5i’

12 Error recovery

This section specifies the error recovery mechanisms for errors which may occur during the communication between a TLM terminal and a TLMAU. The type of recovery will depend upon whether the error occurred during the transmission of control information or a normal document. The recovery mechanism of Recommendation T.62 shall apply. In addition, the qualifications given in the following paragraphs shall apply.

For both directions of transfer, if an error is detected during the transmission of a document containing control information, the transmitted part shall be discarded and the complete TAPDU retransmitted.

If an error is detected during the transmission of a document containing message body, the recovery mechanism depends upon the direction of transfer. In the TLMAU-to-TLM terminal direction, two possibilities for recovery are available, the first one is to apply the rules of Recommendation T.62 using CDC, the second one is the complete retransmission of the TAPDU. In the TLM terminal-to-TLMAU direction, three possible recovery mechanisms are identified, the choice of which is a national matter:

1) No recovery is provided. The complete TAPDU (control information and message body) must be retransmitted.

2) The TLMAU shall retain the received part up to the last acknowledged checkpoint. The originating TLM terminal is required to resume the sending of the remainder of the TAPDU by using CDC protocol element as described in Recommendation T.62. The TLMAU shall automatically link the retained part with the resumed part prior to sending to the MTS. If the originating TLM terminal does not resume the sending within a predetermined time or if the TLMAU receives new TAPDU within that time, the TLMAU shall discard the received part of the TAPDU.

3) The last acknowledged normal document is considered the end of the TAPDU. The TLMAU will send this part to the MTS as a complete message. If the TLM terminal wishes to resume transmission of the interrupted TAPDU, it must first resend the control information. There is no correlation between the original message and the continued message at a receipient TLMAU or IPM-UA.

Note 1 — For failures occurring between document boundaries, the last acknowledged document shall be regarded as the end of the current TAPDU.

Note 2 — A TAPDU, which may be composed of more than one document, cannot be considered complete before at least two documents were received.

Note 3 — If there is a relationship between the sequence of normal documents (for example a multi-part body message) being transferred, the recovery mechanism 2 should not be used.

13 Control procedures

13.1 *Session control procedure*

The session control procedures shall be in accordance with Recommendation T.62. However, the qualifications listed in the following subsections shall also apply.

13.1.1 *Session element of procedure*

The values of mandatory parameters used during session establishment shall be as given in Table 7/T.330. The format of the TLMAU terminal identifier shall be that specified in Recommendation F.200.

13.1.2 *Session rules*

Change control (CSCC/RSCCP exchange) may occur inside TAPDU boundaries but should occur outside document boundaries.

13.2 *Document control procedures*

The document control procedures shall be in accordance with Recommendation T.62.

Control information is conveyed in either a control document or a normal document. Where encoded information types of the control information is Teletex, the body of the IP-message is conveyed in a sequence (at least one) of normal documents.

Note — The use of the normal document for conveying control information should be restricted to Teletex access to IPMS.

H.T. [T54.330]

TABLE 7/T.330

Mandatory parameter values during session establishment

T.62 parameters	Call Originator	
	TLM terminal	TLMAU

{
Terminal identifier of calling terminal (in CSS)
}
	TLM TID	TLMAU's TID

{
Terminal identifier of called terminal (in RSSP)
}
	TLMAU TID	TLM TID

Date and time Date and time the TLM terminal originated call } Date and time the TLMAU terminal originated call }	{ {	
Service identifier	Telematic	Telematic
Window size	Note 1	Note 1
Session user data Basic terminal capabilities and interchange format(s) which are available as receiving capabilities of the TLM terminal (Note 1) } Basic terminal capabilities and interchange format(s) which are available as receiving capabilities of the TLMAU }	{ {	

(Note 1) *Note 1* — This parameter is mandatory for the Group 4 facsimile service.

Note 2 — TID means terminal identification.

Note 3 — Negotiation of the capabilities of handling control documents encoded in T.61 characters is not needed.

Table 7/T.330 [T54.330], p.

In a multiple-TAPDU session, the TAPDUs are delimited by at least one of the following methods:

1) implicity, that is, by the first document of the TAPDU being a control document;

2) explicitly, that is, by the first document of the TAPDU containing a parameter indicating the number of subsequence documents in the TAPDU.

Note — The second method is mandatory for multiple-action-unit session, where the first document of the TAPDU is a normal document.

When a single TAPDU is sent on a session connection, the TAPDU is delimited only by the end of the session.

13.3 *Log-on procedure*

It is conceivable that many subscribers will commonly use a single TLM terminal, some mechanism is required to identify a specific user by intermediate system, i.e. log-on procedure using user name and password. Detailed procedure requires further study.

ANNEX A

(to Recommendation T.330)

Formal definition of TLMA abstract service

This Annex is an integral part of this Recommendation.

This Annex, a supplement to § 7, formally defines for reference purposes the abstract service TLMA (telematic agent). It uses the PORT and ABSTRACT-BIND, -UNBIND, -OPERATION, and -ERROR macro of Recommendation X.407.

H.T. [1T55.330]

TLMAAbsService { | citt-t330 }

DEFINITIONS IMPLICIT TAGS ::=

BEGIN

-- *Prologue*

EXPORTS

-- *Primary port types*

miscellanea

IMPORTS

-- *Abstract service*

origination,

reception,

management

FROM IPMSAbstractService { | oint-iso-ccitt

mhs(6)

ipms(1)

modules(0)

abstract-service(3) }

import,

export

FROM MTSAbstractService { | oint-iso-ccitt

mhs(6)

mts(3)

modules(0)

mTS-abstract-service(3) }

-- *Information objects and their aspects*

IPM,

RN,

NRN

FROM IPMSInformationObjects { | oint-iso-ccitt

mhs(6)

ipms(1)

modules(0)

information-objects(2) }

-- *Functional objects*

tlma

FROM IPMSFunctionalObjects { | oint-iso-ccitt

mhs(6)

ipms(1)

modules(0)

functional-objects(1) }

-- *MTAS aspects*

MessageDeliveryEnvelope, ORName, MessageIdentifier, Priority,

Time, ReportDeliveryEnvelope,

PerRecipientReportDeliveryFields

FROM MTSAbstractService { | oint-iso-ccitt

mhs(6)

mts(3)

modules(0)

mTS-abstract-service(3) }

-- *Abstract services macros*

OBJECT,

PORT,

ABSTRACT-BIND,

ABSTRACT-ERROR,

ABSTRACT-OPERATION

FROM AbstractServiceNotation { | oint-iso-ccitt

mhs(6)

adsdc(2)

modules(0)

notation(1) }

DateandTime ::= Time

-- *Object*

tlma

OBJECT

tlma

PORTS { |

tlma

PORTS { | fR

origination

[S],

tlma

PORTS { | fR

reception

[S],

tlma

PORTS { | fR

management

[S],

tlma

PORTS { | fR

miscellanea

[S],

tlma

PORTS { | fR

import

[C],

tlma

PORTS { | fR

export

[C] }

tlma

::= id-ot-tlma

-- *Ports*

miscellanea PORT

tlma

SUPPLIER PERFORMS { |

tlma

PORTS { | fR

ChangeSubscriptionProfile,

tlma

PORTS { | fR

DSList,

tlma

PORTS { | fR

DSDelete,

tlma

PORTS { | fR

DSFetch,

tlma

PORTS { | fR

MessageStatus }

tlma

::= id-pt-miscellanea

H.T. [2T55.330]

TLMAAbsService (*continuation*

)

-- *Miscellanea port specific abstract error problems*

SubscriptionProfileProblem ::= ENUMERATED { |

tlma

not-changed(0) }

DSProblem ::= ENUMERATED { |

tlma

no-message-in-ds(0),

tlma

ds-not-supported(1),

tlma

ds-not-subscribed(2),

tlma

retrieval-identifier-invalid(3),

tlma

parameter-invalid(4) }

MessageStatusProblem ::= ENUMERATED { |

tlma

query-identifier-invalid(0) }

-- *RetrievalIdentifier*

RetrievalIdentifier ::= PrintableString

-- *CallIdentification*

CallIdentification ::= SEQUENCE { |

tlma

TLMAU TID

[0] TerminalIdentifier,

tlma

TLM TID

[1] TerminalIdentifier,

tlma

date-and-time

[2] DateAndTime,

tlma

document-ref-num

[3] DocumentReferenceNumber,

tlma

additional-session-ref-num

[4]

AdditionalSessionReferenceNumber OPTIONAL }

TerminalIdentifier ::= PrintableString -- *defined in Recommendation F.200*

--

DocumentReferenceNumber ::= NumericString

AdditionalSessionReferenceNumber ::= NumericString

-- *Change subscription profile abstract operation component types*

DSMode ::= SET { |

tlma

[0] Mode,

tlma

frequency

[1] Frequency OPTIONAL,

tlma

time

[2] DateandTime OPTIONAL }

Mode ::= CHOICE { |

tlma

[0] auto-output,

tlma

[1] retrieval }

Frequency ::= NumericString

-- *in minutes*

--

ErrorRecoveryMode ::=

CHOICE { | -- *see § 12 in this Recommendation*

--

tlma

[0] recovery-1,

-- *no-recovery*

--

tlma

[1] recovery-2,

-- *full-support-of-T.62-recovery-procedures*

--

tlma

[2] recovery-3

-- *recovery-of-document-basis*

-- }

MessageDeleteMode ::= CHOICE { |

tlma

[0] auto-delete,

tlma

[1] manual-delete }

-- *DS List abstract operation component types*

ListReport ::= SET { |

tlma

retrieval-id

[0] RetrievalIdentifier,

tlma

message-type

[1] MessageType,

tlma

priority

[2] Priority OPTIONAL,

tlma

message-length

[3] MessageLength OPTIONAL,

tlma

originator-name

[4] ORName OPTIONAL }

MessageType ::= CHOICE { |

tlma

[0] ipm,

tlma

[1] receipt-notice,

tlma

[2] non-receipt-notice,

tlma

[3] report }

MessageLength ::= NumericString

-- *in octet*

--

H.T. [3T55.330]

TLMAAbsService (*continuation*

)

-- *DS Fetch abstract operation component types*

DeleteAfterOutput ::= CHOICE { |

tlma

[0] delete,

tlma

[1] keep }

MessageReport ::= CHOICE { |

tlma

ipm-fetch

[0] IPMFetch,

tlma

rn-fetch

[1] RNFetch,

tlma

nrn-fetch

[2] NRNFetch,

tlma

report-fetch

[3] ReportFetch }

IPMFetch ::= SEQUENCE { |

tlma

envelope

[0] MessageDeliveryEnvelope,

tlma

content

[1] IPM }

RNFetch ::= SEQUENCE { |

tlma

envelope

[0] MessageDeliveryEnvelope,

tlma

-- not used intended-recipient-name and other recipient-name

of deliver-envelope in RNFetch

--

tlma

content

[1] RN } }

NRNFetch ::= SEQUENCE { |

tlma

[0] number-of-docs

[0] NumberOfAssociatedDocuments

OPTIONAL,

tlma

[1] SET { |

tlma

[1]

envelope

[1] MessageDeliveryEnvelope,

tlma

-- not used intended-recipient-name and other recipient-name

of deliver-envelope in NRNFetch

--

tlma

content

[2] NRN } }

ReportFetch ::= SEQUENCE { |

tlma

[0] SET { |

tlma

[0]

number-of-docs

[0] NumberOfAssociatedDocuments

OPTIONAL,

tlma

[0]

call-id

[1] CallIdentification }

tlma

[1] SET { |

tlma

[1]

envelope

[0] ReportDeliveryEnvelope,

tlma

[1]

returned-content

[1] IPM OPTIONAL } } }

NumberOfAssociatedDocuments ::= NumericString

-- *Message status abstract service*

QueryIdentifier ::= CHOICE { |

tlma

submission-id

[0] MessageIdentifier,

tlma

call-id

[1] CallIdentification }

StatusInfo ::= SET { |

tlma

[0] Status,

tlma

per-recipient-info

[1]

PerRecipientReportDeliveryFields OPTIONAL }

Status ::= CHOICE { |

tlma

[0] in-process,

tlma

[1] delivered,

tlma

[2] non-delivered }

-- *Miscellanea abstract-operations*

ChangeSubscriptionProfile ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

ds-mode

[0] DSMode OPTIONAL,

tlma

ARGUMENT SET { | fR

error-recovery-mode

[1]

ErrorRecoveryMode OPTIONAL,

tlma

ARGUMENT SET { | fR

message-delete-mode

[2]

MessageDeleteMode OPTIONAL }

tlma

RESULT { }

tlma

ERRORS { |

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error,

tlma

ERRORS { | fR

subscription-profile-error }

H.T. [4T55.330]

TLMAAbsService (*continuation*

)

DSList

::= ABSTRACT-OPERATION

tlma

ARGUMENT { }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

list-reports [0] SET OF ListReport OPTIONAL }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSDelete

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

selector [0] SET OF RetrievalIdentifier }

tlma

RESULT

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSFetch

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

RESULT SET { | fR

selector

[0] SET OF

RetrievalIdentifier,

tlma

RESULT SET { | fR

delete-after-output

[1]

DeleteAfterOutput OPTIONAL }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

retrieval-id

[0] RetrievalIdentifier,

tlma

RESULT SET { | fR

message-report

[1] MessageReport }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

MessageStatus ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

[0] QueryIdentifier }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

report-time

[0] DateandTime,

tlma

RESULT SET { | fR

reported-message-id

[1]

MessageIdentifier,

tlma

RESULT SET { | eported-message-id

[2]

SET OF StatusInfo }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

message-status-error }

-- *Miscellanea port specific abstract errors*

subscription-profile-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] SubscriptionProfileProblem }

tlma

::= 0

ds-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] DSProblem }

tlma

::= 1

message-status-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] MessageStatusProblem }

tlma

::= 2

END -- *of TLMAAbsService*

?05

H.T. [T56.330]

3.1:□

SEND:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

19:□

FLAGS:

[deferred-delivery-time] ‘NL‘

=[disclose-recipients],[alternate-recipient-allowed]

16:□

CONVERSION:□[conversion-prohibited]

17:□

CONTENT-INFO:□[content-return-request]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[user-report-request],[rn-request],[nrn-request],[return-request],[reply-request] ‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

31:□

BODY-TYPE:□

[

[body-part],

]

H.T. [T57.330]

3.14:□

SEND-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

//repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

//repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks

3.1:□SEND:
3.2:□PROBE:
3.3:□DELIVER:
{
3.4:□DELIVERY-STATUS-NOTICE:
}
{
3.5:□RECEIPT-STATUS-NOTICE:
}
3.6:□EXPLICIT-RN:
3.7:□DS-QUERY:
3.8:□DS-REPORT:
3.9:□OUTPUT-REQUEST:
3.10:□OUTPUT-MESSAGE:
3.11:□REGISTER:
3.12:□EXCEPTION:
3.13:□CANCEL:
3.14:□SEND-ACK:
3.15:□PROBE-ACK:
{
3.16:□EXPLICIT-RN-ACK:
}
3.17:□REGISTER-ACK:
3.18:□MESSAGE-DELETE:
3.19:□STATUS-QUERY:
3.20:□STATUS-REPORT:
	send
	probe
	deliver
	
	deliveryStatusNotice
	
	receiptStatusNotice
	explicitRN
	dsQuery
	dsReport
	outputRequest
	outputMessage
	register
	exception
	cancel
	sendAck
	probeAck
	
	explicitRNAck
	registerAck
	messageDelete
	statusQuery
	statusReport
		—
		—
		—
		
		—
		
		—
		—
		—
		—
		—
		—
		—
		—
		—
		
		—
		—
		—
		—
		—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Tableau [1T55.330], p. 2

-- *Miscellanea port specific abstract error problems*

SubscriptionProfileProblem ::= ENUMERATED { |

tlma

not-changed(0) }

DSProblem ::= ENUMERATED { |

tlma

no-message-in-ds(0),

tlma

ds-not-supported(1),

tlma

ds-not-subscribed(2),

tlma

retrieval-identifier-invalid(3),

tlma

parameter-invalid(4) }

MessageStatusProblem ::= ENUMERATED { |

tlma

query-identifier-invalid(0) }

-- *RetrievalIdentifier*

RetrievalIdentifier ::= PrintableString

-- *CallIdentification*

CallIdentification ::= SEQUENCE { |

tlma

TLMAU TID

[0] TerminalIdentifier,

tlma

TLM TID

[1] TerminalIdentifier,

tlma

date-and-time

[2] DateAndTime,

tlma

document-ref-num

[3] DocumentReferenceNumber,

tlma

additional-session-ref-num

[4]

AdditionalSessionReferenceNumber OPTIONAL }

TerminalIdentifier ::= PrintableString -- *defined in Recommendation F.200*

--

DocumentReferenceNumber ::= NumericString

AdditionalSessionReferenceNumber ::= NumericString

-- *Change subscription profile abstract operation component types*

DSMode ::= SET { |

tlma

[0] Mode,

tlma

frequency

[1] Frequency OPTIONAL,

tlma

time

[2] DateandTime OPTIONAL }

Mode ::= CHOICE { |

tlma

[0] auto-output,

tlma

[1] retrieval }

Frequency ::= NumericString

-- *in minutes*

--

ErrorRecoveryMode ::=

CHOICE { | -- *see § 12 in this Recommendation*

--

tlma

[0] recovery-1,

-- *no-recovery*

--

tlma

[1] recovery-2,

-- *full-support-of-T.62-recovery-procedures*

--

tlma

[2] recovery-3

-- *recovery-of-document-basis*

-- }

MessageDeleteMode ::= CHOICE { |

tlma

[0] auto-delete,

tlma

[1] manual-delete }

-- *DS List abstract operation component types*

ListReport ::= SET { |

tlma

retrieval-id

[0] RetrievalIdentifier,

tlma

message-type

[1] MessageType,

tlma

priority

[2] Priority OPTIONAL,

tlma

message-length

[3] MessageLength OPTIONAL,

tlma

originator-name

[4] ORName OPTIONAL }

MessageType ::= CHOICE { |

tlma

[0] ipm,

tlma

[1] receipt-notice,

tlma

[2] non-receipt-notice,

tlma

[3] report }

MessageLength ::= NumericString

-- *in octet*

--

H.T. [3T55.330]

TLMAAbsService (*continuation*

)

-- *DS Fetch abstract operation component types*

DeleteAfterOutput ::= CHOICE { |

tlma

[0] delete,

tlma

[1] keep }

MessageReport ::= CHOICE { |

tlma

ipm-fetch

[0] IPMFetch,

tlma

rn-fetch

[1] RNFetch,

tlma

nrn-fetch

[2] NRNFetch,

tlma

report-fetch

[3] ReportFetch }

IPMFetch ::= SEQUENCE { |

tlma

envelope

[0] MessageDeliveryEnvelope,

tlma

content

[1] IPM }

RNFetch ::= SEQUENCE { |

tlma

envelope

[0] MessageDeliveryEnvelope,

tlma

-- not used intended-recipient-name and other recipient-name

of deliver-envelope in RNFetch

--

tlma

content

[1] RN } }

NRNFetch ::= SEQUENCE { |

tlma

[0] number-of-docs

[0] NumberOfAssociatedDocuments

OPTIONAL,

tlma

[1] SET { |

tlma

[1]

envelope

[1] MessageDeliveryEnvelope,

tlma

-- not used intended-recipient-name and other recipient-name

of deliver-envelope in NRNFetch

--

tlma

content

[2] NRN } }

ReportFetch ::= SEQUENCE { |

tlma

[0] SET { |

tlma

[0]

number-of-docs

[0] NumberOfAssociatedDocuments

OPTIONAL,

tlma

[0]

call-id

[1] CallIdentification }

tlma

[1] SET { |

tlma

[1]

envelope

[0] ReportDeliveryEnvelope,

tlma

[1]

returned-content

[1] IPM OPTIONAL } } }

NumberOfAssociatedDocuments ::= NumericString

-- *Message status abstract service*

QueryIdentifier ::= CHOICE { |

tlma

submission-id

[0] MessageIdentifier,

tlma

call-id

[1] CallIdentification }

StatusInfo ::= SET { |

tlma

[0] Status,

tlma

per-recipient-info

[1]

PerRecipientReportDeliveryFields OPTIONAL }

Status ::= CHOICE { |

tlma

[0] in-process,

tlma

[1] delivered,

tlma

[2] non-delivered }

-- *Miscellanea abstract-operations*

ChangeSubscriptionProfile ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

ds-mode

[0] DSMode OPTIONAL,

tlma

ARGUMENT SET { | fR

error-recovery-mode

[1]

ErrorRecoveryMode OPTIONAL,

tlma

ARGUMENT SET { | fR

message-delete-mode

[2]

MessageDeleteMode OPTIONAL }

tlma

RESULT { }

tlma

ERRORS { |

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error,

tlma

ERRORS { | fR

subscription-profile-error }

H.T. [4T55.330]

TLMAAbsService (*continuation*

)

DSList

::= ABSTRACT-OPERATION

tlma

ARGUMENT { }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

list-reports [0] SET OF ListReport OPTIONAL }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSDelete

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

selector [0] SET OF RetrievalIdentifier }

tlma

RESULT

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSFetch

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

RESULT SET { | fR

selector

[0] SET OF

RetrievalIdentifier,

tlma

RESULT SET { | fR

delete-after-output

[1]

DeleteAfterOutput OPTIONAL }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

retrieval-id

[0] RetrievalIdentifier,

tlma

RESULT SET { | fR

message-report

[1] MessageReport }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

MessageStatus ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

[0] QueryIdentifier }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

report-time

[0] DateandTime,

tlma

RESULT SET { | fR

reported-message-id

[1]

MessageIdentifier,

tlma

RESULT SET { | eported-message-id

[2]

SET OF StatusInfo }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

message-status-error }

-- *Miscellanea port specific abstract errors*

subscription-profile-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] SubscriptionProfileProblem }

tlma

::= 0

ds-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] DSProblem }

tlma

::= 1

message-status-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] MessageStatusProblem }

tlma

::= 2

END -- *of TLMAAbsService*

?05

H.T. [T56.330]

3.1:□

SEND:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

19:□

FLAGS:

[deferred-delivery-time] ‘NL‘

=[disclose-recipients],[alternate-recipient-allowed]

16:□

CONVERSION:□[conversion-prohibited]

17:□

CONTENT-INFO:□[content-return-request]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[user-report-request],[rn-request],[nrn-request],[return-request],[reply-request] ‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

31:□

BODY-TYPE:□

[

[body-part],

]

H.T. [T57.330]

3.14:□

SEND-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks

3.1:□SEND:
3.2:□PROBE:
3.3:□DELIVER:
{
3.4:□DELIVERY-STATUS-NOTICE:
}
{
3.5:□RECEIPT-STATUS-NOTICE:
}
3.6:□EXPLICIT-RN:
3.7:□DS-QUERY:
3.8:□DS-REPORT:
3.9:□OUTPUT-REQUEST:
3.10:□OUTPUT-MESSAGE:
3.11:□REGISTER:
3.12:□EXCEPTION:
3.13:□CANCEL:
3.14:□SEND-ACK:
3.15:□PROBE-ACK:
{
3.16:□EXPLICIT-RN-ACK:
}
3.17:□REGISTER-ACK:
3.18:□MESSAGE-DELETE:
3.19:□STATUS-QUERY:
3.20:□STATUS-REPORT:
	send
	probe
	deliver
	
	deliveryStatusNotice
	
	receiptStatusNotice
	explicitRN
	dsQuery
	dsReport
	outputRequest
	outputMessage
	register
	exception
	cancel
	sendAck
	probeAck
	
	explicitRNAck
	registerAck
	messageDelete
	statusQuery
	statusReport
		—
		—
		—
		
		—
		
		—
		—
		—
		—
		—
		—
		—
		—
		—
		
		—
		—
		—
		—
		—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Tableau [2T55.330], p. 3

TLMAAbsService (*continuation*

)

-- *DS Fetch abstract operation component types*

DeleteAfterOutput ::= CHOICE { |

tlma

[0] delete,

tlma

[1] keep }

MessageReport ::= CHOICE { |

tlma

ipm-fetch

[0] IPMFetch,

tlma

rn-fetch

[1] RNFetch,

tlma

nrn-fetch

[2] NRNFetch,

tlma

report-fetch

[3] ReportFetch }

IPMFetch ::= SEQUENCE { |

tlma

envelope

[0] MessageDeliveryEnvelope,

tlma

content

[1] IPM }

RNFetch ::= SEQUENCE { |

tlma

envelope

[0] MessageDeliveryEnvelope,

tlma

-- not used intended-recipient-name and other recipient-name

of deliver-envelope in RNFetch

--

tlma

content

[1] RN } }

NRNFetch ::= SEQUENCE { |

tlma

[0] number-of-docs

[0] NumberOfAssociatedDocuments

OPTIONAL,

tlma

[1] SET { |

tlma

[1]

envelope

[1] MessageDeliveryEnvelope,

tlma

-- not used intended-recipient-name and other recipient-name

of deliver-envelope in NRNFetch

--

tlma

content

[2] NRN } }

ReportFetch ::= SEQUENCE { |

tlma

[0] SET { |

tlma

[0]

number-of-docs

[0] NumberOfAssociatedDocuments

OPTIONAL,

tlma

[0]

call-id

[1] CallIdentification }

tlma

[1] SET { |

tlma

[1]

envelope

[0] ReportDeliveryEnvelope,

tlma

[1]

returned-content

[1] IPM OPTIONAL } } }

NumberOfAssociatedDocuments ::= NumericString

-- *Message status abstract service*

QueryIdentifier ::= CHOICE { |

tlma

submission-id

[0] MessageIdentifier,

tlma

call-id

[1] CallIdentification }

StatusInfo ::= SET { |

tlma

[0] Status,

tlma

per-recipient-info

[1]

PerRecipientReportDeliveryFields OPTIONAL }

Status ::= CHOICE { |

tlma

[0] in-process,

tlma

[1] delivered,

tlma

[2] non-delivered }

-- *Miscellanea abstract-operations*

ChangeSubscriptionProfile ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

ds-mode

[0] DSMode OPTIONAL,

tlma

ARGUMENT SET { | fR

error-recovery-mode

[1]

ErrorRecoveryMode OPTIONAL,

tlma

ARGUMENT SET { | fR

message-delete-mode

[2]

MessageDeleteMode OPTIONAL }

tlma

RESULT { }

tlma

ERRORS { |

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error,

tlma

ERRORS { | fR

subscription-profile-error }

H.T. [4T55.330]

TLMAAbsService (*continuation*

)

DSList

::= ABSTRACT-OPERATION

tlma

ARGUMENT { }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

list-reports [0] SET OF ListReport OPTIONAL }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSDelete

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

selector [0] SET OF RetrievalIdentifier }

tlma

RESULT

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSFetch

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

RESULT SET { | fR

selector

[0] SET OF

RetrievalIdentifier,

tlma

RESULT SET { | fR

delete-after-output

[1]

DeleteAfterOutput OPTIONAL }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

retrieval-id

[0] RetrievalIdentifier,

tlma

RESULT SET { | fR

message-report

[1] MessageReport }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

MessageStatus ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

[0] QueryIdentifier }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

report-time

[0] DateandTime,

tlma

RESULT SET { | fR

reported-message-id

[1]

MessageIdentifier,

tlma

RESULT SET { | eported-message-id

[2]

SET OF StatusInfo }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

message-status-error }

-- *Miscellanea port specific abstract errors*

subscription-profile-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] SubscriptionProfileProblem }

tlma

::= 0

ds-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] DSProblem }

tlma

::= 1

message-status-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] MessageStatusProblem }

tlma

::= 2

END -- *of TLMAAbsService*

?05

H.T. [T56.330]

3.1:□

SEND:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

19:□

FLAGS:

[deferred-delivery-time] ‘NL‘

=[disclose-recipients],[alternate-recipient-allowed]

16:□

CONVERSION:□[conversion-prohibited]

17:□

CONTENT-INFO:□[content-return-request]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[user-report-request],[rn-request],[nrn-request],[return-request],[reply-request] ‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

31:□

BODY-TYPE:□

[

[body-part],

]

H.T. [T57.330]

3.14:□

SEND-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

  //The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list _ lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.1:□SEND: send — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.2:□PROBE: probe — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.3:□DELIVER: deliver — lw(102p) | lw(54p) | cw(36p) | lw(36p) .
{ 3.4:□DELIVERY-STATUS-NOTICE:

} deliveryStatusNotice — lw(102p) | lw(54p) | cw(36p) | lw(36p) .
{ 3.5:□RECEIPT-STATUS-NOTICE:
} receiptStatusNotice — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.6:□EXPLICIT-RN: explicitRN — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.7:□DS-QUERY: dsQuery — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.8:□DS-REPORT: dsReport — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.9:□OUTPUT-REQUEST: outputRequest — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.10:□OUTPUT-MESSAGE: outputMessage — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.11:□REGISTER: register — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.12:□EXCEPTION: exception — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.13:□CANCEL: cancel — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.14:□SEND-ACK: sendAck — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.15:□PROBE-ACK: probeAck — lw(102p) | lw(54p) | cw(36p) | lw(36p) .
{ 3.16:□EXPLICIT-RN-ACK:
} explicitRNAck — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.17:□REGISTER-ACK: registerAck — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.18:□MESSAGE-DELETE: messageDelete — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.19:□STATUS-QUERY: statusQuery — lw(102p) | lw(54p) | cw(36p) | lw(36p) . 3.20:□STATUS-REPORT: statusReport — _ lw(102p) | lw(54p) | lw(36p) | lw(36p) .
{ 1:□CORRELATION-INFORMATION:
} correlationInfo Primitive _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 2:□ Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 3:□REPORTED-RECIPIENT: reportedRecipient Primitive _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 4:□TIME-OF-DELIVERY: timeOfDelivery Primitive _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 5:□ Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 6:□ Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 7:□ Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 8: Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 9:□ERRORS: errors Primitive _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 10: Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 11: Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 12:□RECEIVED-TID: Reserved for CF _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 13:□PRIORITY: priority Primitive _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 14:□ORIGINATOR: originator Constructor _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 15:□RECIPIENTS: recipients Constructor _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 16:□CONVERSION: conversion Primitive _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 17:□CONTENT-INFO: contentInfo Constructor _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 18:□CONTENT-INDICATOR: contentIndicator Constructor _ lw(102p) | lw(54p) | lw(36p) | lw(36p) . 19:□FLAG: per Message Indicator Constructor _

H.T. [4T55.330]

TLMAAbsService (*continuation*

)

DSList

::= ABSTRACT-OPERATION

tlma

ARGUMENT { }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

list-reports [0] SET OF ListReport OPTIONAL }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSDelete

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

selector [0] SET OF RetrievalIdentifier }

tlma

RESULT

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

DSFetch

::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

RESULT SET { | fR

selector

[0] SET OF

RetrievalIdentifier,

tlma

RESULT SET { | fR

delete-after-output

[1]

DeleteAfterOutput OPTIONAL }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

retrieval-id

[0] RetrievalIdentifier,

tlma

RESULT SET { | fR

message-report

[1] MessageReport }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

ds-error }

MessageStatus ::= ABSTRACT-OPERATION

tlma

ARGUMENT SET { |

tlma

ARGUMENT SET { | fR

[0] QueryIdentifier }

tlma

RESULT SET { |

tlma

RESULT SET { | fR

report-time

[0] DateandTime,

tlma

RESULT SET { | fR

reported-message-id

[1]

MessageIdentifier,

tlma

RESULT SET { | eported-message-id

[2]

SET OF StatusInfo }

tlma

ERRORS { |

tlma

ERRORS { | fR

subscription-error,

tlma

ERRORS { | fR

name-error,

tlma

ERRORS { | fR

message-status-error }

-- Miscellanea port specific abstract errors

subscription-profile-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] SubscriptionProfileProblem }

tlma

::= 0

ds-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] DSProblem }

tlma

::= 1

message-status-error

ABSTRACT-ERROR

tlma

PARAMETER SET { |

tlma

PARAMETER SET { | fR

problem [0] MessageStatusProblem }

tlma

::= 2

END -- *of TLMAAbsService*

?05

H.T. [T56.330]

3.1:□

SEND:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

19:□

FLAGS:

[deferred-delivery-time] ‘NL‘

=[disclose-recipients],[alternate-recipient-allowed]

16:□

CONVERSION:□[conversion-prohibited]

17:□

CONTENT-INFO:□[content-return-request]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[user-report-request],[rn-request],[nrn-request],[return-request],[reply-request] ‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

31:□

BODY-TYPE:□

[

[body-part],

]

H.T. [T57.330]

3.14:□

SEND-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

  //The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks

3.1:□SEND:
3.2:□PROBE:
3.3:□DELIVER:
{
3.4:□DELIVERY-STATUS-NOTICE:
}
{
3.5:□RECEIPT-STATUS-NOTICE:
}
3.6:□EXPLICIT-RN:
3.7:□DS-QUERY:
3.8:□DS-REPORT:
3.9:□OUTPUT-REQUEST:
3.10:□OUTPUT-MESSAGE:
3.11:□REGISTER:
3.12:□EXCEPTION:
3.13:□CANCEL:
3.14:□SEND-ACK:
3.15:□PROBE-ACK:
{
3.16:□EXPLICIT-RN-ACK:
}
3.17:□REGISTER-ACK:
3.18:□MESSAGE-DELETE:
3.19:□STATUS-QUERY:
3.20:□STATUS-REPORT:
	send
	probe
	deliver
	
	deliveryStatusNotice
	
	receiptStatusNotice
	explicitRN
	dsQuery
	dsReport
	outputRequest
	outputMessage
	register
	exception
	cancel
	sendAck
	probeAck
	
	explicitRNAck
	registerAck
	messageDelete
	statusQuery
	statusReport
		—
		—
		—
		
		—
		
		—
		—
		—
		—
		—
		—
		—
		—
		—
		
		—
		—
		—
		—
		—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Tableau [4T55.330], p. 5

ANNEX B

(to Recommendation T.330)

Format of TAPDU components

In this Annex the formats of the control information for different examples TAPDUS are shown. The principles of encoding are given in § 11. The formats of elements as defined in § 11 are illustrated by the use of the following four different syntax elements:

1) The elements number field is represented by a sequence of numeric graphic characters.

2) The element name field is represented by a text string giving the CCITT language reference name of the field. The actual value shall be a language-dependent representation of that reference name.

3) Separators are shown as they shall be represented in the actual control information.

4) Element value fields are shown in square brackets (‘‘[’’ and ‘‘]’’). The actual parameter values are described in § 11.

Note — The examples shown below are not exhaustive. Not all types (element value of the TAPDU description in § 10 (ASN.1 description) are included.

B.1 *Conventions*

Following symbols are used in this Annex:

1) NL new line function such as (CR LF or LF CR) or LF.

2) □ space character.

3) [ ] element value field. Actual values are defined in § 11 of this Recommendation.

4) [ ] iteration.

Blanc

B.2 *Example of TAPDU*

B.2.1 *Send-TAPDU*

H.T. [T56.330]

3.1:□

SEND:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

19:□

FLAGS:

[deferred-delivery-time] ‘NL‘

=[disclose-recipients],[alternate-recipient-allowed]

16:□

CONVERSION:□[conversion-prohibited]

17:□

CONTENT-INFO:□[content-return-request]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[user-report-request],[rn-request],[nrn-request],[return-request],[reply-request] ‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

31:□

BODY-TYPE:□

[

[body-part],

]

H.T. [T57.330]

3.14:□

SEND-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

//repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

//repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T56.330], p.

B.2.2 *SendAck-TAPDU*

H.T. [T57.330]

3.14:□

SEND-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

  //The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

  //repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks

3.1:□SEND:
3.2:□PROBE:
3.3:□DELIVER:
{
3.4:□DELIVERY-STATUS-NOTICE:
}
{
3.5:□RECEIPT-STATUS-NOTICE:
}
3.6:□EXPLICIT-RN:
3.7:□DS-QUERY:
3.8:□DS-REPORT:
3.9:□OUTPUT-REQUEST:
3.10:□OUTPUT-MESSAGE:
3.11:□REGISTER:
3.12:□EXCEPTION:
3.13:□CANCEL:
3.14:□SEND-ACK:
3.15:□PROBE-ACK:
{
3.16:□EXPLICIT-RN-ACK:
}
3.17:□REGISTER-ACK:
3.18:□MESSAGE-DELETE:
3.19:□STATUS-QUERY:
3.20:□STATUS-REPORT:
	send
	probe
	deliver
	
	deliveryStatusNotice
	
	receiptStatusNotice
	explicitRN
	dsQuery
	dsReport
	outputRequest
	outputMessage
	register
	exception
	cancel
	sendAck
	probeAck
	
	explicitRNAck
	registerAck
	messageDelete
	statusQuery
	statusReport
		—
		—
		—
		
		—
		
		—
		—
		—
		—
		—
		—
		—
		—
		—
		
		—
		—
		—
		—
		—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T57.330], p.

B.2.3 *Exception-TAPDU*

H.T. [T58.330]

3.12:□

EXCEPTION:

1:□

CORRELATION-INFORMATION:

[call-id]

9:□

ERRORS: [error-cause]

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T58.330], p.

B.2.4 *Probe-TAPDU*

H.T. [T59.330]

3.2:□

PROBE:

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

  //The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T59.330], p.

B.2.5 *ProbeAck-TAPDU*

H.T. [T60.330]

3.15:□

PROBE-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

66:□

PROBE-ID:

[probe-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

  //The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T60.330], p.

B.2.6 *ExplicitRN-TAPDU*

H.T. [T61.330]

3.6:□

EXPLICIT-RN:

15:□

RECIPIENTS:

[recipient-name]

13:□

PRIORITY:□[priority-ind]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

47:□

TIME-OF-RECEIPT:

[receipt-time]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T61.330], p.

B.2.7 *ExplicitRNAck-TAPDU*

H.T. [T62.330]

3.16:□

EXPLICIT-RN-ACK:

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

33:□

SUBMISSION-TIME:

[submission-time]

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

//repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T62.330], p.

B.2.8 *Cancel-TAPDU*

H.T. [T63.330]

3.13:□

CANCEL:

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

B.2.9 *Deliver-TAPDU*

H.T. [1T64.330]

3.3:□

DELIVER:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

41:□

OTHER-RECIPIENTS:

[

[other-recipient-name] ‘NL‘

]

33:□

SUBMISSION-TIME:

[submission-time]

35:□

DELIVERY-ID:

[delivery-msg-id]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

27:□

THIS-IPM:

[this-ipm-id]

20:□

FROM:

[originating-user]

21:□

AUTHORIZING:

[

[authorizing-user] ‘NL‘

]

22:□

TO:

[

[primary-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

23:□

CC:

[

[copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

24:□

BCC:

[

[blind-copy-recipient] ‘NL‘

=[rn-request],[nrn-request],[return-request],[reply-request]

‘NL‘

]

30:□

REPLIED-TO-IPM:

[replied-to-ipm-id]

29:□

OBSOLETES:

[

[obsoleted-ipm-id] ‘NL‘

]

28:□

RELATED-IPMS:

[

[related-ipm-id] ‘NL‘

]

26:□

SUBJECT:

[subject-content]

18:□

CONTENT-INDICATOR:

[expiry-time] ‘NL‘

=[importance],[sensitivity],[autoforwarded]

25:□

REPLY:

[reply-time] ‘NL‘

[

[reply-recipient] ‘NL‘

]

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

  //The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

//repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [1T64.330], p.

H.T. [2T64.330]

67:□

EXTENSIONS:□

[

[extension-type] ‘NL‘

[extension-value] ‘NL‘

]

31:□

BODY-TYPE:□[body-part]

32:□

FORWARDED-INFO:

[forwarded-time] ‘NL‘

//The delivery-envelope follows.

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [2T64.330], p.

B.2.10 *ReceiptStatusNotice-TAPDU*

H.T. [T65.330]

3.5:□

RECEIPT-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

13:□

PRIORITY:□[priority-ind]

35:□

DELIVERY-ID:

[delivery-id]

14:□

ORIGINATOR:

[originator-name]

39:□

THIS-RECIPIENT:

[this-recipient-name]

33:□

SUBMISSION-TIME:

[submission-time]

4:□

TIME-OF-DELIVERY:

[delivery-time]

42:□

CONVERSION-INDICATION:

[

[eIT],

]

[conversion-prohibition]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

43:□

NOTIFICATION-TYPE:□[report-type]

71:□

SUBJECT-IPM:

[subject-ipm-id]

69:□

IPN-ORIGINATOR:

[ipn-originating-user]

70:□

PREFERRED-RECIPIENT:

[preferred-recipient]

//The following three elements appear in case of RN.

47:□

TIME-OF-RECEIPT:

[receipt-time]

48:□

TYPE-OF-RECEIPT:

[type-of-receipt]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-receipt-info]

//The following three elements appear in case of NRN.

49:□

NON-RECEIPT-INFO:

[non-receipt-reason],[discard-reason]

50:□

COMMENTS:

[comments]

51:□

MESSAGE-RETURNED-INDICATION:

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

//repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

//repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T65.330], p.

B.2.11 *DeliveryStatusNotice-TAPDU*

H.T. [T66.330]

3.4:□

DELIVERY-STATUS-NOTICE:

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

1:□

CORRELATION-INFORMATION:

[call-id]

65:□

SUBMISSION-ID:

[submission-msg-id]

66:□

PROBE-ID:

[probe-msg-id]

[

  //repeated for each recipient

3:□

REPORTED-RECIPIENT:

[reported-recipient-name]

43:□

NOTIFICATION-TYPE:□[report-type]

40:□

INTENDED-RECIPIENT:

[intended-recipient-name]

44:□

CONVERTED-INFORMATION-TYPES:

[

[eIT],

]

//The following three elements appear in case of DN.

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

68:□

SUPPLEMENTARY-INFORMATION:

[suppl-info]

//The following two elements appear in case of NDN.

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

72:□

CONTENT-RETURNED-INDICATION:

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T66.330], p.

B.2.12 *Register-TAPDU*

H.T. [T67.330]

3.11:□

REGISTER:

73:□

EXPIRED-DISCARD:□[discard-ipm]

74:□

OBSOLETED-DISCARD:□[discard-ipm]

76:□

AUTO-FWD-IPMS:□

[auto-fwd-ipms]

77:□

AUTO-FWD-RECIPIENTS:□

[

[auto-fwd-recipient],

]

78:□

AUTO-FWD-HEADING:□

[auto-fwd-heading]

79:□

AUTO-FWD-COMMENT:□

[auto-fwd-comment]

58:□

DS-MODE:□[ds-mode]

59:□

TLMAU-OPERATION:□[error-recovery-mode],[auto-acknowledgement]

60:□

AUTO-OUTPUT:

[frequency] ‘NL‘

[output-time]

81:□

MESSAGE-DELETE-MODE:□[message-delete-mode]

//and other components require further study.

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

  //repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T67.330], p.

B.2.13 *RegisterAck-TPDU*

H.T. [T68.330]

3.11:□

REGISTER-ACK:

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	
{ 3.4:□DELIVERY-STATUS-NOTICE: }	deliveryStatusNotice	—	
{ 3.5:□RECEIPT-STATUS-NOTICE: }	receiptStatusNotice	—	
3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	
{ 3.16:□EXPLICIT-RN-ACK: }	explicitRNAck	—	
3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	
{ 1:□CORRELATION-INFORMATION: }	correlationInfo	Primitive	
2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T68.330], p.

B.2.14 *DSQuery-TAPDU*

H.T. [T69.330]

3.7:□

DS-QUERY:

H.T. [T70.330]

3.8:□

DS-REPORT:

[

  //repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T69.330], p.

B.2.15 *DSReport-TAPDU*

H.T. [T70.330]

3.8:□

DS-REPORT:

[

//repeated for each message

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

14:□

ORIGINATOR:

[originator-name]

13:□

PRIORITY:□[priority-ind]

37:□

MESSAGE-LENGTH:□[message-length]

]

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

//repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T70.330], p.

B.2.16 *MessageDelete-TAPDU*

H.T. [T71.330]

3.18:□

MESSAGE-DELETE:

82:□

MESSAGE-SELECTOR:

[

[retrieval-id] ‘NL‘

]

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	
{ 3.4:□DELIVERY-STATUS-NOTICE: }	deliveryStatusNotice	—	
{ 3.5:□RECEIPT-STATUS-NOTICE: }	receiptStatusNotice	—	
3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	
{ 3.16:□EXPLICIT-RN-ACK: }	explicitRNAck	—	
3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	
{ 1:□CORRELATION-INFORMATION: }	correlationInfo	Primitive	
2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

B.2.17 *OutputRequest-TAPDU*

H.T. [T72.330]

3.9:□

OUTPUT-REQUEST:

[

//repeated for each retrieval identifier

38:□

RETRIEVAL-ID:

[retrieval-id]

80:□

DELETE-AFTER-OUTPUT:□[delete-after-output]

]

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

//repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	

{
3.4:□DELIVERY-STATUS-NOTICE:
}
	deliveryStatusNotice	—	

{
3.5:□RECEIPT-STATUS-NOTICE:
}
	receiptStatusNotice	—	

3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	

{
3.16:□EXPLICIT-RN-ACK:
}
	explicitRNAck	—	

3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T72.330], p.

B.2.18 *OutputMessage-TAPDU*

H.T. [T73.330]

3.10:□

OUTPUT-MESSAGE:

[

  //repeated for each message

62:□

QUANTITY-OF-DOCS:□[number-of-docs]

38:□

RETRIEVAL-ID:

[retrieval-id]

52:□

MESSAGE-TYPE:□[message-type]

4:□

TIME-OF-DELIVERY:

[delivery-time]

]

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks

3.1:□SEND:
3.2:□PROBE:
3.3:□DELIVER:
{
3.4:□DELIVERY-STATUS-NOTICE:
}
{
3.5:□RECEIPT-STATUS-NOTICE:
}
3.6:□EXPLICIT-RN:
3.7:□DS-QUERY:
3.8:□DS-REPORT:
3.9:□OUTPUT-REQUEST:
3.10:□OUTPUT-MESSAGE:
3.11:□REGISTER:
3.12:□EXCEPTION:
3.13:□CANCEL:
3.14:□SEND-ACK:
3.15:□PROBE-ACK:
{
3.16:□EXPLICIT-RN-ACK:
}
3.17:□REGISTER-ACK:
3.18:□MESSAGE-DELETE:
3.19:□STATUS-QUERY:
3.20:□STATUS-REPORT:
	send
	probe
	deliver
	
	deliveryStatusNotice
	
	receiptStatusNotice
	explicitRN
	dsQuery
	dsReport
	outputRequest
	outputMessage
	register
	exception
	cancel
	sendAck
	probeAck
	
	explicitRNAck
	registerAck
	messageDelete
	statusQuery
	statusReport
		—
		—
		—
		
		—
		
		—
		—
		—
		—
		—
		—
		—
		—
		—
		
		—
		—
		—
		—
		—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T73.330], p.

The remaining Components of this TAPDU are identical to the components in the Delivery. DeliveryStatusNotice and ReceiptStatusNotice-TAPDU. The actual components to be used depend upon the Message Type parameter value specified in the Message Type component.

B.2.19 *StatusQuery-TAPDU*

H.T. [T74.330]

3.19:□

STATUS-QUERY:

14:□

ORIGINATOR:

[originator-name]

65:□

SUBMISSION-ID:

[submission-msg-id]

1:□

CORRELATION-INFORMATION:

[call-id]

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

//repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks

3.1:□SEND:
3.2:□PROBE:
3.3:□DELIVER:
{
3.4:□DELIVERY-STATUS-NOTICE:
}
{
3.5:□RECEIPT-STATUS-NOTICE:
}
3.6:□EXPLICIT-RN:
3.7:□DS-QUERY:
3.8:□DS-REPORT:
3.9:□OUTPUT-REQUEST:
3.10:□OUTPUT-MESSAGE:
3.11:□REGISTER:
3.12:□EXCEPTION:
3.13:□CANCEL:
3.14:□SEND-ACK:
3.15:□PROBE-ACK:
{
3.16:□EXPLICIT-RN-ACK:
}
3.17:□REGISTER-ACK:
3.18:□MESSAGE-DELETE:
3.19:□STATUS-QUERY:
3.20:□STATUS-REPORT:
	send
	probe
	deliver
	
	deliveryStatusNotice
	
	receiptStatusNotice
	explicitRN
	dsQuery
	dsReport
	outputRequest
	outputMessage
	register
	exception
	cancel
	sendAck
	probeAck
	
	explicitRNAck
	registerAck
	messageDelete
	statusQuery
	statusReport
		—
		—
		—
		
		—
		
		—
		—
		—
		—
		—
		—
		—
		—
		—
		
		—
		—
		—
		—
		—	

{
1:□CORRELATION-INFORMATION:
}
	correlationInfo	Primitive	

2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

Table [T74.330], p.

B.2.20 *StatusReport-TAPDU*

H.T. [T75.330]

3.20:□

STATUS-REPORT:

1:□

CORRELATION-INFORMATION:

[call-id]

84:□

TIME-OF-REPORT:

[report-time]

75:□

REPORTED-MESSAGE-ID:

[reported-message-id]

[

  //repeated for each message

83:□

MESSAGE-STATUS:

[status]

4:□

TIME-OF-DELIVERY:

[delivery-time]

45:□

TYPE-OF-UA:

[type-of-ua]

46:□

NON-DELIVERY-REASON:

[reason-code],[diagnostic-code]

]

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	
{ 3.4:□DELIVERY-STATUS-NOTICE: }	deliveryStatusNotice	—	
{ 3.5:□RECEIPT-STATUS-NOTICE: }	receiptStatusNotice	—	
3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	
{ 3.16:□EXPLICIT-RN-ACK: }	explicitRNAck	—	
3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	
{ 1:□CORRELATION-INFORMATION: }	correlationInfo	Primitive	
2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

ANNEX C

(to Recommendation T.330)

Element ID list

This Annex provides a table which maps the coding of TAPDU and the corresponding element ID. The element ID list Table C-1/T.330 comprises:

1) The first column contains the element number and element name, as defined in § 11 of this Recommendation.

2) The second column contains the TAPDUId or ElementId name defined in § 10 of this Recommendation.

3) The third column contains the type of the TAPDU element, defined in § 10 of this Recommendation.

4) The fourth column contains the Remarks.

H.T. [1T76.330]

TABLE C-1/T.330

Element ID list

TAPDUId/element ID	Name	Type	Remarks
3.1:□SEND:	send	—	
3.2:□PROBE:	probe	—	
3.3:□DELIVER:	deliver	—	
{ 3.4:□DELIVERY-STATUS-NOTICE: }	deliveryStatusNotice	—	
{ 3.5:□RECEIPT-STATUS-NOTICE: }	receiptStatusNotice	—	
3.6:□EXPLICIT-RN:	explicitRN	—	
3.7:□DS-QUERY:	dsQuery	—	
3.8:□DS-REPORT:	dsReport	—	
3.9:□OUTPUT-REQUEST:	outputRequest	—	
3.10:□OUTPUT-MESSAGE:	outputMessage	—	
3.11:□REGISTER:	register	—	
3.12:□EXCEPTION:	exception	—	
3.13:□CANCEL:	cancel	—	
3.14:□SEND-ACK:	sendAck	—	
3.15:□PROBE-ACK:	probeAck	—	
{ 3.16:□EXPLICIT-RN-ACK: }	explicitRNAck	—	
3.17:□REGISTER-ACK:	registerAck	—	
3.18:□MESSAGE-DELETE:	messageDelete	—	
3.19:□STATUS-QUERY:	statusQuery	—	
3.20:□STATUS-REPORT:	statusReport	—	
{ 1:□CORRELATION-INFORMATION: }	correlationInfo	Primitive	
2:□			Reserved for CF
3:□REPORTED-RECIPIENT:	reportedRecipient	Primitive	
4:□TIME-OF-DELIVERY:	timeOfDelivery	Primitive	
5:□			Reserved for CF
6:□			Reserved for CF
7:□			Reserved for CF
8:			Reserved for CF
9:□ERRORS:	errors	Primitive	
10:			Reserved for CF
11:			Reserved for CF
12:□RECEIVED-TID:			Reserved for CF
13:□PRIORITY:	priority	Primitive	
14:□ORIGINATOR:	originator	Constructor	
15:□RECIPIENTS:	recipients	Constructor	
16:□CONVERSION:	conversion	Primitive	
17:□CONTENT-INFO:	contentInfo	Constructor	
18:□CONTENT-INDICATOR:	contentIndicator	Constructor	
19:□FLAG:	per Message Indicator	Constructor	

H.T. [2T76.330]

TABLE C-1/T.330 | *(cont.)*

TAPDUId/element ID	Name	Type	Remarks
20:□FROM:	from	Primitive	
21:□AUTHORIZING:	authorizing	Constructor	
22:□TO:	to	Constructor	
23:□CC:	cc	Constructor	
24:□BCC:	bcc	Constructor	
25:□REPLY:	reply	Constructor	
26:□SUBJECT:	subject	Primitive	
27:□THIS-IPM:	thisIPM	Primitive	
28:□RELATED-IPMS:	relatedIPMS	Constructor	
29:□OBSOLETES:	obsoletedIPMS	Constructor	
30:□REPLIED-TO-IPM:	repliedToIPM	Primitive	
31:□BODY-TYPE:	bodyType	Constructor	
32:□FORWARDED-INFO:	forwardedInfo	Constructeur	For further study
33:□SUBMISSION-TIME:	submissionTime	Primitive	
34:□LATEST-DELIVERY:	date and time	Primitive	
35:□DELIVERY-ID:	deliveryId	Primitive	
36:□RETURN-ADDRESS:	return address	Primitive	
37:□MESSAGE-LENGTH:	messageLength	Primitive	
38:□RETRIEVAL-ID:	retrievalId	Primitive	
39:□THIS-RECIPIENT:	thisRecipient	Primitive	
40:□INTENDED-RECIPIENT:	intendedRecipient	Primitive	
41:□OTHER-RECIPIENTS:	otherRecipients	Constructor	

{
42:□CONVERSION-INDICATION:
}
	conversionIndication	Constructor	

43:□NOTIFICATION-TYPE:	notificationType	Primitive	

{
44:□CONVERTED-INFORMATION-TYPES:
}
	convertedInfoTypes	Primitive	

45:□TYPE-OF-UA:	typeOfUA	Primitive	

{
46:□NON-DELIVERY-REASON:
}
	nonDeliveryReason	Primitive	

47:□TIME-OF-RECEIPT:	timeOfReceipt	Primitive	
48:□TYPE-OF-RECEIPT:	typeOfReceipt	Primitive	

{
49:□NON-RECEIPT-INFO:
}
	nonReceiptInfo	Primitive	

50:□COMMENT:	comment	Primitive	

{
51:□MESSAGE-RETURNED-INDICATION:
}
	messageReturnedInd	—	

52:□MESSAGE-TYPE:	messageType	Primitive	
53:□LANGUAGE:	languageInd	Primitive	
54:□REDIRECTED-FROM:	redirected from	Constructor	

H.T. [3T76.330]

TABLE C-1/T.330 | *(end)*

TAPDUId/element ID	Name	Type	Remarks
55:□	—	—	Not used
56:□	—	—	Not used
57:□	—	—	Not used
58:□DS-MODE:	dsMode	Primitive	
59:□TLMAU-OPERATION:	tLMAUOperation	Constructor	
60:□AUTO-OUTPUT:	autoOutput	Constructor	
61:□	—	—	Not used

{
62:□QUANTITY-OF-DOCS:
}
	quantityOfDocs	Primitive	

63:			Not assigned
64:			Not assigned
65:□SUBMISSION-ID:	submissionId	Primitive	
66:□PROBE-ID:	probeId	Primitive	
67:□MSG-INCOMPLETE:			

{
68:□SUPPLEMENTARY-INFORMATION:
}
	supplReceiptInfo SupplInfo	Primitive	

69:□IPN-ORIGINATOR:	IPNOriginator	Primitive	

{
70:□PREFERRED-RECIPIENT:
}
	preferredRecipient	Primitive	

71:□SUBJECT-IPM:	subjectIPM	Primitive	

{
72:□CONTENT-RETURNED-INDICATION:
}
	contentReturned	—	

73:□EXPIRED-DISCARD:	expiredDiscard	Primitive	
74:□OBSOLETED-DISCARD:	obsoletedDiscard	Primitive	

{
75:□REPORTED-MESSAGE-ID:
}
	reportedMessageId	Primitive	

76:□AUTO-FWD-IPMS:	autoFWDIPMs	Primitive	

{
77:□AUTO-FWD-RECIPIENTS:
}
	autoFWDRecipient	Primitive	

{
78:□AUTO-FWD-HEADING:
}
	autoFWDHeading	Constructor	For further study

{
79:□AUTO-FWD-COMMENT:
}
	autoFWDComment	Primitive	

{
80:□DELETE-AFTER-OUTPUT:
}
	deleteAfterOutput	Primitive	

{
81:□MESSAGE-DELETE-MODE:
}
	messageDeleteMode	Primitive	

82:□MESSAGE-SELECTOR:	messageSelector	Constructor	
83:□MESSAGE-STATUS:	messageStatus	Primitive	
84:□TIME-OF-REPORT:	timeOfReport	{	

Primitive

Conventions:

1) Primitive: element contains only one component
2) Constructor: element contains more than one component
3) □: space character

}

tableau C-1/T.330 [3T76.330], p. 29

ANNEX D

(to Recommendation T.330)

Element of service for TTX/IPM service intercommunication

This PTXAU provides only the services listed in Table D-1/T.330 to telematic users. These services may be implemented using only the mhs-doc-xfer abstract operations: message send, message delivery, receipt status notice and delivery status notice.

When a non-registered user attempts to access a service not within the PTTXAU set of services, then a subscription error will be returned.

H.T. [T77.330]

TABLE D-1/T.330

Element of service

{ Reference Rec. F.400 Annex B }	F.400 Elements of service	{ Message submission from TTX to PTTXAU }	{ Message delivery to TTX from PTTXAU }	{ Information generated by PTTXAU }	
B.5	Authorizing users indication			X	
B.6	Auto-forwarded indication			X	
B.8	{ Blind copy recipient indication }	X			
B.9	{ Body part encryption indication }	X			
B.12	Content type indication			X	X
B.13	Conversion prohibition		X	X	
B.15	Converted indication			X	
B.18	{ Cross-referencing indication }		X		
B.21	Delivery notification		X	NA	X
B.22	{ Delivery time stamp indication }		X	X	
B.25	{ Disclosure of other recipients }	X	X		
B.26	{ DL expansion history indication }		X	X	
B.29	Expiry date indication			X	
B.31	{ Forwarded IP-message indication }		X		
B.32	Grade of delivery selection		X	X	
B.34	Implicit conversion			NA	X
B.35	Importance indication			X	
B.37	IP-message identification			X	X
B.38	Language indication			X	
B.39	Latest delivery designation			NA	X
B.41	Message indentification			X	
B.45	Multi-destination delivery		X	NA	
B.46	Multi-part body			X	
B.47	Non-delivery notification			NA	
B.48	{ Non-receipt notification request indication }	X	NA		
B.52	Obsoleting indication			X	
B.54	{ Original encoded information types indication }		X	X	
B.55	Originator indication			X	
B.56	{ Originator requested alternate recipient }		X		

| | | |

Recommendation T.351

IMAGING PROCESS OF CHARACTER INFORMATION

ON FACSIMILE APPARATUS

(Melbourne, 1988)

0 Introduction

This Recommendation defines the page formatting characteristics of the information conversion process, for imaging character-information on a facsimile apparatus.

1 Scope and field of application

This Recommendation intends to specify the method for positioning in a correct manner character structured messages, in facsimile pages, conforming to the format defined in Recommendation T.4 Group 3 facsimile apparatus, and Recommendation T.563 for facsimile Group 4 apparatus. The intention is to insure the printing of the information inside the guaranteed printable area of the facsimile pages.

This Recommendation specify in terms of facsimile picture elements (pels), the initial position and spacing of the characters along the lines and the spacing between the lines, for creating a facsimile page from the character structured information. It does not define neither the shape, nor the repertoire of the characters to be imaged, which is of the responsibility of the application.

Different types of character encoded information, to be printed on both Group 3 and Group 4 facsimile apparatus, are considered, namely teletex, telex, videotex and IA 5 text.

Consideration of mixed mode information requires further study.

This Recommendation applies when interworking implying image conversion between different type of information, including facsimile, is required within a regulated service, such as MHS service.

2 References

— Recommendation F.1: Operational provisions for the international public telegram service.

— Recommendation S.5: Standardization of page-printing start-stop equipment and cooperation between page-printing and tape-printing start-stop equipment (ITA No. 2).

— Recommendation T.4: Standardization of Group 3 facsimile apparatus for document transmission.

— Recommendation T.50: International Alphabet No. 5.

— Recommendation T.60: Terminal equipment for use in the Teletex service.

— Recommendation T.61: Character repertoire and coded character sets for the international Teletex service.

— Recommendation T.563: General aspects of Group 4 facsimile apparatus.

— Recommendation X.408: Message handling systems: Encoded information type conversion rules.

3 Definitions

See the Recommendations quoted in reference.

4 Basic principles

The figures given in this Recommendation, in terms of number of picture elements and facsimile lines, refer to the standard values defined for the resolution in Recommendation T.4 for Group 3 facsimile apparatus (1728 pels/215 mm and 3.85 lines/mm), and in Recommendation T.563 for Group 4 facsimile apparatus (1728 pels/219.46 mm and 200 lines/25.4 mm).

These figures are defined relatively to the transmitted facsimile lines.

The reference position of the first character line is defined using the base line and home position concepts, as defined in Recommendation T.60, Annexes A and B.

5 Imaging of Teletex messages

The figures of this Recommendation are derived from the figures given in Recommendation T.60 for the basic printable area of Teletex, with the same capability of printing a defined number of characters in the left margin, relatively to the home position.

The Teletex pages, to be imaged on facsimile equipments, conform to the character repertoire and character sets defined in Recommendation T.61 and to the pages formats defined for the basic printable area in Recommendation T.60.

5.1 *Reference position*

Table 1/T.351 defines the position of the 5th base line and of the home position, relatively to which is referred the first line of written text, according to Recommendation T.60.

Both horizontal and vertical orientations of the paper are considered. For the horizontal orientation, it is assumed that the printing on the facsimile equipment is performed, starting from the left side of the written text.

H.T. [T1.351]

TABLE 1/T.351

Reference position for printing Teletex

pages

	Home position		5th base line	
Horizontal orientation (fax line) } Vertical orientation (fax line) }	{ Vertical orientation (pel)	Horizontal orientation (pel)	{	
Fax G3	79th	205th	1474th	82th
Fax G4	148th	205th	1474th	164th

Table 1/T.351 [T1.351], p.

5.2 *Character spacing*

From the figures of Table 1/T.351, the first character position on each line is defined; the following characters along the line are positioned according to a character spacing value. Table 2/T.351 defines the values to be used for imaging the characters along the lines, depending on the possible value of the spacing defined for the Teletex page format.

H.T. [T2.351]

TABLE 2/T.351

Values of character spacings

	Character spacing value		
Horizontal orientation (fax line) }	Defined for Teletex (mm) Vertical orientation (pels)	{	
Fax G3	2.54 2.12 1.69	10 8 7	20 16 14
Fax G4	2.54 2.12 1.69	20 16 14	20 16 14

Table 2/T.351 [T2.351], p.

5.3 *Line spacing*

The position of the first character line in the facsimile page is defined from the figures of Table 1/T.351; the following character line are positioned according to a line spacing value. Table 3/T.351 defines the values to be used for imaging the characters lines on the facsimile page, depending on the line spacing value defined for the Teletex page format.

H.T. [T3.351]

TABLE 3/T.351

Values of line spacing

	Line spacing value		
Horizontal orientation (pels) } Vertical orientation (fax lines) }	Defined for Teletex (mm) {	{	
Fax G3 4.23 6.35 8.47 3.175 5 | }	{ 32 48 64 24 38	16 24 32 12 19	
Fax G4 4.23 6.35 8.47 3.175 5 | }	{ 32 48 64 24 38	32 48 64 24 38	

Table 3/T.351 [T3.351], p.

5.4 *Superscript/subscript*

In the Teletex message, the superscript and subscript functionalities, result in an offset in the printing position of the concerned characters. The allowed offset value for imaging the Teletex pages on the facsimile page is defined in Table 4/T.351.

H.T. [T4.351]

TABLE 4/T.351

Offset values for

supercript/subscript

Offset value

Horizontal orientation (pels) } Vertical orientation (fax lines) }	Defined for Teletex (mm) {	{	
Fax G3	2.12	16	8
Fax G4	2.12	16	16

Table 4/T.351 [T4.351], p.

6 Imaging of Telex messages

The telex messages conform to the character set defined in Recommendation F.1, and to the format defined in Recommendation S.5.

When imaged on a facsimile equipment, the telex messages are divided in pages of 55 text lines, as a maximum.

Only the vertical orientation of the paper is to be considered.

The first character of each text line in a page is positioned according to the home position defined in Table 1/T.351.

The first line is referred to the 5th base line, as defined in Table 1/T.351.

The character spacing values to be used are those defined in Table 2/T.351 for the 2.54 mm spacing.

The line spacing values to be used are those defined in Table 3/T.351 for the 4.23 mm spacing.

7 Imaging of videotex messages

For further study.

8 Imaging of IA 5 text messages

IA 5 messages conform to the character set defined in Recommendation T.50.

When imaged on a facsimile equipments, IA 5 messages are formatted in pages of 55 lines of 80 characters.

Only the vertical orientation of the paper is to be considered.

The first character of each text line in a page is positioned according to the home position defined in Table 1/T.351.

The first line is referred to the 5th base line, as defined in Table 1/T.351.

The character spacing values to be used are those defined in Table 2/T.351 for the 2.12 mm spacing.

The line spacing values to be used are those defined in Table 3/T.351 for the 4.23 mm spacing.

Recommendation T.390

TELETEX REQUIREMENTS FOR INTERWORKING

WITH THE TELEX SERVICE

(Malaga-Torremolinos, 1984)

1 General

1.1 *Scope*

1.1.1 Recommendation F.200 lays down the provisions for the operation of the automatic international Teletex service. In particular, Recommendation F.200 defines the basic service requirements and principles for interworking between Teletex and telex services via a conversion facility (CF).

1.1.2 Recommendation T.60 defines the requirements for terminal equipment used in the international Teletex service, including the interworking with telex terminals, and the conversion table to the telex repertoire in case of interworking.

1.1.3 Recommendation T.61 defines the character repertoire and the coded character sets for the Teletex service.

1.1.4 Recommendation T.62 defines the end-to-end control procedures to be used within the Teletex service as well as between a Teletex terminal and a Teletex/telex conversion facility (CF)

1.1.5 Recommendation T.70 defines the network-independent basic transport service applicable to Teletex terminals, as well as between a Teletex terminal and a CF.

1.1.6 This Recommendation defines the requirements additional to Recommendation T.62 for use between a Teletex terminal and a CF to provide interworking between Teletex and telex services, using store-and-forward principles, in the following cases:

a) when the CF and Teletex terminal are in the same country, with message transfer in either direction;

b) when the CF and Teletex terminal are in different countries, with message transfer in the CF to Teletex terminal direction. This is subject to bilateral agreement.

Note 1 — Due to practical operational difficulties such as charging, message transfer in the direction from a Teletex terminal to a CF in another country is not considered in this Recommendation.

Note 2 — The requirements of interconnection of CFs for the international interworking between Teletex and telex services are for further study.

Note 3 — The real-time conversion operation is not considered in this Recommendation.

1.1.7 The provisions in this Recommendation are independent of the means and procedures for communication between the CF and the telex network. These are covered in Recommendation F.200.

1.2 *Basic Teletex/telex interworking model*

1.2.1 As illustrated in Figure 1/T.390 and in the single-message case, the communications between a CF and a Teletex terminal for the transfer of a message from Teletex to telex may consist of two calls, namely:

a) a submission call initiated by a Teletex terminal to transfer to the CF a message prepared in the telex mode as per Recommendations F.200 and T.60, and related control information;

b) a notification call initiated by the CF in which delivery or non-delivery information may be provided. This call is mandatory if the telex call is unsuccessful but optional if the telex call succeeds.

Figure 1/T.390, p.

1.2.2 As illustrated in Figure 2/T.390, the communications between a CF and a Teletex terminal for the transfer of a message from telex to Teletex may consist of two calls, namely:

a) an address validation call initiated by the CF to validate the called Teletex number. The requirement for this call is a national matter;

b) a delivery call initiated by the CF to transfer to the Teletex terminal a message received from the telex terminal.

Figure 2/T.390, p.

1.2.3 For transferring additional control information between the Teletex terminal and the CF, *control documents* are used. A control document may be associated with one or more normal documents. This set will be called a *message* . All these normal documents should be in telex mode and shall be delivered by the CF as a single *telex message* . The control document need not be prepared in telex mode. An acknowledgement control document will refer to a message and not to individual documents.

2 Session elements of procedure

2.1 The session elements of procedure shall be in accordance with Recommendation T.62. However, the following qualifications shall apply:

2.1.1 The values of mandatory parameters used during session establishment shall be as given in Table 1/T.390.

2.1.2 The value of the ‘‘terminal identifier of the calling terminal’’ parameter in the CSS of the delivery call depends on whether the CF and Teletex terminal are in the same or different countries.

2.1.2.1 When the CF and Teletex terminal are in the same country, it may be either the terminal identification of the CF or, alternatively, the terminal identifier derived from the calling telex answerback (A/B) in one of the following forms in which optional fields are enclosed in parentheses:

8—=<A/B>

8<TDC>—=<A/B>

8<TDC>—<A/B number>(—<A/B machine identity>)=(<A/B subscriber>)

Note 1 — <A/B> is the value of the answerback received from the telex terminal after the deletion of the CR LF characters, if present.

Note 2 — <TDC> is the value of the Recommendation F.69 ‘‘telex destination code’’ of the originating network.

Note 3 — <A/B number> is the subscriber number part of the received <A/B>, as described in Note 1, which conforms to Recommendation F.60.

Note 4 — <A/B machine identity> is the optional machine identity part of the received <A/B>, as described in Note 1, which conforms to Recommendation F.60.

Note 5 — <A/B subscriber name> is the optional subscriber name part of the received <A/B>, as described in Note 1, which conforms to Recommendation F.60. This may also include the telex network identification code.

H.T. [T1.390]

TABLE 1/T.390

Mandatory parameter values

during session establishment lw(60p) | lw(42p) | lw(42p) | lw(42p) | lw(42p) .

Table 1/T.390 [T1.390], p.

2.1.2.2 When the CF and Teletex terminal are in different countries, it shall be the terminal identification of the CF in accordance to the format specified in Recommendation F.201. The calling telex answerback shall be contained in the text of the normal document in the format and at the point at which it was obtained by the CF.

3 Document elements of procedures

3.1 *General*

3.1.1 The document elements of procedure shall be in accordance with Recommendation T.62. In addition, the Teletex terminal and the CF shall be able to handle control documents defined in this Recommendation as shown in Table 2/T.390.

4 Control documents

4.1 For transferring additional control information between the Teletex terminal and the CF, control documents are used. The additional control information is contained in the user information part of the control document and is called ‘‘ control text given in Table 2/T.390.

H.T. [T2.390]

TABLE 2/T.390

Control documents for Teletex/telex

interworking service

{		Status of control document	
CF	Teletex terminal		
{ *Teletex to telex message transfer* }			
Submission	Telex submission	Mandatory	Mandatory
Notification { Telex delivery notification (Note 2) }	Mandatory	Selectable	
Telex non-delivery notification (Note 2)	Mandatory	Mandatory	
{ *Telex to teletex message transfer* }			
Address validation	Telex validation (Note 1)	Optional	Optional
Delivery	Telex message delivery	Optional	Optional

Mandatory: | Shall always be implemented.

Optional: | Shall be implemented according to national requirements.

Selectable: | To be implemented as appropriate.

Note 1 — An address validation call need not contain a telex validation control document.

Note 2 — At present, this only relates to a single telex address.

Table 2/T.390 [T2.390], p.

4.2 *Telex submission control document*

4.2.1 The Telex submission control document shall be used by the Teletex terminal to indicate to the CF that the associated subsequent normal document(s) is to be transferred to a telex terminal.

4.2.2 Elements of the control text are:

a) control document identifier — mandatory;

b) submission control information — optional.

This element consists of the following parameters:

i) telex address — optional.

This is the address of the recipient. It need not be present if provided in lower layer procedures;

ii) answerback — optional.

This is the expected telex answerback. It is to be provided if automatic check by the CF is required;

iii) acknowledgement request — optional.

This is the request for telex delivery notification. This parameter is only present if the user requires advice of a successful telex call. It need not be present in cases where the CF always provides delivery notification.

4.2.3 This control document may be utilized in multi-addressing by providing several sets of the submission control information element in § 4.2.2 above. The provision of this capability in a CF is a national matter.

Note — The inclusion of Teletex addresses within the multi-addressing list is for further study.

4.2.4 Multiple telex submission control documents (each with associated normal documents) may be used within the same session. The provision of this capability in a CF is a national matter.

4.3 *Telex delivery notification control document*

4.3.1 If the Teletex user requires notification after the successful message transfer to the telex terminal [see § 4.2.2 b)], then the telex delivery notification control document shall be sent by the CF to the originator of the telex message. As a national matter, some CFs may always provide this delivery notification.

4.3.2 Elements of the control text are:

a) control document identifier — mandatory;

b) correlation information — mandatory.

This provides a unique reference to the corresponding telex submission control document. The element parameters which are provided by the CF are a national matter. These parameters are:

— CF TID

This is the terminal identification of the CF to which the corresponding telex submission control document was sent.

— TTX TID

This is the terminal identification of the Teletex terminal which sent the telex submission control document.

— Date and time

This is the date and time of the submission call.

— CD No.

This is the document reference number of the telex submission control document.

— Add'l session Ref No.

This is the additional session reference number if used in both the CSS and RSSP in the submission call;

c) submitted control information — mandatory.

This reflects the relevant parameters of the telex submission control document pertaining to a single address. These parameters are:

— telex address

Note — This parameter can be derived from lower layer procedures if not present in the telex submission control document.

— answerback

— acknowledgement request;

d) delivery information — mandatory.

This provides information concerning call establishment from CF to the called telex terminal. The element parameters which are provided by the CF are a national matter. These parameters are:

— telex address

This is the address derived from the telex submission control document and used by the CF to establish the call.

Note — This parameter can be derived from lower layer procedures if not present in the telex submission control document.

— received answerback

This is the complete telex answerback as received by the CF;

e) time of delivery — optional.

This is the time at which the CF delivered the telex message to the telex terminal;

f) telex transmission duration — optional;

g) note — optional.

This is used to convey additional information;

h) received recorded message — optional.

This is used to convey to the Teletex terminal any recorded message from the telex destination.

4.4 *Telex non-delivery notification control document*

4.4.1 The telex non-delivery notification control document shall be used in the following cases:

a) if a telex message cannot be delivered;

b) if a telex message was only partially delivered;

c) if a message is incompletely received in the CF and this partial message successfully delivered (see § 6.1.2).

4.4.2 Elements of the control text are:

a) control document identifier — mandatory;

b) correlation information — mandatory [see § 4.3.2 b)];

c) submitted control information — mandatory [see § 4.3.2 c)];

d) delivery information — mandatory.

This provides information concerning call attempt or call establishment. [For details of the parameters, see § 4.3.2 d)];

e) time of delivery — optional.

This is the time at which the CF delivered the partial telex message to the telex terminal if a partial delivery was achieved;

f) telex transmission duration — optional.

This may be provided if a partial delivery was achieved;

g) last page delivered — optional.

This shall identify the last page number, and its document reference number, successfully transmitted to telex;

h) failure cause — mandatory.

The cause may be one of the following examples:

— service signal from telex network;

— clearing before call connect;

— wrong answerback;

— clear or break during message transmission;

— submitted normal document not in the telex mode;

i) note — optional [see § 4.3.2 g)];

j) received recorded message — optional [see § 4.3.2 h)].

4.5 *Telex validation control document*

4.5.1 The telex validation control document is used by the CF to indicate to the called Teletex terminal that a message from telex will subsequently be sent from the CF. The use of this control document is a national matter (e.g. for unique message identification) and shall not be allowed over international connections.

4.5.2 Elements of the control text are:

a) control document identifier — mandatory;

b) reference — mandatory. This reference is assigned by the CF.

4.6 *Telex message delivery control document*

4.6.1 The telex message delivery control document is used by the CF to indicate to the Teletex terminal that the associated subsequent normal document was received from a telex terminal. The use of this control document is a national matter.

Note — The use of this control document over international connections requires further study.

4.6.2 Elements of the control text are:

a) control document identifier — mandatory;

b) reference — optional.

This reference is assigned by the CF. If the telex validation control document is used, then this reference must be quoted;

c) received time — mandatory.

This contains the time at which the telex was received by the CF;

d) received telex answerback — optional.

This is the complete telex answerback as received by the CF;

e) Note — optional [see § 4.3.2 g)].

5 General rules for control documents

5.1 *Control document utilization*

Teletex terminals shall be capable of constructing messages, each consisting of a control document linked with a sequence of normal documents. The message ends at either the start of the next control document, or at the normal end of the session.

5.1.1 The Teletex terminal will allow the following types of communication to a CF within a single session:

— one or more normal documents covered by the same control document (‘‘normal’’ documents shall be in the ‘‘telex’’ mode);

— one or more addresses covered by the same control document. The provision of this capability in a CF is a national matter;

— more than one control document and related normal documents in the same session. The provision of this capability in a CF is a national matter.

5.1.2 When interworking with telex, the following rules shall apply (see Figure 3/T.390):

— a control document relates to the normal documents which follow it, up to the next control document (if any) within the session, or up to the normal end of the session;

— the presence of more than one address in a control document indicates multi-addressing of all related normal documents;

— within a session, document reference numbers will be assigned, as specified in Recommendation T.62, without distinction between control documents and normal documents.

Figure 3/T.390, p.

6 Error recovery in Teletex/telex interworking

6.1 *Message transfer from Teletex to telex*

6.1.1 During a session, the CF shall perform automatic linking using the procedures specified in T.62.

6.1.2 In the case where a session interruption or CF memory overflow occurs, the following shall apply:

a) All complete messages received and positively acknowledged in that session shall be handled by the CF as in error-free operation.

b) The CF shall handle the interrupted message in one of the following ways:

— The CF shall forward to the telex terminal all positively acknowledged documents and pages of the interrupted document, with an appropriate explanatory text.

At the end of the text part which is transferred to telex an explanatory text is added, for example:

‘‘This is an incomplete telex message which may be continued later with the following reference information:

<rearranged TTX terminal ID> <date and time>’’

At the end of the telex call, the CF may optionally transfer a telex non-delivery notification control document indicating the last page number, and its document reference number, which was successfully transferred to the telex network.

— The CF shall not forward the interrupted message, but shall return a telex non-delivery notification control document to the Teletex terminal to indicate that the complete message has to be retransmitted to the CF.

c) Additionally, in the case of the interrupted message:

— the reaction of the CF is independent of the acknowledgement request of the telex submission control document;

— if a CF in case of interrupted message always sends a telex non-delivery notification, a Teletex terminal or operator should not retransmit any part of that message before receiving that notification.

6.1.3 When the CF is not able to forward the telex message (e.g. because of line interruption) to the telex network, it shall transfer to the Teletex terminal a telex non-delivery notification control document.

6.1.4 If the Teletex terminal retransmits an interrupted message in a new session, it shall send as the first document the control document relating to the interrupted message. When the Teletex operator wants to indicate to the telex terminal that this transmission is a continuation of an interrupted one, the Teletex terminal shall always start the interrupted normal document with CDC. When delivering this message to the telex network, the CF shall precede the continuation of the transmitted message with an appropriate explanatory text, for example ‘‘This is a continuation of an incomplete message with the following reference information:

<rearranged TTX terminal ID> <date and time>’’

Note — Both parameters of the reference information are taken from the linking information of the CDC command and are identical to the parameters described in § 6.1.2 b).

6.2 *Message transfer from telex to Teletex*

6.2.1 For error conditions arising during the Teletex call, normal error recovery procedures in Recommendation T.62 shall apply.

6.2.2 If an error was detected during telex input, the CF shall add to the end of the interrupted telex message an appropriate explanatory text. An example is ‘‘This may be an incomplete message’’.

This explanatory text may also be used if the telex call was cleared before the CF received the end of input signal (EOI).

7 Coding and formatting of control documents

7.1 *Control document structure*

7.1.1 Figure 4/T.390 illustrates the structure of control documents. The user information part of the control document user information (CDUI) in control documents is called *control text* .

Figure 4/T.390, p.

7.2 *Control document coding principles*

7.2.1 For the basic Teletex/telex interworking service, the control text shall be coded using explicit, human-readable graphic characters of Recommendation T.61 coding scheme.

7.3 *General formatting of control text*

7.3.1 The control text is subdivided in *elements* each consisting of a number of *fields* .

7.3.2 An element is uniquely identifiable by an *element number* field, which is language-independent, and an *element name* field, which is language dependent. These two fields are always closed by the character ‘‘colon’’ (:). In control documents sent by the CF to the Teletex terminal, at least one of the above fields must be present. For international communications, the element number field shall be mandatory.

7.3.2.1 The element number assigned to the control document identifier shall consist of two parts separated by a period. Each part is a sequentially assigned number. The first part identifies the application which uses the control document. The second part identifies the control document.

7.3.2.2 Each distinct element name, other than control document identifiers, shall be sequentially assigned a different number.

7.3.2.3 There shall be no restriction on the number of digits for element numbers. Any leading zeros in an element number are ignored.

7.3.2.4 Where national requirements dictate the use of non-standardized element numbers, Administrations may choose any value in the range 1000-1999 for the first part of non-standardized control document identifiers and for non-standardized elements.

7.3.3 Parameters to the elements shall be coded in separate *element value* fields.

The parameters will be illustrated in this Recommendation by enclosing them between angular brackets (< >).

7.3.4 In the text each element is contained in one or more lines. When more than one line is used, only the element number field and the element name field shall be present in the first line. See Figure 5/T.390.

Figure 5/T.390, p.

7.3.5 The first element present in the control text shall be the control document identifier. This element is mandatory and used to identify the function of the control document, e.g. submission of a telex message, acknowledgement of a previous message.

7.3.6 The element denoted by the name ‘‘Note’’ will be allowed for extending the format to accommodate national requirements.

7.3.7 An element name shall be represented by a *text string* , that is, a sequence of graphic characters. Some parameters may also consist of such text strings. All text strings are language-dependent.

7.3.8 When encoding the control text the following rules shall apply:

a) The control text shall always begin with the character sequence FF CR or CR FF preceded by applicable presentation control functions (see Recommendation T.61, § 3.3.1.4).

b) Each element following the control document identifier may be preceded by one or more empty lines.

c) Each field in an element shall be separated by the character ‘‘space’’ if no other special separator is defined for the element.

Note — It is allowed to have leading spaces or backspaces in a line.

7.3.9 When decoding the control text the following rules shall apply:

a) The first element in the text shall be recognized as the control document identifier. Leading New Line functions (CR LF or LF CR), LF and leading spaces shall be ignored.

b) Contiguous New Line functions (CR LF or LF CR) or LF shall be considered as *one* New Line function.

c) Contiguous embedded spaces are considered as one space. Leading spaces in a line shall be ignored.

Note — Leading backspaces in a line shall be ignored.

7.4 *Format of Teletex/telex interworking control documents*

In this section the formats of the different control documents are shown. Their control texts are illustrated by the use of four different syntax elements:

— The element number field is represented by a sequence of numeric graphic characters.

— The element name field is represented by a text string giving the CCITT language reference name of the field. The actual value shall be a language-dependent representation of that reference name.

— Separators [i.e.: (SP13), / (SP12), = (SA04)] are shown as they shall be represented in the actual control text.

— Element value fields are shown in angular brackets (< >). The actual parameter values are described in § 7.5.

The formats are illustrated in terms of layout and contents, but do not explicitly show the presentation control functions. These shall be inserted as appropriate (see § 7.3.8).

7.4.1 *Telex submission control document format*

7.4.1.1 Figure 6/T.390 illustrates the format of the control text in the telex submission control document.

Figure 6/T.390 [T3.390], p.

7.4.1.2 The submission control information element does not have an explicit identification.

7.4.2 *Telex delivery notification control document format*

7.4.2.1 Figure 7/T.390 illustrates the format of the control text in the telex delivery notification control document.

Figure 7/T.390 [T4.390], p.

7.4.3 *Telex non-delivery nofitication control document format*

7.4.3.1 Figure 8/T.390 illustrates the format of the control text in the telex non-delivery notification control document.

Figure 8/T.390 [T5.390], p.

7.4.4 *Telex validation control document format*

7.4.4.1 Figure 9/T.390 illustrates the format of the control text in the telex validation control document.

Figure 9/T.390 [T6.390], p.

7.4.5 *Telex message delivery control document format*

7.4.5.1 Figure 10/T.390 illustrates the format of the control text in the telex message delivery control document.

Figure 10/T.390 [T7.390], p.

7.5 *Description of parameter values in Teletex/telex interworking control documents*

7.5.1 <TELEX ADDRESS>

A sequence of numeric graphic characters. As a national option, a limited set of graphic characters may be allowed to be embedded in this field as punctuation marks.

7.5.2 <= | NSWERBACK>

An equals sign graphic character followed by a sequence of alphanumeric graphic characters which comprise part or all of the expected answerback code. The carriage return and line feed characters shall not occur in this parameter.

7.5.3 <+ | CKNOWLEDGEMENT REQUEST>

A plus sign graphic character followed by the text string ‘‘ACK’’.

7.5.4 <CF TID>

A sequence of graphic characters as defined in Figure 2/F.200.

7.5.5 <TTX TID>

A sequence of graphic characters as defined in Figure 2/F.200.

7.5.6 <DATE AND TIME>

A sequence of graphic characters as defined in Figure 1/F.200.

7.5.7 <CD No.>

A document reference number as specified in Recommendation T.62.

7.5.8 <ADD'L SESSION REF No.>

An additional session reference number as specified in Recommendation T.62.

7.5.9 <RECEIVED ANSWERBACK>

A sequence of graphic characters representing a telex answerback code from which CR LF characters have been deleted, if present.

7.5.10 <DURATION>

A sequence of graphic characters in the form ‘‘HH : MM : SS’’ representing the numeric values in hours, minutes and seconds.

7.5.11 <TEXT>

Any text string coded as in Recommendation T.61.

7.5.12 <DOC No.>

A document reference number as specified in Recommendation T.62 with a length not exceeding five digits.

7.5.13 <PAGE No.>

A page reference number as specified in Recommendation T.62 with a length not exceeding five digits.

7.5.14 <CAUSE>

This is a text string with the following possible values — the list is not exhaustive:

— network service signal as received from the telex network (see Recommendation U.12) or/and a corresponding text string in the appropriate language;

— error in submitted control document;

— invalid telex address;

— not delivered — interruption in the transmission;

— submitted text not prepared for telex;

— not permitted telex answerback;

— procedural error during the submission call.

7.5.15 <REFERENCE>

An alphanumeric text string.

Blanc

MONTAGE: PAGE 384 = BLANCHE