection (action taken), and identifying any error related to the UNH, UNT, UNO, and UNP segments. It can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the message or package level.

A message shall be identified by copying its Message Identifier and Message Reference Number data elements into the identical data elements in this segment. An erroneous or missing UNH, UNT, USA, USC, USD, USH, USR, UST, or USU segment may be identified. If no segment is identified, the error relates to the complete message.

A package shall be identified by copying its Reference Identification and Package Reference Number data elements into the identical data elements in this segment. An erroneous or missing UNO, UNP, USA, USC, USD, USH, USR, UST, or USU segment may be identified. If no segment is identified, the error relates to the complete package.

0120 Segment Group 5: UCS-UCD
A group of segments sent in response to a segment containing one or more errors, and which was part of the message identified by the UCM segment in segment group 4.

0130 UCS, Segment error indication
A segment identifying a segment in the message, indicating that this segment contains an error, and identifying any error related to the complete segment.

0140 UCD, Data element error indication
A segment identifying an erroneous stand-alone, composite or component data element in the segment identified by the UCS segment in segment group 5, and identifying the nature of the error.

0150 UNT, Message trailer
A service segment ending a message, giving the total number of segments and the control reference number of the message.

5.4.2 Data segment index (alphabetical sequence by tag)

UCD	Data element error indication
UCF	Group response
UCI	Interchange response
UCM	Message/package response
UCS	Segment error indication
UNH	Message header
UNT	Message trailer

5.4.3 Message structure

5.4.3.1 Segment table

POS	TAG	Name	S	R	Notes
0010	UNH	Message header	M	1	
0020	UCI	Interchange response	M	1	
0030	———	Segment group 1	C	999999	1
0040	UCM	Message/package response	M	1	
0050	———	Segment group 2	C	999	
0060	UCS	Segment error indication	M	1	
0070	UCD	Data element error indication	C	99	
0080	———	Segment group 3	C	999999	1
0090	UCF	Group response	M	1	
0100	———	Segment group 4	C	999999	
0110	UCM	Message/package response	M	1	
0120	———	Segment group 5	C	999	
0130	UCS	Segment error indication	M	1	
0140	UCD	Data element error indication	C	99	
0150	UNT	Message trailer	M	1	

Notes:

1. D4(0030,0080) One or none

Annex A
(normative)

Use of error codes

The table below describes at which reporting-level an error code may be used.

Code	Code name	Segment				
		UCI	UCF	UCM	UCS	UCD
2	Syntax version or level not supported	x	-	-	-	-
7	Interchange recipient not actual recipient	x	-	-	-	-
12	Invalid value	x	x	x	x	x
13	Missing	x	x	x	x	x
14	Value not supported in this position	x	x	x	x	x
15	Not supported in this position	x	x	x	x	x
16	Too many constituents	x	x	x	x	x
17	No agreement	x	x	x	-	-
18	Unspecified error	x	x	x	x	x
20	Character invalid as service character	x	-	-	-	-
21	Invalid character(s)	x	x	x	x	x
22	Invalid service character(s)	x	x	x	x	x
23	Unknown Interchange sender	x	-	-	-	-
24	Too old	x	x	-	-	-
25	Test indicator not supported	x	x	x	-	-
26	Duplicate detected	x	x	x	-	-
28	References do not match	x	x	x	-	-
29	Control or octet count does not match number of instances received	x	x	x	-	-
30	Groups and messages/packages mixed	x	x	x	-	-
32	Lower level empty	x	x	-	-	-
33	Invalid occurrence outside message, package or group	x	x	-	-	-
35	Too many repetitions	-	-	x	x	x
36	Too many segment group repetitions	-	-	-	x	-
37	Invalid type of character(s)	x	x	x	-	x
39	Data element too long	x	x	x	-	x
40	Data element too short	x	x	x	-	x
45	Trailing separator	x	x	x	x	-
46	Character set not supported	x	-	-	-	-
47	Envelope functionality not supported	-	x	x	-	-

Legend:

x = may be used
- = shall not be used

Addendum - to be added to Part 1 annex C when approved

Syntax Service Directories

(normative)

Part 4 requires that the following content be added to Part 1 Annex C of this International Standard in the sections indicated.

C.1.3 Index of segments by tag

TAG	Name
UCD	Data element error indication
UCF	Group response
UCI	Interchange response
UCM	Message/package response
UCS	Segment error indication

C.1.4 Index of segments by name

TAG	Name
UCD	Data element error indication
UCF	Group response
UCI	Interchange response
UCM	Message/package response
UCS	Segment error indication

C.1.5 Segment specifications

UCD DATA ELEMENT ERROR INDICATION

Function: To identify an erroneous stand-alone, composite or component data element, and to identify the nature of the error.

POS	TAG	Name	S	R	Repr.	Notes
010	0085	SYNTAX ERROR, CODED	M	1	an..3	
020	S011	DATA ELEMENT IDENTIFICATION	M	1		
	0098	Erroneous data element position in segment	M		n..3	
	0104	Erroneous component data element position	C		n..3	
	0136	Erroneous data element occurrence	C		n..6	

UCF GROUP RESPONSE

Function: To identify a group in the subject interchange and to indicate acknowledgement or rejection (action taken) of the UNG and UNE segments, and to identify any error related to these segments. t can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the group level. Depending on the action code, it may also indicate the action taken on the messages and packages within that group.

POS	TAG	Name	S	R	Repr.	Notes
010	0048	GROUP REFERENCE NUMBER	M	1	an..14	
020	S006	APPLICATION SENDER IDENTIFICATION	C	1		7
	0040	Application sender identification	M		an..35	
	0007	Identification code qualifier	C		an..4	
030	S007	APPLICATION RECIPIENT IDENTIFICATION	C	1		7
	0044	Application recipient identification	M		an..35	
	0007	Identification code qualifier	C		an..4	
040	0083	ACTION, CODED	M	1	an..3	
050	0085	SYNTAX ERROR, CODED	C	1	an..3	1,2,3,4
060	0135	SERVICE SEGMENT TAG, CODED	C	1	an..3	1,2,3, 4,5
070	S011	DATA ELEMENT IDENTIFICATION	C	1		2
	0098	Erroneous data element position in segment	M		n..3	
	0104	Erroneous component data element position	C		n..3	
	0136	Erroneous data element occurrence	C		n..6	
080	0534	SECURITY REFERENCE NUMBER	C	1	an..14	3,4,6
090	0138	SECURITY SEGMENT POSITION	C	1	n..6	3,4,6

Notes:

1. D5(060, 050) If first, then all
2. D5(070, 060, 050) If first, then all
3. D5(080, 060, 050, 090) If first, then all
4. D5(090, 080, 060, 050) If first, then all
5. 0135, may only contain the values UNG, UNE, USA, USC, USD, USH, USR, UST, or USU
6. This data element shall be present when reporting an error in a security segment
7. This data element shall be present if it was present in the subject interchange

UCI INTERCHANGE RESPONSE

Function: To identify the subject interchange, to indicate interchange receipt, to indicate acknowledgement or rejection (action taken) of the UNA, UNB and UNZ segments, and to identify any error related to these segments. It can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the interchange level. Depending on the action code, it may also indicate the action taken on the groups, messages, and packages within that interchange.

POS	TAG	Name	S	R	Repr.	Notes
010	0020	INTERCHANGE CONTROL REFERENCE	M	1	an..14	
020	S002	INTERCHANGE SENDER	M	1		
	0004	Interchange sender identification	M		an..35	
	0007	Identification code qualifier	C		an..4	
	0008	Interchange sender internal identification	C		an..35	
	0042	Interchange sender internal sub-identification	C		an..35	
030	S003	INTERCHANGE RECIPIENT	M	1		
	0010	Interchange recipient identification	M		an..35	
	0007	Identification code qualifier	C		an..4	
	0014	Interchange recipient internal identification	C		an..35	
	0046	Interchange recipient internal sub-identification	C		an..35	
040	0083	ACTION, CODED	M	1	an..3	
050	0085	SYNTAX ERROR, CODED	C	1	an..3	1,2,3,4
060	0135	SERVICE SEGMENT TAG, CODED	C	1	an..3	1,2,3, 4,5
070	S011	DATA ELEMENT IDENTIFICATION	C	1		2
	0098	Erroneous data element position in segment	M		n..3	
	0104	Erroneous component data element position	C		n..3	
	0136	Erroneous data element occurrence	C		n..6	
080	0534	SECURITY REFERENCE NUMBER	C	1	an..14	3,4,6
090	0138	SECURITY SEGMENT POSITION	C	1	n..6	3,4,6

Notes:

1. D5(060, 050) If first, then all
2. D5(070, 060, 050) If first then all
3. D5(080, 060, 050, 090) If first, then all
4. D5(090, 080, 060, 050) If first, then all
5. 0135, may only contain the values UNA, UNB, UNZ, USA, USC, USD, USH, USR, UST, or USU
6. This data element shall be present when reporting an error in a security segment

UCM MESSAGE/PACKAGE RESPONSE

Function: To identify a message or package in the subject interchange, and to indicate that message's or package's acknowledgement or rejection (action taken), and to identify any error related to the UNH, UNT, UNO, and UNP segments. It can also identify errors related to the USA, USC, USD, USH, USR, UST, or USU security segments when they appear at the message or package level.

POS	TAG	Name	S	R	Repr.	Notes
010	0062	MESSAGE REFERENCE NUMBER	C	1	an..14	1,2
020	S009	MESSAGE IDENTIFIER	C	1		2
	0065	Message type	M		an..6	
	0052	Message version number	M		an..3	
	0054	Message release number	M		an..3	
	0051	Controlling agency, coded	M		an..3	
	0057	Association assigned code	C		an..6	
	0110	Code list directory version number	C		an..6	
	0113	Message type sub-function identification	C		an..6	
030	0083	ACTION, CODED	M	1	an..3	
040	0085	SYNTAX ERROR, CODED	C	1	an..3	4,5,6,7
050	0135	SERVICE SEGMENT TAG, CODED	C	1	an..3	4,5,6, 7,8
060	S011	DATA ELEMENT IDENTIFICATION	C	1		5
	0098	Erroneous data element position in segment	M		n..3	
	0104	Erroneous component data element position	C		n..3	
	0136	Erroneous data element occurrence	C		n..6	
070	0800	PACKAGE REFERENCE NUMBER	C	1	an..35	1,3
080	S020	REFERENCE IDENTIFICATION	C	99		3
	0813	Reference qualifier	M		an..3	
	0802	Reference identification number	M		an..35	
090	0534	SECURITY REFERENCE NUMBER	C	1	an..14	6,7,9
100	0138	SECURITY SEGMENT POSITION	C	1	n..6	6,7,9

Notes:

1. D1(010, 070) One and only one
2. D2(010, 020) All or none
3. D2(070, 080) All or none
4. D5(050, 040) If first, then all
5. D5(060, 050, 040) If first, then all
6. D5(090, 050, 040, 100) If first, then all
7. D5(100, 090, 050, 040) If first, then all
8. 0135, may only contain the values UNH, UNT, UNO, UNP, USA, USC, USD, USH, USR, UST, or USU
9. This data element shall be present when reporting an error in a security segment

UCS SEGMENT ERROR INDICATION

Function: To identify either a segment containing an error or a missing segment, and to identify any error related to the complete segment.

POS	TAG	Name	S	R	Repr.	Notes
010	0096	SEGMENT POSITION IN MESSAGE BODY	M	1	n..6	
020	0085	SYNTAX ERROR, CODED	C	1	an..3	1

Notes:

1. 0085, shall contain a value only if the error pertains to the segment identified by data element 0096.

C.2 Composite data element directory

C.2.3 Index of composite data element by TAG

TAG	Name
S011	DATA ELEMENT IDENTIFICATION

C.2.4 Index of composite data element by name

TAG	Name
S011	DATA ELEMENT IDENTIFICATION

C.2.5 Composite data element specifications

S011 DATA ELEMENT IDENTIFICATION

Desc: Identification of the position for an erroneous data element. This can be the position of a stand-alone or composite data element in the definition of a segment or a component data element in the definition a composite data element.

POS	TAG	Name	S	Repr.	Notes
010	0098	Erroneous data element position in segment	M	n..3	
020	0104	Erroneous component data element position	C	n..3	1,2
030	0136	Erroneous data element occurrence	C	n..6	1,3

Notes:

1. D4(020, 030) One or none
2. 0104, only used if an error is to be reported in a component data element.
3. 0136, only used if an error is to be reported in a repeating data element.

C.3 Simple data element directory

C.3.2 Index of simple data element by tag

TAG	Name
0083	Action, coded
0085	Syntax error, coded
0096	Segment position in message body
0098	Erroneous data element position in segment
0104	Erroneous component data element position
0136	Erroneous data element occurrence
0138	Security segment position

C.3.3 Index of simple data element by name

TAG	Name
0083	Action, coded
0104	Erroneous component data element position
0136	Erroneous data element occurrence
0098	Erroneous data element position in segment
0138	Security segment position
0096	Segment position in message body
0085	Syntax error, coded

C.3.4 Simple data element specifications

0083 Action, coded

Desc: A code indicating acknowledgement, or rejection (the action taken) of a subject interchange, or part of the subject interchange, or indication of interchange receipt.

Repr: an..3

0085 Syntax error, coded

Desc: A code indicating the error detected.

Repr: an..3

0096 Segment position in message body

Desc: The numerical count position of a specific segment that is within the actual received message body. The numbering starts with, and includes, the UNH segment as segment number 1. To identify a segment that contains an error, this is the numerical count position of that segment. To report that a segment is missing, this is the numerical count position of the last segment that was processed before the position where the missing segment was expected to be. A missing segment group is denoted by identifying the first segment in the group as missing.

Repr: n..6

0098 Erroneous data element position in segment

Desc: The numerical count position of the stand-alone or composite data element in error. The segment code and each following stand-alone or composite data element defined in the segment description shall cause the count to be incremented. The segment tag has position number 1.

Repr: n..3

0104 Erroneous component data element position

Desc: The numerical count position of the component data element in error. Each component data element position defined in the composite data element description shall cause the count to be incremented. The count starts at 1.

Repr: n..3

0136 Erroneous data element occurrence

Desc: The numerical occurrence of the repeating stand-alone or composite data element in error. Each occurrence (as indicated by the repetition separator) shall cause the count to be incremented. The count starts at 1.

Repr: n..6

0138 Security segment position

Desc: The numerical count position of a specific security segment that is within the actual received security header/trailer segment group pair, identified by its security reference number. The numbering starts with, and includes, the USH segment as segment number 1. To identify a security segment that contains an error, this is the numerical count position of that security segment. To report that a security segment is missing, this is the numerical count position of the last security segment that was processed before the position where the missing security segment was expected to be. A missing security segment group is denoted by identifying the first segment in the security segment group as missing.

Repr: n..6

Addendum - to be added to Part 1 annex D when approved

Syntax Service Code Directory

(informative)

Part 4 requires that the following content be added to Part 1 Annex D of this International Standard in the sections indicated.

D.4 Code specifications

0083 Action, coded

Desc: A code indicating acknowledgement, or rejection (the action taken) of a subject interchange, or part of the subject interchange, or indication of interchange receipt.

Repr: an..3

Note: Code values missing from this code list are applicable to earlier versions of CONTRL and will not be re-used.

4 This level and all lower levels rejected
The corresponding referenced-level and all its lower referenced-levels are rejected. One or more errors are reported at this reporting-level or a lower reporting-level.

7 This level acknowledged and all lower levels acknowledged if not explicitly rejected
The corresponding referenced-level is acknowledged. All messages, packages, or groups at the lower referenced-levels are acknowledged except those explicitly reported as rejected at their reporting-level in this CONTRL message.

8 Interchange received
Indication of interchange receipt.

0085 Syntax error, coded

Desc: A code indicating the syntax error detected.

Repr: an..3

Note: Code values missing from this code list are applicable to earlier versions of CONTRL and will not be re-used.

2 Syntax version or level not supported
Notification that the syntax version and/or level is not supported by the recipient.

7 Interchange recipient not actual recipient
Notification that the Interchange recipient (S003) is different from the actual recipient.

12 Invalid value
Notification that the value of a stand-alone data element, composite data element or component data element does not conform to the relevant specifications for the value.

13 Missing
Notification that a mandatory (or otherwise required) service or user segment, data element, composite data element or component data element is missing.

14 Value not supported in this position
Notification that the recipient does not support use of the specific value of an identified stand-alone data element, composite data element or component data element in the position where it is used. The value may be valid according to the relevant specifications and may be supported if it is used in another position.

15 Not supported in this position
Notification that the recipient does not support use of the segment type, stand-alone data element type, composite data element type or component data element type in the identified position.

16 Too many constituents
Notification that the identified segment contained to many data elements or that the identified composite data element contained too many component data elements.

17 No agreement
No agreement exists that allows receipt of an interchange, group, message, or package with the value of the identified stand-alone data element, composite data element or component data element.

18 Unspecified error
Notification that an error has been identified, but the nature of the error is not reported.

20 Character invalid as service character
Notification that a character advised in UNA is invalid as a service character.

21 Invalid character(s)
Notification that one or more character(s) used in the interchange is not a valid character as defined by the syntax identifier indicated in UNB. The invalid character is part of the referenced-level, or followed immediately after the identified part of the interchange.

22 Invalid service character(s)
Notification that the service character(s) used in the interchange is not a valid service character as advised in UNA or not one of the default service characters. If the code is used in UCS or UCD, the invalid character followed immediately after the identified part of the interchange.

23 Unknown Interchange sender
Notification that the Interchange sender (S002) is unknown.

24 Too old
Notification that the received interchange or group is older than a limit specified in an IA or determined by the recipient.

25 Test indicator not supported
Notification that test processing can not be performed for the identified interchange, group, message, or package.

26 Duplicate detected
Notification that a possible duplication of a previously received interchange, group, message, or package has been detected. The earlier transmission may have been rejected.

28 References do not match
Notification that the control reference in UNB, UNG, UNH, UNO, USH, or USD does not match the one in UNZ, UNE, UNT, UNP, UST, or USU, respectively.

29 Control count does not match number of instances received
Notification that the number of groups, messages, or segments does not match the number given in UNZ, UNE, UNT, or UST or that the length of an object or of encrypted data is not equal to the length stated in the UNO, UNP, USD, or USU.

30 Groups and messages/packages mixed
Notification that groups have been mixed with messages/packages outside of groups in the interchange.

32 Lower level empty
Notification that the interchange does not contain any messages, packages, or groups, or a group does not contain any messages or packages.

33 Invalid occurrence outside message, package, or group
Notification of an invalid segment or data element in the interchange, between messages or between packages or between groups. Rejection is reported at the level above.

35 Too many repetitions
Notification that a stand-alone data element, composite data element or segment is repeated too many times.

36 Too many segment group repetitions
Notification that a segment group is repeated too many times.

37 Invalid type of character(s)
Notification that one or more numeric characters are used in an alphabetic (component) data element or that one or more alphabetic characters are used in a numeric (component) data element.

39 Data element too long
Notification that the length of the data element received exceeds the maximum length specified in the data element description.

40 Data element too short
Notification that the length of the data element received is shorter than the minimum length specified in the data element description.

45 Trailing separator
Notification of one of the following:
- the last character before the segment terminator is a data element separator or a component data element separator or a repeating data element separator, or
- the last character before a data element separator is a component data element separator or a repeating data element separator.

46 Character set not supported

Notification that one or more characters used are not in the character set defined by the syntax identifier, or the character set identified by the escape sequence for the code extension technique is not supported by the recipient.

47 Envelope functionality not supported

Notification that the envelope structure encountered is not supported by the recipient.