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(09/92)

DATA COMMUNICATION NETWORKS

P7 PROTOCOL – PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT (PICS) PROFORMA

Recommendation X.484

FOREWORD

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

Recommendation X.484 was prepared by Study Group VII and was approved under the Resolution No. 2 procedure on the 10th of September 1992.

CCITT NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

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INTRODUCTION

This Recommendation is one of a set of Recommendations defining Message Handling in a distributed open systems environment.

Message Handling provides for the exchange of messages between users on a store-and-forward basis. A message submitted by one user (the originator) is transferred through the message transfer system (MTS) and delivered to one or more other users (the recipients).

A user may interact directly with the MTS, or indirectly via a message store (MS).

The MTS comprises a number of message transfer agents (MTAs), which transfer messages and deliver them to their intended recipients.

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a given OSI protocol. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

This Recommendation includes the PICS proforma for the P7 protocol as defined in the Recommendations X.411, X.413 and X.419.

Recommendation X.484

P7 PROTOCOL – PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT (PICS) PROFORMA

(1992)

1 Scope

This Recommendation provides the PICS proforma for the P7 protocol as specified in Recommendations X.411, X.413 and X.419. This PICS proforma is in compliance with the relevant requirements, and in accordance with the relevant guidance for PICS proforma, given in ISO/IEC 9642-2. Detail of the use of this proforma is provided in the Annex A of this Recommendation.

The scope of this Recommendation is the specification of the conformance statements for :

a) a User Agent (UA) when inter-acting with a Message Store (MS);

b) an MS when inter-acting with an UA.

2 Normative references

– CCITT Recommendation X.400, *Message Handling: System and Service overview.*

– CCITT Recommendation X.411, *Message Handling Systems: Message Transfer System: Abstract service definition and procedures.*

– CCITT Recommendation X.413, *Message Handling Systems: Message Store: Abstract service definition.*

– CCITT Recommendation X.402, *Message Handling Systems: Overall Architecture.*

– CCITT Recommendation X.408, *Message Handling System: Encoded information type conversion rules.*

– CCITT Recommendation X.419, *Message Handling System: Protocol Specifications.*

ISO/IEC 9646-1:1991, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts. [See also CCITT Recommendation X.290 (1991).]*

ISO/IEC 9646-2:1991, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract test suite specification. [See also CCITT Recommendation X.291 (1991).]*

3 Definitions

This Recommendation uses terms defined in Recommendations X.411, X.413 and X.419.

This Recommandation uses the following terms defined in ISO/IEC 9646-1:

a) PICS proforma;

b) Protocol Implementation Conformance Statement (PICS).

4 Abbreviations

Abbreviations defined in Recommendations X.411, X.413 and X.419 are used in this Recommendation.

5 Conventions

The PICS proforma is designed as an annex to this Recommendation (see Annex A).

6 Conformance

The supplier of a protocol implementation that is claimed to conform to Recommendation X.419, Section 2 is required to complete a copy of the PICS proforma provided in Annex A and is required to provide the information necessary to identify both the supplier and the implementation.

ANNEX A

(to Recommendation X.484)

P7 Protocol – Protocol Implementation Conformance Statement (PICS) Proforma

(This annex forms an integral part of this Recommendation)

A.1 *Identification of the implementation*

A.1.1 *Identification of the PICS*

Ref. No.	Question	Response
1	Date of Statement (DD/MM/YY)	
2	PICS Serial Number	
3	System Conformance Statement Cross Reference	

A.1.2 *Identification of the implementation and/or system*

Ref. No.	Question	Response
1	Implementation Name	
2	Version Number	
3	Machine Name	
4	Machine Version Number	
5	Operating System Name	
6	Operating System Version	
7	Special Configuration	
8	Other information	

Copyright release for PICS proforma

Users of this Recommendation may freely reproduce the PICS proforma in this annex so that it can be used for its intended purpose and may further publish the completed PICS.

A.1.3 *Identification of the system supplier and/or test laboratory client*

Ref. No.	Question	Response
1	Organization Name	
2	Contact Name(s)	
3	Address	
4	Telephone Number	
5	Telex Number	
6	Fax Number	
7	E-mail Address	
8	Other information	

A.2 *Identification of protocol*

A.2.1 *General*

Ref. No.	Question	Response
1	Title and Reference Number and date of publication of the protocol standard	
2	Protocol version Numbers	
3	Addenda Implemented Defects	
4	Implemented Defect Reports (Ref. No.)	

A.2.2 *Identification of the physical configuration*

Ref. No.	Question	Response
1	UA	[ ]
	or	
2.1	MS co-located with the MTA	[ ]
	or	
2.2	MS remote from the MTA	[ ]

A.3 *Global statement of conformance*

Ref. No.	Question	Def	Response
1	Are all mandatory capabilities implemented (YES or NO)	m	

Note – Answering "No" to this question indicates non-conformance to the protocol specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conformant. Such information shall be provided in A.6.7 "Other information".

A.4 *Instructions for completing the PICS proforma*

A.4.1 *Definition of support*

A capability is said to be supported if the Implementation Under Test (IUT) is able

a) to generate the corresponding service parameters (either automatically or because the end user explicitly requires that capability);

b) to interpret, handle and when required make available to the end user the corresponding service parameter(s).

A capability is referred to as either an originator capability "O" (when the MHS end-user is acting as originator) or a recipient capability "R" (when the MHS end-user is acting as recipient).

A protocol element is said to be supported for a sending implementation if it is able to generate it under some circumstances (either automatically or because the end user requires relevant services explicitly).

A protocol element is said to be supported for a receiving implementation if it is correctly interpreted and handled it and also, when required, made available to the end user.

A.4.2 *Def (Defined) columns*

These two columns (one for each physical configuration UA or MS) indicate the level of support required for conformance to the Recommendation X.419, Section 2. Only one shall be considered according to the response given to question A.2.2 . The values are as follows:

m Mandatory support is required.

o Optional support is permitted for conformance to the Recommendation. If implemented it must conform to the specifications and restrictions contained in the Recommendation. These restrictions may affect the optionality of other items.

c The item is conditional, the support of this item is subject to a predicate which is referenced in the Note column.

n/a The item is not applicable.

If Security or Physical Delivery options are not supported (see A.6.2.2) the corresponding items shall be considered as not applicable.

A.4.3 *Impl (Implemented) column*

This column shall be completed by the supplier or implementor, when a "[ ]" is present, to indicate the level of implementation of each feature. The proforma has been designed such that the only entries required in that column are:

Y Yes, the feature has been implemented.

N No, the feature has not been implemented.

– The item is not applicable.

In the PICS proforma tables, every leading feature marked 'm' should be supported by the IUT. Sub-features marked 'm' should be supported if the corresponding leading feature is supported by the IUT.

All entries within the PICS proforma shall be made in ink. Alterations to such entries shall be made by crossing out, not erasing nor making the original entry illegible, and writing the new entry alongside. All such alterations to records shall be initialled by the staff making them.

A.4.4 *Permitted range of values/value supported columns*

A permitted range of values is specified when the value is different from the bounds specified in A.6.6.6. For each line for which there is a "___" in the value supported column values should be indicated.

A.4.5 *Note column*

The 'Note' column has to be read as follows:

nxx Refers to Note nxx.

pxx Refers to predicate pxx.

#yy Refers to A.6.6.yy.

A.4.6 *Options column*

SEC Refers to a security item.

PHY Refers to a physical delivery item.

A.4.7 *Item reference numbers*

Each line within the PICS proforma which requires implementation details to be entered is numbered at the left hand edge of the line. This numbering is included as a means of uniquely identifying all possible implementation details within the PICS proforma.

The means of referencing individual responses is done by the following sequence:

a) a reference to the smallest subclause enclosing the relevant item;

b) a solidus character, '/';

c) the reference number of the row in which the response appears;

An example of the use of this notation would be A.6.3/20, which refers to the Message Identification element of service.

A.4.8 *Predicate definitions*

If the classification of an Element of Service (EOS) or a Protocol ELement (PEL) is subject to a predicate support of the item is mandatory is the related predicate is true. Otherwise support of the item is optional.

MS predicates

p1 true if the MS is stand alone; for colocated MS/MTA when supported by the MTA (see A.2.2);

p2 true if the MS is remote from the MTA (see A.2.2).

UA predicates

p9o True if the IUT subscribes to the Alternate recipient allowed EOS in Origination (see A.6.3/2);

p10 True if the IUT subscribes to the Alternate recipient assignement EOS (see A.6.3/3);

p11o True if the IUT subscribes to the Conversion prohibition in case of loss information EOS in Origination (see A.6.3/6);

p11r True if the IUT subscribes to the Conversion prohibition in case of loss information EOS in Reception (see A.6.3/6);

p12 True if the IUT subscribes to the Deferred delivery cancellation EOS (see A.6.3/9);

p13 True if the IUT subscribes to the Disclosure of other recipients EOS (see A.6.3/12);

p14 True if the IUT subscribes to the DL expansion prohibited EOS (see A.6.3/14);

p15 True if the IUT subscribes to the Explicit conversion EOS (see A.6.3/15);

p18 True if the IUT subscribes to the Latest delivery designation EOS (see A.6.3/19);

p19 True if the IUT subscribes to the Originator requested alternate recipient EOS (see A.6.3/24);

p20 True if the IUT subscribes to the Prevention of non-delivery notification EOS (see A.6.3/25);

p21 True if the IUT subscribes to the Probe EOS (A.6.3/26);

p22 True if the IUT subscribes to the Redirection disallowed by originator EOS (see A.6.3/27);

p23o True if the IUT subscribes to the Requested Preferred Delivery Method EOS in origination (see A.6.3/29);

p23r True if the IUT subscribes to the Requested Preferred Delivery Method EOS in reception (see A.6.3/29);

p25 True if the IUT subscribes to the Return of content EOS (see A.6.3/31);

p26 True if the IUT subscribes to the Use of distribution list EOS (see A.6.3/39);

p27 True if g3, g4 facsimile or teletex is supported (see A.6.6.2.1.6/1.4, A.6.6.2.1.6/1.5 or A.6.6.2.1.6/1.6);

p28 True if the issuing management domain is not an ADMD;

p29 True if the content-identifier is supported in the MessageSubmissionEnvelope (see A.6.6.2.1.1.1/4);

p30 True if the content-identifier is supported in the ProbeSubmissionEnvelope (see A.6.6.2.2.1.1/4);

p31 True if fetch-restrictions are supported by the UA in MS-Bind argument (see A.6.1.1.1/4);

p32 True if the IUT subscribes to the Stored message listing EOS (see A.6.3/46);

p33 True if the IUT subscribes to the Stored message summary EOS (see A.6.3/47);

p34 True if ms-configuration-request is supported in MS-Bind argument (see A.6.6.1.1.1/5);

p35 True if the IUT subscribes to the MS Register EOS (see A.6.3/48);

p36 True if requested attribute supported in alert Auto-Actions (see A.6.6.3.8/2.1.3).

p37 True if summary_requests is supported in Summarize argument (see A.6.6.3.1.1/3);

p38 True if search is supported in Fetch argument (see A.6.6.3.3.1/2.1);

p39 True if equivalent registration by local means cannot take place.

UA and MS predicates

p40 True if supported in Origination;

p42 True if the IUT subscribes to the Content confidentiality EOS (see A.6.3/80);

p43 True if the IUT subscribes to the Content integrity EOS (see A.6.3/81);

p44 True if the IUT subscribes to the Message origin authentication EOS (see A.6.3/83);

p45 True if the IUT subscribes to the Message security labelling EOS (see A.6.3/84);

p46 True if the IUT subscribes to the Non repudiation of delivery EOS (see A.6.3/86);

p47 True if the IUT subscribes to the Probe origin authentication EOS (see A.6.3/89);

p48 True if the IUT subscribes to the Proof of delivery EOS (see A.6.3/90);

p49 True if the IUT subscribes to the Proof of submission EOS (see A.6.3/91);

p50 True if the IUT subscribes to the Report origin authentication EOS (see A.6.3/92);

p51 True if the IUT subscribes to the Secure access management EOS (see A.6.3/93);

p52 True if the IUT subscribes to the Stored message alert EOS (see A.6.3/42);

p53 True if the IUT subscribes to the Stored message auto forward EOS (see A.6.3/43);

p54 True if the IUT subscribes to the Request for forwarding address EOS (see A.6.3/73);

p55 True if the IUT subscribes to the Counter collection with advice or the Delivery via Bureaufax Service EOS (see A.6.3/63 or A.6.3/64);

p56 True if originating-MTA-certificate supported in the argument.

p57 True if the IUT subscribes to the Physical forwarding prohibited EOS (see A.6.3/70);

p58 True if the IUT subscribes to the Registered mail EOS (see A.6.3/71);

p59 True if the IUT subscribes to the Physical delivery notification by MHS or Physical delivery notification by PDS EOS (see A.6.3/67 or A.6.3/68).

Combined predicates

p100 p56 or p49;

p101 p11o or p14 or p18 or p22 or p42 or p44 or p45;

p102 p11o or p14 or p22 or p45 or p47.

p103 p39 and [(p45 and p51) or p10]

p104 (p45 and p51) or p1

A.5 *Abbreviations*

"N/A" Not Applicable.

A.6 *Capabilities and options*

A.6.1 *Initiator/Responder capability*

A.6.2 *Supported application contexts and options*

A.6.2.1 Application Context Name		Def UA	Def MS	Note	Impl
1	ms-access	m	m		[ ]
2	ms-reliable-access	o	o		[ ]

A.6.2.2 Options		Def UA	Def MS	Note	Impl
1	Are all Security capabilities implemented ?	o	o		[ ]
2	Are all Physical Delivery capabilities implemented ?	o	o		[ ]

A.6.3 *Major capabilities*

Note – 'O' / 'R' means 'Origination' / 'Reception'.

A.6.3 Major capabilities, Elements of Service		O/R	Def UA	Def MTA	Note	Impl	Clause reference (Rec. X.400)
1	Access management	O	m	m		[ ]	B.1
		R	m	m		[ ]	
2	Alternate recipient allowed	O	o	m		[ ]	B.3
		R	o	m		[ ]	
3	Alternate recipient assignment	O	n/a	n/a			B.4
		R	o	c	p1	[ ]	
4	Content type indication	O	m	m		[ ]	B.12
		R	m	m		[ ]	
5	Conversion prohibition	O	m	m		[ ]	B.13
		R	m	m		[ ]	
6	Conversion prohibition	O	o	c	p1	[ ]	B.14
	in case of loss of information	R	o	c	p1	[ ]	
7	Converted indication	O	n/a	n/a			B.15
		R	m	m		[ ]	
8	Deferred delivery	O	m	m		[ ]	B.19
		R	n/a	n/a			
9	Deferred delivery cancellation	O	o	m		[ ]	B.20
		R	n/a	n/a			
10	Delivery notification	O	m	m		[ ]	B.21
		R	n/a	n/a			
11	Delivery time stamp indication	O	n/a	n/a			B.22
		R	m	m		[ ]	
12	Disclosure of other recipients	O	o	m		[ ]	B.25
		R	m	m		[ ]	
13	DL expansion history indication	O	n/a	n/a			B.26
		R	m	m		[ ]	
14	DL expansion prohibited	O	o	c	p1	[ ]	B.27
		R	n/a	n/a			
15	Explicit conversion	O	o	c	p1	[ ]	B.30
		R	n/a	n/a			
16	Grade of delivery selection	O	m	m		[ ]	B.32
		R	m	m		[ ]	
17	Hold for delivery	O	n/a	n/a			B.33
		R	n/a	n/a			
18	Implicit conversion	O	n/a	n/a			B.34
		R	o	o	n1	[ ]	
19	Latest delivery designation	O	o	c	p1	[ ]	B.39
		R	n/a	n/a			
20	Message identification	O	m	m		[ ]	B.41
		R	m	m		[ ]	
21	Multi-destination delivery	O	m	m		[ ]	B.45
		R	n/a	n/a			
22	Non-delivery notification	O	m	m		[ ]	B.47
		R	n/a	n/a			
23	Original encoded information types indication	O	m	m		[ ]	B.54
		R	m	m		[ ]	
24	Originator requested alternate recipient	O	o	c	p1	[ ]	B.56
		R	n/a	n/a			
25	Prevention of non-delivery notification	O	o	c	p1	[ ]	B.61
		R	n/a	n/a			
26	Probe	O	o	m		[ ]	B.63
		R	n/a	n/a			
27	Redirection disallowed by originator	O	o	c	p1	[ ]	B.68
		R	n/a	n/a			
28	Redirection of incoming messages	O	n/a	n/a			B.69
		R	o	c	p1	[ ]	
29	Requested preferred delivery method	O	o	c	p1	[ ]	B.76
		R	o	c	p1	[ ]	
30	Restricted delivery	O	n/a	n/a			B.77
		R	o	o	n2	[ ]	
31	Return of content	O	o	c	p1	[ ]	B.78
		R	n/a	n/a			

Note n1 – Neither the originating nor the recipient UA explicitly requests this EOS on a per-message basis.

Note n2 – The MTS abstract service specified in Recommendation X.411 does not provide a technical realization of this element of Service.

A.6.3 Major capabilities, Elements of Service (cont.)		O/R	Def UA	Def MTA	Note	Impl	Clause reference (Rec. X.400)
38	Submission time stamp indication	O	m	m		[ ]	B.89
		R	m	m		[ ]	
39	Use of distribution list	O	o	c	p1	[ ]	B.92
		R	o	c	p1	[ ]	
40	User/UA capabilities registration	O	n/a	n/a			B.93
		R	m	m		[ ]	
41	Designation of recipient by directory name	O	o	c	p1	[ ]	B.24
		R	n/a	n/a			
42	Stored message alert	O	n/a	n/a			B.82
		R	o	o		[ ]	
43	Stored message auto forward	O	n/a	n/a			B.83
		R	o	o		[ ]	
44	Stored message deletion	O	n/a	n/a			B.84
		R	m	m		[ ]	
45	Stored message fetching	O	n/a	n/a			B.85
		R	m	m		[ ]	
46	Stored message listing	O	n/a	n/a			B.86
		R	o	m		[ ]	
47	Stored message summary	O	n/a	n/a			B.87
		R	o	m		[ ]	
48	MS Register	O	o	m		[ ]	
		R	o	m		[ ]	

Note – The table below shall be filled in only if Physical Delivery option is supported (see A.6.2.2/2).

A.6.3 Major capabilities, Elements of Service		O/R	Def UA	Def MTA	Note	Impl	Clause reference (Rec. X.400)
	Physical delivery						
60	Additional physical rendition	O	o	c	p1	[ ]	B.2
		R	o	c	p1	[ ]	
61	Basic physical rendition	O	m	m		[ ]	B.7
		R	n/a	n/a			
62	Counter collection	O	m	m		[ ]	B.16
		R	n/a	n/a			
63	Counter collection with advice	O	o	c	p1	[ ]	B.17
		R	o	c	p1	[ ]	
64	Delivery via Bureaufax service	O	o	c	p1	[ ]	B.23
		R	o	c	p1	[ ]	
65	EMS (express mail service)	O	m	m		[ ]	B.28
		R	n/a	n/a			
66	Ordinary mail	O	m	m		[ ]	B.53
		R	n/a	n/a			
67	Physical delivery notification by MHS	O	o	c	p1	[ ]	B.57
		R	o	c	p1	[ ]	
68	Physical delivery notification by PDS	O	o	c	p1	[ ]	B.58
		R	n/a	n/a			
69	Physical forwarding allowed	O	m	m		[ ]	B.59
		R	n/a	n/a		[ ]	
70	Physical forwarding prohibited	O	o	c	p1	[ ]	B.60
		R	n/a	n/a			
71	Registered mail	O	o	c	p1	[ ]	B.70
		R	o	c	p1	[ ]	
72	Registered mail to addressee in person	O	o	c	p1	[ ]	B.71
		R	o	c	p1	[ ]	
73	Request for forwarding address	O	o	c	p1	[ ]	B.75
		R	o	c	p1	[ ]	
74	Special delivery	O	m	m		[ ]	B.81
		R	n/a	n/a			
75	Undeliverable mail with return of physical message	O	m	m		[ ]	B.91
		R	n/a	n/a			

Note – The table below shall be filled in only if Security option is implemented (see A.6.2.2/1).

A.6.3 Major capabilities, Elements of Service		O/R	Def UA	Def MTA	Note	Impl	Clause reference (Rec. X.400)
	Security						
80	Content confidentiality	O	o	o		[ ]	B.10
		R	c	c	p40	[ ]	
81	Content integrity	O	o	o		[ ]	B.11
		R	c	c	p40	[ ]	
82	Message flow confidentiality	O	o	o		[ ]	B.40
		R	n/a	n/a			
83	Message origin authentication	O	o	o		[ ]	B.42
		R	c	c	p40	[ ]	
84	Message security labelling	O	o	o		[ ]	B.43
		R	c	c	p40	[ ]	
85	Message sequence integrity	O	o	o		[ ]	B.44
		R	c	c	p40	[ ]	
86	Non-repudiation of delivery	O	o	o		[ ]	B.49
		R	c	c	p40	[ ]	
87	Non-repudiation of origin	O	o	o		[ ]	B.50
		R	c	c	p40	[ ]	
88	Non-repudiation of submission	O	o	o		[ ]	B.51
		R	c	c	p40	[ ]	
89	Probe origin authentication	O	o	o		[ ]	B.64
		R	n/a	n/a			
90	Proof of delivery	O	o	o		[ ]	B.65
		R	c	c	p40	[ ]	
91	Proof of submission	O	o	o		[ ]	B.66
		R	n/a	n/a			
92	Report origin authentication	O	o	o		[ ]	B.74
		R	c	c	p40	[ ]	
93	Secure access management	O	o	o		[ ]	B.79
		R	c	c	p40	[ ]	

A.6.4 *Timers and Protocol parameters*

"N/A".

A.6.5 *Supported PDUs (Operations)*

The UA must provide access to the MSSE, the MRSE and the MASE application-service-elements. Support of the related operations is as defined in the UA column of the tables below.

The MS must support the MSSE, the MRSE and the MASE application-service-elements. Support of the related operations is as defined in the MS column of the tables below.

A.6.5 Supported PDUs (Operations)		Def UA	Def MS	Note	Impl	Clause reference	
A.6.5.1 Bind and Unbind						(Rec. X.413)	
1	MSBind	m	m		[ ]	7.1	
2	MSUnbind	m	m		[ ]	7.2	
A.6.5.2 MSSE						(Rec. X.411)	
1	MessageSubmission	m	m		[ ]	8.2.1.1	
2	ProbeSubmission	c	m	p21	[ ]	8.2.1.3	
3	CancelDeferredDelivery	c	m	p12	[ ]	8.2.1.4	
4	SubmissionControl	m	c	p1	[ ]	8.2.1.5	

A.6.5 Supported PDUs (Operations) (cont.)		Def UA	Def MS	Note	Impl	Clause reference	
A.6.5.3 MRSE						(Rec. X.413)	
1	Summarize	c	m	p33	[ ]	8.2	
2	List	c	m	p32	[ ]	8.3	
3	Fetch	m	m		[ ]	8.4	
4	Delete	m	m		[ ]	8.5	
5	Register-MS	c	m	p35	[ ]	8.6	
6	Alert	c	c	p52	[ ]	8.7	
A.6.5.4 MASE						(Rec. X.411)	
1	Register	c	m	p39	[ ]	8.4.1.1	
2	ChangeCredentials (MS to UA)	m	c	p1	[ ]	8.4.1.2	
3	ChangeCredentials (UA to MS)	o	m		[ ]	8.4.1.2	

A.6.6 *Supported PDU Parameters (Operations Arguments)*

A.6.6.1 *Abstract Bind/Unbind Operations*

A.6.6.1.1 Abstract Binding operations: MS-Bind		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 7.1.1	
1	initiator-name	m	m				[ ]			
2	initiator-credentials	m	m				[ ]			
2.1	simple	m	m				[ ]			
2.1.1	IA5String	o	m				[ ]			
2.1.2	OCTET STRING	o	m				[ ]			
2.2	strong	c	c	p51			[ ]			SEC
2.2.1	bind-token	m	m				[ ]			SEC
2.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
2.2.1.2	name	m	m				[ ]			SEC
2.2.1.3	time	m	m				[ ]			SEC
2.2.1.4	signed-data	o	o				[ ]			SEC
2.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
2.2.1.6	encrypted-data	o	o				[ ]			SEC
2.2.2	certificate	o	o				[ ]			SEC
3	security-context	c	c	p45 and p51			[ ]			
4	fetch-restrictions	o	m				[ ]			
4.1	allowed-content-types	o	m				[ ]			
4.2	allowed-EITs	o	m				[ ]			
4.3	maximum-content-length	o	m				[ ]			
5	ms-configuration-request	o	m				[ ]			

A.6.6.1.1	Abstract Binding operations: MS-Bind (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
2	Result								Rec. X.413, 7.1.2	
1	responder-credentials	m	m				[ ]			
1.1	simple	m	m				[ ]			
1.1.1	IA5String	m	o				[ ]			
1.1.2	OCTET STRING	m	o				[ ]			
1.2	strong	c	c	p51			[ ]			SEC
1.2.1	bind-token	m	m				[ ]			SEC
1.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
1.2.1.2	name	m	m				[ ]			SEC
1.2.1.3	time	m	m				[ ]			SEC
1.2.1.4	signed-data	o	o				[ ]			SEC
1.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
1.2.1.6	encrypted-data	o	o				[ ]			SEC
2	available-auto-actions	c	m	p34			[ ]			
2.1	auto-alert	m	c	p52			[ ]			
2.2	auto-forward	m	c	p53			[ ]			
3	available-attribute-types	c	m	p34 #3.7			[ ]			
4	alert-indication	c	c	p52			[ ]			
5	content-types-supported	c	m	p34 #3.7.19.7			[ ]			
3	Errors								Rec. X.413, 7.1.3	
1	authentication-error	m	m				[ ]			
2	unacceptable-security-context	m	m				[ ]			SEC
3	unable-to-establish-association	m	m				[ ]			

A.6.6.2 *Abstract MSSE Operations*

A.6.6.2.1	MSSE operations: MessageSubmission	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								8.2.1.1.1	
1	MessageSubmissionEnvelope	m	m				[ ]			
2	Content	m	m				[ ]			
2	Result								8.2.1.1.2	
1	message-submission-identifier	m	m	#2.1.4			[ ]			
2	message-submission-time	m	m				[ ]			
3	content-identifier	c	m	p29			[ ]			
4	extensions	c	c	p100			[ ]			
4.1	originating-MTA-certificate	c	c	p56			[ ]			SEC
4.2	proof-of-submission	c	c	p49			[ ]			SEC

A.6.6.2.1	MSSE operations: MessageSubmission (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
3	Errors								Rec. X.411, 8.2.1.1.3	
1	SubmissionControlViolated	m	m				[ ]			
2	ElementOfServiceNotSubscribed	m	m				[ ]			
3	OriginatorInvalid	m	m				[ ]			
4	RecipientImproperlySpecified	m	m				[ ]			
5	InconsistentRequest	m	m				[ ]			
6	SecurityError	m	m				[ ]			SEC
7	UnsupportedCriticalFunction	m	m				[ ]			
8	RemoteBindError	m	c	p2			[ ]			

A.6.6.2.1.1.1	MessageSubmissionEnvelope	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									(Rec. X.411)	
1	originator-name	m	m				[ ]		8.2.1.1.1.1	
2	original-encoded-information-types	m	m	#2.1.6			[ ]		8.2.1.1.1.33	
3	content-type	m	m	#2.1.7			[ ]		8.2.1.1.1.34	
4	content-identifier	o	m				[ ]		8.2.1.1.1.35	
5	priority	m	m				[ ]		8.2.1.1.1.8	
5.1	normal	m	m				[ ]			
5.2	urgent	m	m				[ ]			
5.3	non-urgent	m	m				[ ]			
6	per-message-indicators	m	m				[ ]			
6.1	disclosure-of-recipients	c	m	p13			[ ]		8.2.1.1.1.7	
6.2	implicit-conversion-prohibited	m	m				[ ]		8.2.1.1.1.9	
6.3	alternate-recipient-allowed	c	m	p9o			[ ]		8.2.1.1.1.3	
6.4	content-return-request	c	c	p25,p1			[ ]		8.2.1.1.1.23	
7	deferred-delivery-time	m	m				[ ]		8.2.1.1.1.12	
8	extensions	c	m	p101			[ ]			
8.1	recipient-reassignment-prohibited	c	c	p22,p1			[ ]		8.2.1.1.1.4	
8.2	dl-expansion-prohibited	c	c	p14,p1			[ ]		8.2.1.1.1.6	
8.3	conversion-with-loss-prohibited	c	c	p11o,p1			[ ]		8.2.1.1.1.10	
8.4	latest-delivery-time	c	c	p18,p1			[ ]		8.2.1.1.1.13	
8.5	originator-return-address	m	m				[ ]		8.2.1.1.1.21	PHY
8.6	originator-certificate	o	o				[ ]		8.2.1.1.1.25	SEC
8.7	content-confidentiality-algorithm-identifier	c	c	p42			[ ]		8.2.1.1.1.27	SEC
8.8	message-origin-authentication-check	c	c	p44			[ ]		8.2.1.1.1.29	SEC
8.9	message-security-label	c	c	p45			[ ]		8.2.1.1.1.30	SEC
8.10	proof-of-submission-request	c	c	p49			[ ]		8.2.1.1.1.31	SEC
8.11	content-correlator	o	m				[ ]		8.2.1.1.1.36	
8.12	forwarding-request	o	o				[ ]		X.413, 6.6.	

A.6.6.2.1.1.1 MessageSubmissionEnvelope (cont.)		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
9	per-recipient-fields	m	m				[ ]		(Rec. X.411)	
9.1	recipient-name	m	m	#5			[ ]		8.2.1.1.1.2	
9.2	originator-report-request	m	m	#2.1.8			[ ]		8.2.1.1.1.22	
9.3	explicit-conversion	c	c	p15,p1 #2.1.10			[ ]		8.2.1.1.1.11	
9.4	extensions	m	m				[ ]			
9.4.1	originator-requested-alternate-recipient	c	c	p19,p1			[ ]		8.2.1.1.1.5	
9.4.2	requested-delivery-method	c	c	#2.1.9 p23o,p1			[ ]		8.2.1.1.1.14	
9.4.3	physical-forwarding-prohibited	c	c	p57			[ ]		8.2.1.1.1.15	PHY
9.4.4	physical-forwarding-address-request	c	c	p54			[ ]		8.2.1.1.1.16	PHY
9.4.5	physical-delivery-modes	m	m				[ ]		8.2.1.1.1.17	PHY
9.4.6	registered-mail-type	c	c	p58			[ ]		8.2.1.1.1.18	PHY
9.4.7	recipient-number-for-advice	c	c	p55			[ ]		8.2.1.1.1.19	PHY
9.4.8	physical-rendition-attributes	m	m				[ ]		8.2.1.1.1.20	PHY
9.4.9	physical-delivery-report-request	c	c	p59			[ ]		8.2.1.1.1.24	PHY
9.4.10	message-token	c	c	p44			[ ]		8.2.1.1.1.26	SEC
9.4.11	content-integrity-check	c	c	p43			[ ]		8.2.1.1.1.27	SEC
9.4.13	proof-of-delivery-request	c	c	p48			[ ]		8.2.1.1.1.32	SEC

A.6.6.2.1.4 MTSIdentifier								Rec. X.411, 8.5.1	
1	global-domain-identifier	m	m	#2.1.5		[ ]			
2	local-identifier	m	m			[ ]			

A.6.6.2.1.5 GlobalDomainIdentifier								Rec. X.411, 8.5.2	
1	country-name	m	m			[ ]			
1.1	x121-dcc-code	m	m			[ ]			
1.2	iso-3166-alpha2-code	m	m			[ ]			
2	administration-domain-name	m	m			[ ]			
2.1	numeric	m	m			[ ]			
2.2	printable	m	m			[ ]			
3	private-domain-identifier	c	c	p28,p1		[ ]			
3.1	numeric	m	m			[ ]			
3.2	printable	m	m			[ ]			

A.6.6.2.1.6 EncodedInformationTypes		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									Rec. X.411, 8.5.6	
1	built-in-encoded-information-types	m	m				[ ]			
1.1	undefined	o	c	p1			[ ]			
1.2	ia5-text	o	c	p1			[ ]			
1.3	g3-facsimile	o	c	p1			[ ]			
1.4	g4-class-1	o	c	p1			[ ]			
1.5	teletex	o	c	p1			[ ]			
1.6	videotex	o	c	p1			[ ]			
1.7	voice	o	c	p1			[ ]			
1.8	sfd	o	c	p1			[ ]			
1.9	mixed-mode	o	c	p1			[ ]			
2	non-basic-parameters	c	c	p27,p1			[ ]			
2.1	g3-facsimile	o	c	p1			[ ]			
2.2	teletex	o	c	p1			[ ]			
2.2.1	graphic-character-sets	o	c	p1			[ ]			
2.2.2	control-character-sets	o	c	p1			[ ]			
2.2.3	page-formats	o	c	p1			[ ]			
2.2.4	miscellaneous-terminal-capabilities	o	c	p1			[ ]			
2.2.5	private-use	o	c	p1			[ ]			
2.3	g4-class-1-and-mixed-mode	o	c	p1			[ ]			
3	external-encoded-information-types	o	c	p1 n3			[ ]			

Note n3 – Same support as corresponding built-in-encoded-information-types.

A.6.6.2.1.7 ContentType		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									Rec. X.411, 8.2.1.1.1.34	
1	built-in	m	m				[ ]			
1.1	unidentified	o	c	p1			[ ]			
1.2	external	o	c	p1			[ ]			
1.3	interpersonal-84	o	c	p1			[ ]			
1.4	interpersonal-88	o	c	p1			[ ]			
2	extended	o	c	p1			[ ]			

A.6.6.2.1.8 OriginatorReportRequest									Rec. X.411, 8.2.1.1.1.22	
1	no report	c	c	p20,p1			[ ]			
2	non-delivery-report	m	m				[ ]			
3	report	m	m				[ ]			

A.6.6.2.1.9 RequestDeliveryMethod									Rec. X.411, 8.2.1.1.1.14	
1	any-delivery-method	o	c	p1			[ ]			
2	mhs-delivery	m	m				[ ]			
3	physical-delivery	m	m				[ ]			PHY
4	telex-delivery	o	c	p1			[ ]			
5	teletex-delivery	o	c	p1			[ ]			
6	g3-facsimile-delivery	o	c	p1			[ ]			
7	g4-facsimile-delivery	o	c	p1			[ ]			
8	ia5-terminal-delivery	o	c	p1			[ ]			
9	videotex-delivery	o	c	p1			[ ]			
10	telephone-delivery	o	c	p1			[ ]			

A.6.6.2.1.10 Conversion		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									(Rec. X.411)	
1	From ia5-text to									
1.2	teletex	o	c	p1			[ ]			
1.3	g3-facsimile	o	c	p1			[ ]			
1.4	g4-class-1	o	c	p1			[ ]			
1.5	videotex	o	c	p1			[ ]			
2	From teletex to									
2.1	ia5-text	o	c	p1			[ ]			
2.2	g3-facsimile	o	c	p1			[ ]			
2.3	g4-class-1	o	c	p1			[ ]			
2.4	videotex	o	c	p1			[ ]			
3	From videotex to									
3.1	ia5-text	o	c	p1			[ ]			
3.2	teletex	o	c	p1			[ ]			

Note – The tables below shall be filled in, for an UA, if the Probe capability is supported (predicate p21).

A.6.6.2.2 MSSE operations: ProbeSubmission		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.411, 8.2.1.2.1	
1	ProbeSubmissionEnvelope	m	m				[ ]			
2	Result								Rec. X.411, 8.2.1.2.2	
1	probe-submission-identifier	m	m	#2.1.4			[ ]			
2	probe-submission-time	m	m				[ ]			
3	content-identifier	c	m	p30			[ ]			
3	Errors								Rec. X.411, 8.2.1.2.3	
1	SubmissionControlViolated	m	m				[ ]			
2	ElementOfServiceNotSubscribed	m	m				[ ]			
3	OriginatorInvalid	m	m				[ ]			
4	RecipientImproperlySpecified	m	m				[ ]			
5	InconsistentRequest	m	m				[ ]			
6	SecurityError	m	m				[ ]			SEC
7	UnsupportedCriticalFunction	m	m				[ ]			
8	RemoteBindError	m	c	p2			[ ]			

A.6.6.2.2.1.1 ProbeSubmissionEnvelope		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									(Rec. X.411)	
1	originator-name	m	m				[ ]		8.2.1.1.1.1	
2	original-encoded-information-types	m	m	#2.1.6			[ ]		8.2.1.1.1.33	
3	content-type	m	m	#2.1.7			[ ]		8.2.1.1.1.34	
4	content-identifier	o	m				[ ]		8.2.1.1.1.35	
5	content-length	o	m				[ ]		8.2.1.2.1.2	
6	per-message-indicators	m	m				[ ]			
6.1	disclosure-of-recipients	n/a	n/a							
6.2	implicit-conversion-prohibited	m	m				[ ]		8.2.1.1.1.9	
6.3	alternate-recipient-allowed	c	m	p9o			[ ]		8.2.1.1.1.3	
6.4	content-return-request	n/a	n/a							
7	extension	c	m	p102			[ ]			
7.1	recipient-reassignment-prohibited	c	c	p22,p1			[ ]		8.2.1.1.1.4	
7.2	dl-expansion-prohibited	c	c	p14,p1			[ ]		8.2.1.1.1.6	
7.3	conversion-with-loss-prohibited	c	c	p11o,p1			[ ]		8.2.1.1.1.10	
7.4	originator-certificate	o	o				[ ]		8.2.1.1.1.25	SEC
7.5	message-security-label	c	c	p45			[ ]		8.2.1.1.1.30	SEC
7.6	content-correlator	o	m				[ ]		8.2.1.1.1.36	
7.7	probe-origin-authentication-check	c	c	p47			[ ]		8.2.1.2.1.1	SEC
7.8	physical-rendition-attributes	m	m				[ ]		8.2.1.1.1.20	PHY

	PerRecipientProbeSubmissionFields							(Rec. X.411)	
8	per-probe-recipient-fields	m	m			[ ]			
8.1	recipient-name	m	m	#5		[ ]		8.2.1.1.1.2	
8.2	originator-report-request	m	m	#2.1.8		[ ]		8.2.1.1.1.22	
8.3	explicit-conversion	c	c	p15,p1		[ ]		8.2.1.1.1.11	
8.4	extensions	m	m			[ ]			
8.4.1	originator-requested-alternate-recipient	c	c	p19,p1		[ ]		8.2.1.1.1.5	
8.4.2	requested-delivery-method	c	c	#2.1.9 p23o,p1		[ ]		8.2.1.1.1.14	

Note – The tables below shall be filled in, for an UA, if the Deferred delivery cancellation capability is supported (predicate p12).

A.6.6.2.3 MSSE operations: CancelDeferredDelivery		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.411, 8.2.1.3.1	
1	message-submission-identifier	m	m	#2.1.4			[ ]			
2	Result (NULL)	m	m				[ ]			
3	Errors								Rec. X.411, 8.2.1.3.3	
1	DeferredDeliveryCancellationRejected	m	m				[ ]			
2	MessageSubmissionIdentifierInvalid	m	m				[ ]			
3	RemoteBindError	m	c	p2			[ ]			

Note – The tables below shall be filled in, for an MS, if SubmissionControl operation is supported.

A.6.6.2.4	MSSE operations: SubmissionControl	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.411, 8.2.1.4.1	
1	controls	m	m				[ ]			
1.1	restrict	m	c	p1			[ ]			
1.2	permissible-operations	m	c	p1			[ ]			
1.3	permissible-maximum-content-length	m	c	p1			[ ]			
1.4	permissible-lowest-priority	m	c	p1			[ ]			
1.5	permissible-security-context	c	c	p45 and p51			[ ]			SEC
2	Result								Rec. X.411, 8.2.1.4.2	
1	waiting	m	m				[ ]			
1.1	waiting-operations	o	m				[ ]			
1.2	waiting-messages	o	m				[ ]			
1.2.1	long-content	o	m				[ ]			
1.2.2	low-priority	o	m				[ ]			
1.2.3	other-security-labels	c	c	p45 and p51			[ ]			SEC
1.3	waiting-content-types	o	m	#2.1.7			[ ]			
1.4	waiting-encoded-information-types	o	m	#2.1.6			[ ]			
3	Errors								Rec. X.411, 8.2.1.4.3	
1	SecurityError	m	m				[ ]			SEC
2	RemoteBindError	m	c	p2			[ ]			

A.6.6.3 *Abstract MRSE Operations*

Note – An UA may omit the "information-base-type" parameter in MRSE operation arguments because the default value (stored message) is the only value descibed in Recommendation X.411.

Note – The tables below shall be filled in, for an UA, if the Summarize operation is supported.

A.6.6.3.1	MRSE operations: Summarize	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 8.2.1	
1	information-base-type	m	m				[ ]			
1.1	stored-messages	m	m				[ ]			
1.2	inlog	n/a	n/a							
1.3	outlog	n/a	n/a							
2	selector	m	m	#3.1.4			[ ]			
3	summary-requests	o	m				[ ]			

A.6.6.3.1	MRSE operations: Summarize (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
2	Result								Rec. X.413, 8.2.2	
1	next	m	m				[ ]			
2	count	m	m				[ ]			
3	span	m	m				[ ]			
3.1	lowest	m	m				[ ]			
3.2	highest	m	m				[ ]			
4	summaries	c	m	p37			[ ]			
4.1	absent	m	m				[ ]			
4.2	present	m	m				[ ]			
4.2.1	type	m	m				[ ]			
4.2.2	value (depends on “type”)	m	m				[ ]			
4.2.3	count	m	m				[ ]			
3	Errors								Rec. X.413	
1	AttributeError	m	m				[ ]		9.2	
2	InvalidParameterError	m	m				[ ]		9.6	
3	RangeError	m	m				[ ]		9.7	
4	SecurityError	m	m				[ ]		9.8	SEC
5	SequenceNumberError	m	m				[ ]		9.9	
6	ServiceError	m	m				[ ]		9.10	
4	Selector								Rec. X.413, 8.1.3	
1	child-entries	o	m				[ ]			
2	range	o	m				[ ]			
2.1	sequence-number-range	o	m				[ ]			
2.1.1	from	o	m				[ ]			
2.1.2	to	o	m				[ ]			
2.2	creation-time-range	o	m				[ ]			
2.2.1	from	o	m				[ ]			
2.2.2	to	o	m				[ ]			
3	filter	o	m	#3.1.5			[ ]			
4	limit	o	m				[ ]			
5	override	o	m				[ ]			
5.1	overrideContentTypesRestriction	o	m				[ ]			
5.2	overrideEITsRestriction	o	m				[ ]			
5.3	overrideContentLengthRestriction	o	m				[ ]			

A.6.6.3.1	MRSE operations: Summarize (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
5	Filter								Rec. X.413, 8.1.2	
1	item	m	m				[ ]			
1.1	equality	o	m				[ ]			
1.1.1	type	m	m				[ ]			
1.1.2	value (depends on “type”)	m	m				[ ]			
1.2	substrings	o	o				[ ]			
1.2.1	type	m	m				[ ]			
1.2.2	strings	m	m				[ ]			
1.2.2.1	initial	o	m				[ ]			
1.2.2.2	any	o	m				[ ]			
1.2.2.3	final	o	m				[ ]			
1.3	greater-or-equal	o	m				[ ]			
1.3.1	type	m	m				[ ]			
1.3.2	value (depends on “type”)	m	m				[ ]			
1.4	less-or-equal	o	m				[ ]			
1.4.1	type	m	m				[ ]			
1.4.2	value (depends on “type”)	m	m				[ ]			
1.5	present	o	m				[ ]			
1.6	approximate-match	o	o				[ ]			
1.6.1	type	m	m				[ ]			
1.6.2	value (depends on “type”)	m	m				[ ]			
2	and	o	m				[ ]			
3	or	o	m				[ ]			
3	not	o	m				[ ]			

Note – The tables below shall be filled in, for an UA, if the List operation is supported.

A.6.6.3.2	MRSE operations: List	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 8.3.1	
1	information-base-type	m	m				[ ]			
1.1	stored-messages	m	m				[ ]			
1.2	inlog	n/a	n/a							
1.3	outlog	n/a	n/a							
2	selector	m	m	#3.1.4			[ ]			
3	requested-attributes	m	m				[ ]			
3.1	type	m	m				[ ]			
3.2	from	o	m				[ ]			
3.3	count	o	m				[ ]			

A.6.6.3.2	MRSE operations: List (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
2	Result								Rec. X.413, 8.3.2	
1	next	m	m				[ ]			
2	requested	m	m				[ ]			
2.1	sequence-number	m	m				[ ]			
2.2	attributes	m	m				[ ]			
2.2.1	type	m	m				[ ]			
2.2.2	values (depends on “type”)	m	m				[ ]			
3	Errors								(Rec. X.413)	
1	AttributeError	m	m				[ ]		9.2	
2	InvalidParametersError	m	m				[ ]		9.6	
3	RangeError	m	m				[ ]		9.7	
4	SecurityError	m	m				[ ]		9.8	SEC
5	SequenceNumberError	m	m				[ ]		9.9	
6	ServiceError	m	m				[ ]		9.10	

A.6.6.3.3	MRSE operations: Fetch	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 8.4.1	
1	information-base-type	m	m				[ ]			
1.1	stored-messages	m	m				[ ]			
1.2	inlog	n/a	n/a							
1.3	outlog	n/a	n/a							
2	item	m	m				[ ]			
2.1	search	o	m	#3.1.4			[ ]			
2.2	precise	o	m				[ ]			
3	requested-attributes	m	m				[ ]			
3.1	type	m	m				[ ]			
3.2	from	o	m				[ ]			
3.3	count	o	m				[ ]			

A.6.6.3.3	MRSE operations: Fetch (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
2	Result								Rec. X.413, 8.4.2	
1	entry-information	m	m				[ ]			
1.1	sequence-number	m	m				[ ]			
1.2	attributes	m	m				[ ]			
1.2.1	type	m	m				[ ]			
1.2.2	values (depends on “type”)	m	m				[ ]			
2	list	c	m	p38			[ ]			
3	next	c	m	p38			[ ]			
3	Errors								(Rec. X.413)	
1	AttributeError	m	m				[ ]		9.2	
2	FetchRestrictionError	m	m				[ ]		9.5	
3	InvalidParametersError	m	m				[ ]		9.6	
4	RangeError	m	m				[ ]		9.7	
5	SecurityError	m	m						9.8	SEC
6	SequenceNumberError	m	m				[ ]		9.9	
7	ServiceError	m	m				[ ]		9.10	

A.6.6.3.4	MRSE operations: Delete	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 8.5.1	
1	information-base-type	m	m				[ ]			
1.1	stored-messages	m	m				[ ]			
1.2	inlog	n/a	n/a							
1.3	outlog	n/a	n/a							
2	items	m	m				[ ]			
2.1	selector	o	m	#3.1.4			[ ]			
2.2	sequence-numbers	o	m				[ ]			
2	Result (NULL)	m	m				[ ]		Rec. X.413, 8.5.2	
3	Errors								(Rec. X.413)	
1	DeleteError	m	m				[ ]		9.4	
2	InvalidParametersError	m	m				[ ]		9.6	
3	RangeError	m	m				[ ]		9.7	
4	SecurityError	m	m						9.8	SEC
5	SequenceNumberError	m	m				[ ]		9.9	
6	ServiceError	m	m				[ ]		9.10	

Note – The tables below shall be filled in for an UA if the Register MS capability is supported (predicate p35).

A.6.6.3.5	MRSE operations: Register-MS	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 8.6.1	
1	auto-action-registrations	c	c	p52 and p53			[ ]			
1.1	auto-forward	c	c	p53 #3.8.1			[ ]			
1.2	auto-alert	c	c	p52 #3.8.2			[ ]			
2	auto-action-deregistrations	c	c	p52 and p53			[ ]			
1.1	auto-forward	c	c	p53 #3.8.1			[ ]			
1.2	auto-alert	c	c	p52 #3.8.2			[ ]			
3	list-attribute-defaults	o	m				[ ]			
4	fetch-attribute-defaults	o	m				[ ]			
5	change-credentials	m	m				[ ]			
5.1	old-credentials	m	m				[ ]			
5.1.1	simple	m	m				[ ]			
5.1.1.1	IA5String	o	m				[ ]			
5.1.1.2	OCTET STRING	o	m				[ ]			
5.1.2	strong	c	c	p51			[ ]			SEC
5.1.2.1	bind-token	m	m				[ ]			SEC
5.1.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
5.1.2.1.2	name	m	m				[ ]			SEC
5.1.2.1.3	time	m	m				[ ]			SEC
5.1.2.1.4	signed-data	o	o				[ ]			SEC
5.1.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
5.1.2.1.6	encrypted-data	o	o				[ ]			SEC
5.1.2.2	certificate	o	o				[ ]			SEC
5.2	new-credentials	m	m				[ ]			
5.2.1	simple	m	m				[ ]			
5.2.1.1	IA5String	o	m				[ ]			
5.2.1.2	OCTET STRING	o	m				[ ]			
5.2.2	strong	c	c	p51			[ ]			SEC
5.2.2.1	bind-token	m	m				[ ]			SEC
5.2.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
5.2.2.1.2	name	m	m				[ ]			SEC
5.2.2.1.3	time	m	m				[ ]			SEC
5.2.2.1.4	signed-data	o	o				[ ]			SEC
5.2.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
5.2.2.1.6	encrypted-data	o	o				[ ]			SEC
5.2.2.2	certificate	o	o				[ ]			SEC
6	user-security-labels	c	c	p45 and p51			[ ]			SEC
6.1	security-policy-identifier	o	m				[ ]			SEC
6.2	security-classification	o	m				[ ]			SEC
6.3	privacy-mark	o	m				[ ]			SEC
6.4	security-categories	o	m				[ ]			SEC
6.4.1	type	o	m				[ ]			SEC
6.4.2	value (depends on “type”)	o	m				[ ]			SEC

Note – The tables below shall be filled in for an UA if the Register MS capability is supported (predicate p35).

A.6.6.3.5	MRSE operations: Register-MS (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
2	Result (NULL)	m	m				[ ]		Rec. X.413, 8.6.2	
3	Errors								(Rec. X.413)	
1	AttributeError	m	m				[ ]		9.2	
2	AutoActionRequestError	m	m				[ ]		9.3	
3	InvalidParametersError	m	m				[ ]		9.6	
4	SecurityError	m	m				[ ]		9.8	SEC
5	ServiceError	m	m				[ ]		9.10	

Note – The tables below shall be filled in if the Stored Message Alert capability is supported (predicate p52).

A.6.6.3.6	MRSE operations: Alert	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.413, 8.7.1	
1	alert-registration-identifier	m	m				[ ]			
2	new-entry	c	m	p36			[ ]			
2.1	sequence-number	m	m				[ ]			
2.2	attributes	m	m				[ ]			
2.2.1	type	m	m				[ ]			
2.2.2	values (depends on “type”)	m	m				[ ]			
2	Result (NULL)	m	m				[ ]		Rec. X.413, 8.7.2	
3	Errors								(Rec. X.413)	
1	SecurityError	m	m				[ ]		9.8	SEC

Note – Support level is described in Recommendation X.413, Table 1.

A.6.6.3.7	MRSE operations: MS Attributes	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									(Rec. X.413)	
1	child-sequence-number	m	m				[ ]		11.2.1	
2	content	m	m				[ ]		11.2.2	
3	content-confidentiality-algorithm-identifier	c	c	p42			[ ]		11.2.3	SEC
4	content-correlator	o	o				[ ]		11.2.4	
5	content-identifier	o	o				[ ]		11.2.5	
6	content-integrity-check	c	c	p43			[ ]		11.2.6	SEC
7	content-length	o	o				[ ]		11.2.7	
8	content-returned	o	o				[ ]		11.2.8	
9	content-type	m	m				[ ]		11.2.9	
10	conversion-with-loss-prohibited	o	o				[ ]		11.2.10	
11	converted-eits	o	o				[ ]		11.2.11	
12	creation-time	m	m				[ ]		11.2.12	
13	delivered-eits	o	o				[ ]		11.2.13	
14	delivery-flags	o	o				[ ]		11.2.14	
15	dl-expansion-history	o	o				[ ]		11.2.15	
16	entry-status	m	m				[ ]		11.2.16	
17	entry-type	m	m				[ ]		11.2.17	
18	intended-recipient-name	o	o	#5			[ ]		11.2.18	
19	message-delivery-envelope	m	m				[ ]		11.2.19	
20	message-delivery-identifier	o	o	#3.7.19.4			[ ]		11.2.20	
21	message-delivery-time	o	o				[ ]		11.2.21	
22	message-origin-authentication-check	c	c	p44			[ ]		11.2.22	SEC
23	message-security-label	c	c	p45			[ ]		11.2.23	SEC
24	message-submission-time	o	o				[ ]		11.2.24	
25	message-token	c	c	p44			[ ]		11.2.25	SEC
26	original-eits	o	o				[ ]		11.2.26	
27	originator-certificate	o	o				[ ]		11.2.27	SEC
28	originator-name	o	o	#5			[ ]		11.2.28	
29	other-recipient-names	o	o	#5			[ ]		11.2.29	
30	parent-sequence-number	m	m				[ ]		11.2.30	
31	per-recipient-report-delivery-fields	m	m	#3.7.35.6			[ ]		11.2.31	
32	priority	o	o				[ ]		11.2.32	
33	proof-of-delivery-request	c	c	p46 and p48			[ ]		11.2.33	SEC
34	redirection-history	o	o				[ ]		11.2.34	
35	report-delivery-envelope	m	m				[ ]		11.2.35	
36	reporting-dl-name	o	o				[ ]		11.2.36	
37	reporting-mta-certificate	o	o				[ ]		11.2.37	SEC
38	report-origin-authentication-check	c	c	p50			[ ]		11.2.38	SEC
39	security-classification	c	c	p45			[ ]		11.2.39	SEC
40	sequence-number	m	m				[ ]		11.2.40	
41	subject-submission-identifier	m	m				[ ]		11.2.41	
42	this-recipient-name	o	o				[ ]		11.2.42	

A.6.6.3.7 MRSE operations: MS Attributes		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
A.6.6.3.7.19 MessageDeliveryEnvelope									(Rec. X.411)	
1	message-delivery-identifier	m	m	#3.7.19.4			[ ]		8.3.1.1.1.1	
2	message-delivery-time	m	m				[ ]		8.3.1.1.1.2	
3	other-fields	m	m				[ ]			
3.1	content-type	m	m	#3.7.19.7			[ ]		8.2.1.1.1.34	
3.2	originator-name	m	m	#5			[ ]		8.2.1.1.1.1	
3.3	original-encoded-information-types	m	m	#3.7.19.6			[ ]		8.2.1.1.1.33	
3.4	priority	m	m				[ ]		8.2.1.1.1.8	
3.5	delivery-flags	m	m				[ ]			
3.6	other-recipient-names	m	m	#5			[ ]		8.3.1.1.1.6	
3.7	this-recipient	m	m	#5			[ ]		8.3.1.1.1.3	
3.8	originally-intended-recipient-name	m	m				[ ]		8.3.1.1.1.4	
3.9	converted-encoded-information-types	m	m	#3.7.19.6			[ ]		8.3.1.1.1.8	
3.10	message-submission-time	m	m				[ ]		8.2.1.1.2.2	
3.11	content-identifier	o	m				[ ]		8.2.1.1.1.35	
3.13	extensions	m	m				[ ]			
3.13.1	conversion-with-loss-prohibited	c	c	p11r,p1			[ ]		8.2.1.1.1.10	
3.13.2	requested-delivery-method	c	c	p23r,p1			[ ]		8.2.1.1.1.14	
3.13.3	physical-forwarding-prohibited	o	m				[ ]		8.2.1.1.1.15	PHY
3.13.4	physical-forwarding-address-request	o	m				[ ]		8.2.1.1.1.16	PHY
3.13.5	physical-delivery-modes	o	m				[ ]		8.2.1.1.1.17	PHY
3.13.6	registered-mail-type	o	m				[ ]		8.2.1.1.1.18	PHY
3.13.7	recipient-number-for-advice	o	m				[ ]		8.2.1.1.1.19	PHY
3.13.8	physical-rendition-attributes	o	m				[ ]		8.2.1.1.1.20	PHY
3.13.9	originator-return-address	o	m				[ ]		8.2.1.1.1.21	PHY
3.13.10	physical-delivery-report-request	o	m				[ ]		8.2.1.1.1.24	PHY
3.13.11	originator-certificate	o	o				[ ]		8.2.1.1.1.25	SEC
3.13.13	message-token	c	c	p44			[ ]		8.2.1.1.1.26	SEC
3.13.14	content-confidentiality-algorithm-identifier	c	c	p42			[ ]		8.2.1.1.1.27	SEC
3.13.15	content-integrity-check	c	c	p43			[ ]		8.2.1.1.1.28	SEC
3.13.16	message-origin-authentification-check	c	c	p44			[ ]		8.2.1.1.1.29	SEC
3.13.17	message-security-label	c	c	p45			[ ]		8.2.1.1.1.30	SEC
3.13.18	proof-of-delivery	c	c	p46 and p48			[ ]		8.2.1.1.1.32	SEC
3.13.19	redirection-history	o	m				[ ]			
	intended-recipient-name	m	m				[ ]		8.3.1.1.1.4	
	redirection-reason	m	m				[ ]		8.3.1.1.1.5	
3.13.20	dl-expansion-history	m	m				[ ]		8.3.1.1.1.7	

A.6.6.3.7.19.4 MTSIdentifier		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									Rec. X.411, 8.5.1	
1	global-domain-identifier	m	m	#3.7.19.5			[ ]			
2	local-identifier	m	m				[ ]			

A.6.6.3.7.19.5 GlobalDomainIdentifier		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									Rec. X.411, 8.5.2	
1	country-name	m	m				[ ]			
1.1	x121-dcc-code	m	m				[ ]			
1.2	iso-3166-alpha2-code	m	m				[ ]			
2	administration-domain-name	m	m				[ ]			
2.1	numeric	m	m				[ ]			
2.2	printable	m	m				[ ]			
3	private-domain-identifier	m	m				[ ]			
3.1	numeric	m	m				[ ]			
3.2	printable	m	m				[ ]			

A.6.6.3.7.19.6 EncodedInformationTypes								Rec. X.411, 8.5.6	
1	built-in-encoded-information-types	m	m			[ ]			
1.1	undefined	o	o			[ ]			
1.2	ia5-text	o	o			[ ]			
1.3	g3-facsimile	o	o			[ ]			
1.4	g4-class-1	o	o			[ ]			
1.5	teletex	o	o			[ ]			
1.6	videotex	o	o			[ ]			
1.7	voice	o	o			[ ]			
1.8	sfd	o	o			[ ]			
1.9	mixed-mode	o	o			[ ]			
2	non-basic-parameters	o	o			[ ]			
2.1	g3-facsimile	o	o			[ ]			
2.2	teletex	o	o			[ ]			
2.2.1	graphic-character-sets	o	o			[ ]			
2.2.2	control-character-sets	o	o			[ ]			
2.2.3	page-formats	o	o			[ ]			
2.2.4	miscellaneous-terminal-capabilities	o	o			[ ]			
2.2.5	private-use	o	o			[ ]			
2.3	g4-class-1-and-mixed-mode	o	o			[ ]			
3	external-encoded-information-types	o	o	n4		[ ]			

Note n4 – Same support as corresponding built-in-encoded-information-types.

A.6.6.3.7.19.7 ContentType								Rec. X.411, 8.2.1.1.34	
1	built-in	m	m			[ ]			
1.1	unidentified	o	o			[ ]			
1.2	external	o	o			[ ]			
1.3	interpersonal-84	o	o			[ ]			
1.4	interpersonal-88	o	o			[ ]			
2	extended	o	o			[ ]			

A.6.6.3.7.35 ReportDeliveryEnvelope		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
									(Rec. X.411)	
1	subject-submission-identifier	m	m				[ ]		8.3.1.2.1.1	
2	content-identifier	c	m	p30			[ ]		8.2.1.2.1.35	
3	content-type	m	m				[ ]		8.2.1.2.1.34	
4	original-encoded-information-types	m	m				[ ]		8.2.1.2.1.33	
5	extensions	m	m				[ ]			
5.1	message-security-label	c	c	p45			[ ]		8.2.1.2.1.30	SEC
5.2	content-correlator	c	m				[ ]		8.2.1.1.1.36	
5.3	originator-and-DL-expansion-history	m	m				[ ]		8.3.1.2.1.3	
5.4	reporting-DL-name	c	c	p26,p1			[ ]		8.3.1.2.1.4	
5.5	reporting-MTA-certificate	o	o				[ ]		8.3.1.2.1.12	SEC
5.6	report-origin-authentification-check	c	c	p50			[ ]		8.3.1.2.1.13	SEC
6	per-recipient-fields	m	m				[ ]			
1	recipient-name	m	m				[ ]		8.3.1.2.1.2	
2	delivery	m	m				[ ]			
2.1	message-delivery-time	m	m				[ ]		8.3.1.2.1.8	
2.2	type-of-MTS-user	m	m				[ ]		8.3.1.2.1.9	
3	non-delivery	m	m				[ ]			
3.1	non-delivery-reason-code	m	m				[ ]		8.3.1.2.1.10	
3.2	non-delivery-diagnostic-code	m	m				[ ]		8.3.1.2.1.11	
4	delivered-encoded-information-types	m	m				[ ]			
5	originally-intended-recipient-name	m	m				[ ]		8.3.1.1.1.4	
6	supplementary-information	o	c	p1			[ ]		8.3.1.2.1.6	
7	extensions	c	c	p46 and p48			[ ]			
7.1	redirection-history	o	m				[ ]			
7.1.1	intended-recipient-name	m	m				[ ]		8.3.1.1.1.4	
7.1.2	redirection-reason	m	m				[ ]		8.3.1.1.1.5	
7.2	physical-forwarding-address	m	m				[ ]		8.3.1.2.1.7	PHY
7.3	recipient-certificate	o	o				[ ]		8.3.1.1.2.1	SEC
7.4	proof-of-delivery	c	c	p46 and p48			[ ]		8.3.1.1.1.2	SEC

Note – The tables below shall be filled in only if Auto-forward or Auto-alert capabilities are supported (predicates p52, p53).

A.6.6.3.8 MRSE operations: Auto-Actions		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Auto-forward								Rec. X.413, 12.1	
1	AutoForwardRegistrationParameter						[ ]			
1.1	filter	o	m	#3.1.5			[ ]			
1.2	auto-forward-arguments	m	m				[ ]			
1.3	delete-after-auto-forwarding	o	m				[ ]			
1.4	other-parameters	o	o				[ ]		”	

A.6.6.3.8	E operations: Auto-Actions (cont.)	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
2	Auto-alert								Rec. X.413, 12.2	
1	AutoAlertRegistrationParameter						[ ]			
1.1	filter	o	m	#3.1.5			[ ]			
1.2	alert-addresses	o	o				[ ]			
1.2.1	address	m	m				[ ]			
1.2.2	alert-qualifier	o	o				[ ]			
1.3	requested-attributes	o	m				[ ]			
1.3.1	type	m	m				[ ]			
1.3.2	from	o	m				[ ]			
1.3.3	count	o	m				[ ]			

A.6.6.3.9	MRSE operations: Errors	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	AttributeError								Rec. X.413, 9.2	
1	invalid-attribute-value	m	m				[ ]			
2	unavailable-attribute-type	m	m				[ ]			
3	inappropriate-matching	m	m				[ ]			
4	attribute-type-not-subscribed	m	m				[ ]			
5	inappropriate-for-operation	m	m				[ ]			
2	AutoActionRequestError								Rec. X.413, 9.3	
1	unavailable-auto-action-type	m	m				[ ]			
2	auto-action-type-not-subscribed	m	m				[ ]			
3	DeleteError								Rec. X.413, 9.4	
1	child-entry-specified	m	m				[ ]			
2	delete-restriction-problem	m	m				[ ]			

A.6.6.3.9	MRSE operations: Errors	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
4	FetchRestrictionError								Rec. X.413, 9.5	
1	content-type-problem	m	m				[ ]			
2	eit-problem	m	m				[ ]			
3	content-length-problem	m	m				[ ]			
5	RangeError								Rec. X.413, 9.7	
1	reversed	m	m				[ ]			
6	RecipientImproperlySpecified								MTS 7	
1	improperly-specified-recipients	m	m				[ ]			
7	SequenceNumberError								Rec. X.413, 9.9	
1	no-such-entry	m	m				[ ]			
8	ServiceError								Rec. X.413, 9.10	
1	busy	m	m				[ ]			
2	unavailable	m	m				[ ]			
3	unwilling-to-perform	m	m				[ ]			

A.6.6.4 *Abstract MASE Operations*

Note – The tables below shall be filled in, for an UA, if the Register operation is supported.

A.6.6.4.1	MASE operation: Register	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.411, 8.4.1.1.1	
1	user-name	c	m	p39			[ ]			
2	user-address	c	m	p39			[ ]			
2.1	x121	m	m				[ ]			
2.1.1	x121-address	m	m				[ ]			
2.1.2	tsap-id	m	m				[ ]			
2.2	presentation	m	m				[ ]			
3	deliverable-encoded-Information-types	c	m	p39 #3.7.19.6			[ ]			
4	deliverable-maximum-content-length	c	m	p39			[ ]			
5	default-delivery-controls	o	m				[ ]			
5.1	restrict	o	m				[ ]			
5.2	permissible-operations	o	m				[ ]			
5.3	permissible-maximum-content-length	o	m				[ ]			
5.4	permissible-lowest-priority	o	m				[ ]			
5.5	permissible-content-types	o	m	#3.7.19.7			[ ]			
5.6	permissible-encoded-information-types	o	m	#3.7.19.6			[ ]			
6	deliverable-content-types	c	m	p39 #3.7.19.7			[ ]			
7	labels-and-redirections	c	c	p103 p104			[ ]			
7.1	user-security-label	c	c	p45 and p51			[ ]			SEC
7.1.1	security-policy-identifier	o	m				[ ]			SEC
7.1.2	security-classification	o	m				[ ]			SEC
7.1.3	privacy-mark	o	m				[ ]			SEC
7.1.4	security-categories	o	m				[ ]			SEC
7.2	recipient-assigned-alternate-recipient	c	c	p10,pl #5			[ ]			
2	Result (NULL)	m	m				[ ]		Rec. X.411, 8.4.1.1.2	
3	Errors								Rec. X.411, 8.4.1.1.3	
1	RegisterRejected	m	m				[ ]			
2	RemoteBindError	m	c	p2			[ ]			

Note – The tables below shall be filled in, for an UA, if ChangeCredentials UA to MS operation is supported (see A.6.5.4.3).

A.6.6.4.2	MASE operation: ChangeCredentials UA to MS	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	ARGUMENT								Rec. X.411, 8.4.1.2.1	
1	old-credentials	m	m				[ ]			
1.1	simple	m	m				[ ]			
1.1.1	IA5String	o	m				[ ]			
1.1.2	OCTET STRING	o	m				[ ]			
1.2	strong	c	c	p51			[ ]			SEC
1.2.1	bind-token	m	m				[ ]			SEC
1.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
1.2.1.2	name	m	m				[ ]			SEC
1.2.1.3	time	m	m				[ ]			SEC
1.2.1.4	signed-data	o	o				[ ]			SEC
1.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
1.2.1.6	encrypted-data	o	o				[ ]			SEC
1.2.2	certificate	o	o				[ ]			SEC
2	new-credentials	m	m				[ ]			
2.1	simple	m	m				[ ]			
2.1.1	IA5String	m	o				[ ]			
2.1.2	OCTET STRING	m	o				[ ]			
2.2	strong	c	c	p51			[ ]			SEC
2.2.1	bind-token	m	m				[ ]			SEC
2.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
2.2.1.2	name	m	m				[ ]			SEC
2.2.1.3	time	m	m				[ ]			SEC
2.2.1.4	signed-data	o	o				[ ]			SEC
2.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
2.2.1.6	encrypted-data	o	o				[ ]			SEC
2.2.2	certificate	o	o				[ ]			SEC
2	Result (NULL)	m	m				[ ]		Rec. X.411, 8.4.1.2.2	
3	Errors								Rec. X.411, 8.4.1.2.3	
1	NewCredentialsUnacceptable	m	m				[ ]			
2	OldCredentialsIncorrectlySpecified	m	m				[ ]			
3	RemoteBindError	m	c	p2			[ ]			

Note – These tables below shall be filled in, for an MS, if ChangeCredentials MS to UA operation is supported (see A.6.5.4.2).

A.6.6.4.3	MASE operation: ChangeCredentials MS to UA	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Argument								Rec. X.411, 8.4.1.2.1	
1	old-credentials	m	m				[ ]			
1.1	simple	m	m				[ ]			
1.1.1	IA5String	m	m				[ ]			
1.1.2	OCTET STRING	m	m				[ ]			
1.2	strong	c	c	p51			[ ]			SEC
1.2.1	bind-token	m	m				[ ]			SEC
1.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
1.2.1.2	name	m	m				[ ]			SEC
1.2.1.3	time	m	m				[ ]			SEC
1.2.1.4	signed-data	o	o				[ ]			SEC
1.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
1.2.1.6	encrypted-data	o	o				[ ]			SEC
1.2.2	certificate	o	o				[ ]			SEC
2	new-credentials	m	m				[ ]			
2.1	simple	m	m				[ ]			
2.1.1	IA5String	m	m				[ ]			
2.1.2	OCTET STRING	m	m				[ ]			
2.2	strong	c	c	p51			[ ]			SEC
2.2.1	bind-token	m	m				[ ]			SEC
2.2.1.1	signature-algorithm-identifier	m	m				[ ]			SEC
2.2.1.2	name	m	m				[ ]			SEC
2.2.1.3	time	m	m				[ ]			SEC
2.2.1.4	signed-data	o	o				[ ]			SEC
2.2.1.5	encryption-algorithm-identifier	o	o				[ ]			SEC
2.2.1.6	encrypted-data	o	o				[ ]			SEC
2.2.2	certificate	o	o				[ ]			SEC
2	Result (NULL)	m	m				[ ]		Rec. X.411, 8.4.1.2.2	
3	Errors								Rec. X.411, 8.4.1.2.3	
1	NewCredentialsUnacceptable	m	m				[ ]			
2	OldCredentialsIncorrectlySpecified	m	m				[ ]			
3	RemoteBindError	n/a	n/a							

A.6.6.5 *ORnames*

ORNames consist of a mandatory address part and an optional directory-name part. The address part is a COMPONENT OF ORAddress. Recommendation X.402, 18.5 distinguishes five different types of ORAddress.

This subclause deals with remote MTS-user ORNames only. The register operation may enable the MTS-user to change its local ORName. An MD is not required to provide MTS-users with the ability to change their ORNames. If it does so, the MD may restrict that ability. It may prohibit certain MTS-users from changing their ORNames, or it may restrict the scope of the change to a locally defined subset of the components of their ORnames. A proposed new ORNames shall be rejected if it is already assigned to another MTS-user.

The five different types of ORAddress are presented in the table below.

A.6.6.5.1	ORnames Forms	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
1	Mnemonic OR Address	m	m				[ ]		Rec. X.402, 18.5.1	
2	Numeric OR Address	m	m				[ ]		Rec. X.402, 18.5.2	
3	Terminal OR Address	m	m				[ ]		Rec. X.402, 18.5.4	
4	Formatted Postal OR Address	m	m				[ ]		Rec. X.402, 18.5.3	PHY
5	Unformatted Postal OR Address	m	m				[ ]		Rec. X.402, 18.5.3	PHY

A.6.6.5.1.1	OR Name with Mnemonic OR Address	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
	OR Name								Rec. X.411, 8.5.5	
1	address	m	m				[ ]			
1.1	country-name	m	m				[ ]			
1.1.1	x121-dcc-code	m	m				[ ]			
1.1.2	iso-3166-alpha2-code	m	m				[ ]			
1.2	administration-domain-name	m	m				[ ]			
1.2.1	numeric	m	m				[ ]			
1.2.2	printable	m	m				[ ]			
1.3	private-domain-name	m	m				[ ]			
1.3.1	numeric	m	m				[ ]			
1.3.2	printable	m	m				[ ]			
1.4	organization-name	m	m				[ ]			
1.5	personal-name	m	m				[ ]			
1.5.1	surname	m	m				[ ]			
1.5.2	given-name	m	m				[ ]			
1.5.3	initials	m	m				[ ]			
1.5.4	generational-qualifier	m	m				[ ]			
1.6	organizational-unit-names	m	m				[ ]			
1.6.2	OrganizationalUnitName	m	m				[ ]			
1.7	domain-defined-attributes	o	c	p1			[ ]			
1.8	extension-attributes	m	m				[ ]			
1.8.1	CommonName	m	m				[ ]			
1.8.2	TeletexCommonName	m	m				[ ]			
1.8.3	TeletexOrganizationName	m	m				[ ]			
1.8.4	TeletexPersonalName	m	m				[ ]			
1.8.4.1	surname	m	m				[ ]			
1.8.4.2	given-name	m	m				[ ]			
1.8.4.3	initials	m	m				[ ]			
1.8.4.4	generational-qualifier	m	m				[ ]			
1.8.4.5	TeletexOrganizationalUnitNames	m	m				[ ]			
1.8.4.6	TeletexDomainDefinedAttributes	o	c	p1			[ ]			
2	directory-name	o	c	p1			[ ]			

A.6.6.5.1.2 OR Name with Numeric OR Address		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference Rec. X.411, 8.5.5	
	OR Name									
1	address	m	m				[ ]			
1.1	country-name	m	m				[ ]			
1.1.1	x121-dcc-code	m	m				[ ]			
1.1.2	iso-3166-alpha2-code	m	m				[ ]			
1.2	administration-domain-name	m	m				[ ]			
1.2.1	numeric	m	m				[ ]			
1.2.2	printable	m	m				[ ]			
1.3	private-domain-name	m	m				[ ]			
1.3.1	numeric	m	m				[ ]			
1.3.2	printable	m	m				[ ]			
1.4	numeric-user-identifier	m	m				[ ]			
1.5	domain-defined-attributes	o	m				[ ]			
2	directory-name	o	c	p1			[ ]			

A.6.6.5.1.3 OR Name with Terminal OR Address		Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference Rec. X.411, 8.5.5	
	OR Name									
1	address	m	m				[ ]			
1.1	country-name	m	m				[ ]			
1.1.1	x121-dcc-code	m	m				[ ]			
1.1.2	iso-3166-alpha2-code	m	m				[ ]			
1.2	administration-domain-name	m	m				[ ]			
1.2.1	numeric	m	m				[ ]			
1.2.2	printable	m	m				[ ]			
1.3	network-address	m	m				[ ]			
1.4	terminal-identifier	m	m				[ ]			
1.5	private-domain-name	m	m				[ ]			
1.5.1	numeric	m	m				[ ]			
1.5.2	printable	m	m				[ ]			
1.6	domain-defined-attributes	o	c	p1			[ ]			
2	extension-attributes	m	m				[ ]			
2.1	ExtendedNetworkAddress	m	m				[ ]			
2.1.1	e163-4-address	m	m				[ ]			
2.1.1.1	number	m	m				[ ]			
2.1.1.2	sub-address	m	m				[ ]			
2.1.2	psap-address	m	m				[ ]			
2.2	TerminalType	m	m				[ ]			
3	directory-name	o	c	p1			[ ]			

A.6.6.5.1.4	OR Name with FormattedPostal OR Address	Def UA	Def MTA	Note	Permitted range of values UA	Permitted range of values MTA	Impl	Value supported	Clause reference	
	OR Name								Rec. X.411, 8.5.5	PHY
1	address	m	m				[ ]			
1.1	country-name	m	m				[ ]			
1.1.1	x121-dcc-code	m	m				[ ]			
1.1.2	iso-3166-alpha2-code	m	m				[ ]			
1.2	administration-domain-name	m	m				[ ]			
1.2.1	numeric	m	m				[ ]			
1.2.2	printable	m	m				[ ]			
1.3	private-domain-name	m	m				[ ]			
1.3.1	numeric	m	m				[ ]			
1.3.2	printable	m	m				[ ]			
1.4	extension-attributes	m	m				[ ]			
1.4.1	physical-delivery-country-name	m	m				[ ]			
1.4.1.1	x121-dcc-code	m	m				[ ]			
1.4.1.2	iso-3166-alpha2-code	m	m				[ ]			
1.4.2	physical-delivery-office-name	m	m				[ ]			
1.4.2.1	printable	m	m				[ ]			
1.4.2.2	teletex	m	m				[ ]			
1.4.3	physical-delivery-office-number	m	m				[ ]			
1.4.3.1	printable	m	m				[ ]			
1.4.3.2	teletex	m	m				[ ]			
1.4.4	physical-delivery-organization-name	m	m				[ ]			
1.4.4.1	printable	m	m				[ ]			
1.4.4.2	teletex	m	m				[ ]			
1.4.5	physical-delivery-personal-name	m	m				[ ]			
1.4.5.1	printable	m	m				[ ]			
1.4.5.2	teletex	m	m				[ ]			
1.4.6	postal code	m	m				[ ]			
1.4.6.1	numeric	m	m				[ ]			
1.4.6.2	printable	m	m				[ ]			
1.4.7	poste-restante-address	m	m				[ ]			
1.4.7.1	printable	m	m				[ ]			
1.4.7.2	teletex	m	m				[ ]			
1.4.8	post-office-box-address	m	m				[ ]			
1.4.8.1	printable	m	m				[ ]			
1.4.8.2	teletex	m	m				[ ]			
1.4.9	pds-name	m	m				[ ]			
1.4.10	street-address	m	m				[ ]			
1.4.10.1	printable	m	m				[ ]			
1.4.10.2	teletex	m	m				[ ]			
1.4.11	unique-postal-name	m	m				[ ]			
1.4.11.1	printable	m	m				[ ]			
1.4.11.2	teletex	m	m				[ ]			
1.4.12	extension-postal-OR-address-components	m	m				[ ]			
1.4.12.1	printable	m	m				[ ]			
1.4.12.2	teletex	m	m				[ ]			
1.4.13	extension-physical-delivery-address-components	m	m				[ ]			
1.4.13.1	printable	m	m				[ ]			
1.4.13.2	teletex	m	m				[ ]			
1.4.14	local-postal-attributes	m	m				[ ]			
1.4.14.1	printable	m	m				[ ]			
1.4.14.2	teletex	m	m				[ ]			
2	directory-name	o	c	p1			[ ]			

A.6.6.5.1.5 OR Name with Unformatted Postal OR Address		Def UA	Def MTA	Note	Permitted range of values UA MTA	Impl	Value supported	Clause reference	
	OR Name							Rec. X.411, 8.5.5	PHY
1	address	m	m			[ ]			
1.1	country-name	m	m			[ ]			
1.1.1	x121-dcc-code	m	m			[ ]			
1.1.2	iso-3166-alpha2-code	m	m			[ ]			
1.2	administration-domain-name	m	m			[ ]			
1.2.1	numeric	m	m			[ ]			
1.2.2	printable	m	m			[ ]			
1.3	private-domain-name	m	m			[ ]			
1.3.1	numeric	m	m			[ ]			
1.3.2	printable	m	m			[ ]			
1.4	extension-attributes	m	m			[ ]			
1.4.1	unformatted-postal-address	m	m			[ ]			
1.4.1.1	printable	m	m			[ ]			
1.4.1.2	teletex	m	m			[ ]			
1.4.2	physical-delivery-country-name	m	m			[ ]			
1.4.2.1	x121-dcc-code	m	m			[ ]			
1.4.2.2	iso-3166-alpha2-code	m	m			[ ]			
1.4.3	postal code	m	m			[ ]			
1.4.3.1	numeric	m	m			[ ]			
1.4.3.2	printable	m	m			[ ]			
1.4.4	pds-name	m	m			[ ]			
2	directory-name	o	c	p1		[ ]			

A.6.6.6 *Parameters bounds*

A.6.6.6 Parameters bounds		Note	Upper bounds UA and MS	Value supported	Comment
1	ub-integer-options		256	_____	
2	ub-queue-size		'7FFFFFFF'H	_____	
3	ub-content-length		'7FFFFFFF'H	_____	
4	ub-password-length		62	_____	
5	ub-bit-options		16	_____	
6	ub-content-types		1024	_____	
7	ub-tsap-id-length		16	_____	
8	ub-recipients		32767	_____	
9	ub-content-id-length		16	_____	
10	ub-x121-address-length		15	_____	
11	ub-mts-user-types		256	_____	
12	ub-reason-codes		32767	_____	

A.6.6.6 Parameters bounds		Note	Upper bounds UA and MS	Value supported	Comment
13	ub-diagnostic-codes		32767	_____	
14	ub-supplementary-info-length		256	_____	
15	ub-extension-types		256	_____	
16	ub-recipient-number-for-advice-length		32	_____	
17	ub-content-correlator-length		512	_____	
18	ub-redirections		512	_____	
19	ub-dl-expansions		512	_____	
20	ub-built-in-content-type		32767	_____	
21	ub-local-id-length		32	_____	
22	ub-mhs-name		32	_____	
23	ub-country-name-numeric-length		3	_____	
24	ub-country-name-alpha-length		2	_____	
25	ub-domain-name-length		16	_____	
26	ub-terminal-id-length		24	_____	
27	ub-organization-name-length		64	_____	
28	ub-numeric-user-id-length		32	_____	
29	ub-surname-length		40	_____	
30	ub-given-name-length		16	_____	
31	ub-initials-length		5	_____	
32	ub-generation-qualifier		3	_____	
33	ub-organizational-units		4	_____	
34	ub-organizational-unit-name-length		32	_____	
35	ub-domain-defined-attributes		4	_____	
36	ub-domain-defined-attribute-type-length		8	_____	
37	ub-domain-defined-attribute-value-length		128	_____	
38	ub-extension-attributes		256	_____	
39	ub-common-name-length		64	_____	
40	ub-postal-code-length		16	_____	
41	ub-physical-address-lines		16	_____	
42	ub-unformatted-address-length		180	_____	
43	ub-e163-4-number-length		15	_____	
44	ub-el63-4-sub-address-length		40	_____	

A.6.6.6 Parameters bounds		Note	Upper bounds UA and MS	Value supported	Comment
45	ub-built-in-encoded-information-types		32	_____	
46	ub-teletex-private-use-length		128	_____	
47	ub-encoded-information-types		1024	_____	
48	ub-security-labels		256	_____	
49	ub-privacy-mark-length		128	_____	
50	ub-security-categories		64	_____	
51	ub-labels-and-redirections		256	_____	
52	ub-transfer		512	_____	
53	ub-bilateral-info		1024	_____	
54	ub-additional-info		1024	_____	
55	ub-pds-name-length		16	_____	
56	ub-postal-code-length		16	_____	
57	ub-pds-parameter-length		30	_____	
58	ub-unformatted-address-length		180	_____	
60	ub-alert-adresses		16	_____	
61	ub-attribute-values		32767	_____	
62	ub-attributes-supported		1024	_____	
63	ub-auto-actions		16	_____	
64	ub-auto-registrations		1024	_____	
65	ub-default-registration		1024	_____	
66	ub-entry-types		16	_____	
67	ub-error-reasons		16	_____	
68	ub-information-bases		16	_____	
69	ub-messages		215-1	_____	
70	ub-nested-filters		32	_____	
71	ub-per-auto-action		32767	_____	
72	ub-nested-filters		32	_____	
73	ub-per-entry		1024	_____	
74	ub-summaries		16	_____	
75	ub-Information-objects		16	_____	
76	ub-alert-addresses		16	_____	

A.6.7 *Negociation capabilities*

"N/A".

A.6.8 *Protocol Error Handling*

"N/A".

A.6.9 *Other information*

The table below can be used to provide any other relevant information.

Ref. No.	Other information

A.7 *Multi-layer dependencies*

A.7.1 *Upper layers*

An UA or MS must satisfy certain interpersonal messaging specific requirements to qualify as an IPMS UA or MS. In particular, an IPM UA or MS shall support MS attributes specific to interpersonal messaging. These additional requirements are described in the Recommendation X.481 (P2 PICS), A.6.6.3.

A.7.2 *Lower layers*

The P7 protocol is defined in the following Application Contexts:

– ms-access;

– ms-reliable access.

Each of these Application Contexts imply the modifications shown in the tables below to the referenced elements within the appropriate PICS proforma.

A.7.2.1 *ROSE (Recommendation X.249)*

PICS reference	ms-access		ms-reliable-access	
	UA	MS	UA	MS
A.6.4/2	N/A	N/A	N/A	N/A
A.6.5/2	N/A	N/A	N/A	N/A
A.6.14/2	N/A	N/A	N/A	N/A
A.6.15/2	N/A	N/A	N/A	N/A

A.7.2.2 *RTSE (Recommendation X.248)*

PICS reference	ms-access		ms-reliable-access	
	UA	MS	UA	MS
A.6.2.1.1	N/A	N/A	m	m
A.6.2.1.2	N/A	N/A	N/A	N/A
A.6.1.1	N/A	N/A	m	N/A
A.6.1.2	N/A	N/A	N/A	m

A.7.2.3 *ACSE (ISO/IEC DIS 8650-2)*

PICS reference	ms-access		ms-reliable-access	
	UA	MS	UA	MS
A.7.1	m	m	m	m
A.7.2	N/A	N/A	N/A	N/A
A.8.1	m	N/A	m	N/A
A.8.2	N/A	m	N/A	m

A.7.2.4 *Presentation (ISO/IEC DIS 8823-2)*

PICS reference	ms-access		ms-reliable-access	
	UA	MS	UA	MS
A.7.1/1	m	m	m	m
A.7.1/2	N/A	N/A	N/A	N/A
A.7.2/1	m	N/A	m	N/A
A.7.2/2	N/A	m	N/A	m