INTERNATIONAL TELECOMMUNICATION UNION

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TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

SERIES X: DATA NETWORKS AND OPEN SYSTEM COMMUNICATION

Message Handling Systems

Messaging Handling Systems – P7 protocol PICS proforma

ITU-T Recommendation X.484
Superseded by a more recent version

(Previously "CCITT Recommendation")

Superseded by a more recent version

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For further details, please refer to ITU-T List of Recommendations.

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FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (ITU). The ITU-T 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 World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1 (Helsinki, March 1-12, 1993).

ITU-T Recommendation X.484, was revised by ITU-T Study Group 7 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 5th of October 1996.

NOTE

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

CONTENTS

SUMMARY

This Recommendation provides the Protocol Implementation Conformance Statement (PICS) proforma for the P7 protocol specified in Recommendations X.413 and X.419 and in ISO/IEC 10021 Parts 5 and 6. The PICS proforma presents in tabular form the mandatory and optional elements of the P7 protocol.

INTRODUCTION

This Recommendation is one in a set of Recommendations defining Message Handling in a distributed open system 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 users (the recipients). The MTS comprises a number of Message Transfer Agents (MTAs), which transfer messages and deliver them to their recipients.

To evaluate the capabilities 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 statement is called a Protocol Implementation Conformance Statement (PICS).

Recommendation X.484

MESSAGING HANDLING SYSTEMS – P7 PROTOCOL PICS PROFORMA

(Geneva, 1992: revised in 1996)

1 Scope

This Recommendation provides the Protocol Implementation Conformance Statement (PICS) proforma for the P7 protocol specified in Recommendations X.413 (1988) and X.419 (1988) and in ISO/IEC 10021:1990 Parts 5 and 6. The PICS proforma presents in tabular form the mandatory and optional elements of the P7 protocol.

This PICS proforma is based on the relevant guidance for PICS proformas given in Recommendation X.296. Details of the use of this proforma is provided in the Annex A.

2 Normative references

The following Recommendations and other references contain provisions which, through reference in this text, constitute provisions of this Recommendation. At the time of publication, the editions indicated were valid. All Recommendations and other references are subject to revision: all users of this Recommendation are therefore encouraged to investigate the possibility of applying the most recent edition of the Recommendations and other references listed below. A list of the currently valid ITU-T Recommendations is regularly published.

Amendments and corrigenda to the base standards referenced are listed in Annex B.

NOTE – References in the body of this Recommendation to specific clauses of ISO/IEC standards shall be considered to refer also to the corresponding clauses of the equivalent ITU-T Recommendations (as noted below) unless otherwise stated.

- ITU-T Recommendation X.290 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – General concepts.* (See also ISO/IEC 9646-1.)
- ITU-T Recommendation X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements.* (See also ISO/IEC 9646-7.)
- CCITT Recommendation X.402 (1992), *Message Handling System – Overall architecture.* (See also ISO/IEC 10021-2.)
- CCITT Recommendation X.411 (1992), *Message handling systems – Message transfer system: Abstract service definition and procedures.* (See also ISO/IEC 10021-4.)
- CCITT Recommendation X.413 (1992), *Message handling systems – Message store: Abstract service definition.* (See also ISO/IEC 10021-5.)
- CCITT Recommendation X.419 (1992), *Message handling systems – Protocol specifications.* (See also ISO/IEC 10021-6.)
- ISO/IEC 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts.*
- ISO/IEC 9646-7:1995, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation conformance statements.*
- ISO/IEC 10021-2:1990, *Information technology – Text Communication – Message-Oriented Text Interchange Systems (MOTIS) – Part 2: Overall Architecture.*
- ISO/IEC 10021-4:1990, *Information technology – Text Communication – Message-Oriented Text Interchange Systems (MOTIS) – Part 4: Message Transfer System: Abstract Service Definition and Procedures.*

– ISO/IEC 10021-5:1994, *Information technology – Text Communication – Message-Oriented Text Interchange Systems (MOTIS) – Part 5: Message Store: Abstract Service Definition.*

– ISO/IEC 10021-6:1990, *Information technology – Text Communication – Message-Oriented Text Interchange Systems (MOTIS) – Part 6: Protocol Specifications.*

3 Definitions

Terms used in this Recommendation are defined in the referenced base Standards.

4 Abbreviations

For the purposes of this Recommendation, the following abbreviations are used.

ASN.1 Abstract Syntax Notation One

IEC International Electrotechnical Commission

ISO International Organization for Standardization

ISP International Standardized Profile

MHS Message Handling Systems

MS Message Store

MTA Message Transfer Agent

OSI Open Systems Interconnection

PDU Protocol Data Unit

PICS Protocol Implementation Conformance Statement

UA User Agent

Support level for protocol elements and features:

m mandatory support

o optional support

c conditional support

i out of scope

– not applicable

5 Conformance

A conforming PICS proforma shall be technically equivalent to the text of the PICS proforma in this Recommendation and shall preserve the numbering and ordering of the items in the PICS proforma in this Recommendation.

A PICS which conforms to this Recommendation shall:

a) describe an implementation which conforms to Recommendations X.413 and X.419 and to ISO/IEC 10021 parts 5 and 6;

b) be a conforming PICS proforma, which has been completed in accordance with the instructions for completion given in Annex A;

c) include the information necessary to uniquely identify both the supplier and the implementation.

NOTE – The ISO/IEC and ITU-T conformance requirements currently differ with respect to support of P7 application contexts, as described in A.1.2.

Annex A[1)]

PICS Proforma for MS Access (P7)

(This annex forms an integral part of this Recommendation)

In the event of a discrepancy becoming apparent in the body of this Recommendation and the tables in this annex, this annex is to take precedence.

Subclause A.1 specifies the basic requirements for conformance to this Recommendation. Subclause A.2 is allocated but not used, it is present to keep the numbering alignment with the corresponding ISP. Subclause A.3 allows additional information to be provided for certain aspects of an implementation where no specific requirements are included in the base specifications. All subclauses shall be completed as appropriate.

NOTE – The numbering of subclauses and items in this annex is identical to the one in ISO/IEC 10611-3 "Information technology – International Standardized Profiles AMH1n – Message Handling Systems – Common Messaging – Part 5: AMH13-MS Access (P7)".

In each table, the "Base" column reflects the level of support required for conformance to the base standard, using the classification and notation defined in A.0.2.5.

The "Ref" column is provided for cross-referencing purposes. The notation employed for references also indicates composite elements which contain sub-elements (a sub-element reference is prefixed by the reference of the composite element).

Contents of the PICS proforma

A.0 Identification of the implementation

A.0.1 Identification of PICS proforma corrigenda

The supplier of the PICS proforma shall identify any corrigenda that have been applied (i.e. Technical Corrigendum or equivalent) to the published proforma. Suppliers of the proforma should modify the proforma, or attach relevant additional pages in order to apply the corrigenda and then record the application of the corrigenda in the table below.

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1) **Copyright release for PICS proformas**
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.

Corrigenda to ITU-T Recommendation X.484 (1996)

Corr:
Corr:
Corr:
Corr:
Implementors' Guide version:

A.0.2 Instructions

A.0.2.1 Purpose of the proforma

The purpose of the PICS proforma is to provide suppliers of implementations of the P7 protocol with a consistent means of stating which proforma has been implemented.

The proforma is in the form of a questionnaire and consists of a set of items. An item is provided for each capability for which an implementation choice is allowed. Items are also provided for mandatory capabilities for which no implementation choice is allowed. Each item includes an item number, an item description, a status value specifying the support requirement, and room for a support answer to be provided by the supplier.

A.0.2.2 Symbols, terms and abbreviations

The following definitions apply.

A.0.2.3 Item numbering

Each line in the PICS proforma which requires implementation detail to be entered is given a number in the first column. The item number column provides a means of uniquely referencing each possible answer within the PICS proforma.

A reference to a specific item is specified by the following sequence:

a) if the reference is to an item in another document, then the reference starts with unambiguous identifier for that document;

b) the number of the subclause enclosing the table, or the number of the table if they are numbered;

c) a solidus character "/";

d) the item number, to identify the row in which the answer appears.

A.0.2.4 Base column

The following classifications are used in this PICS to specify static conformance requirements – i.e. capability.

NOTE – The Profile column is used for functional profiles and uses the same classification.

In the case of protocol elements, the classification is relative to that of the containing element, if any. Where the constituent elements of a non-primitive element are not individually specified, then each shall be considered to have the classification of that element. Where the range of values to be supported for an element is not specified, then all values defined in the MHS base standards shall be supported.

mandatory support (**m**): The element or feature shall be fully supported. An implementation shall be able to generate the element, and/or receive the element and perform all associated procedures (i.e. implying the ability to handle both the syntax and the semantics of the element) as relevant, as specified in the MHS base standards. Where support for origination (generation) and reception are not distinguished, then both capabilities shall be assumed. Mandatory support of an MS attribute for the MS requires that it is supported in the context of all applicable supported operation arguments and results and also for use within a selector to the level of support claimed for the filter item. Mandatory support of an MS attribute by the MS-user requires that it is supported in the context of at least one supported operation argument and result or supported in a selector to the level of support claimed for the filter item (see table in A.3.5). The way in which attribute values are stored by an MS implementation, or used by a UA implementation, is otherwise a local matter.

optional support (**o**): An implementation is not required to support the element or feature. If support is claimed, the element shall be treated as if it were specified as mandatory support. If support is not claimed, and the element is an argument, then an implementation shall generate an appropriate error indication if the element is received. If support is not claimed, and the element is a result, then an implementation may ignore the element if it is received. If support of an operation as a responder is not claimed, then an appropriate error indication shall be generated (as a minimum, a ROSE reject shall be generated).

conditional support (**c**): The element shall be supported under the conditions specified in this Recommendation. If these conditions are met, the element shall be treated as if it were specified as mandatory support. If these conditions are not met, the element shall be treated as if it were specified as optional support (unless otherwise stated).

out of scope (**i**): The element is outside the scope of this Recommendation – i.e. it will not be the subject of a conformance test.

not applicable (**–**): The element is not applicable in the particular context in which this classification is used.

A.0.2.5 Support column

The "Support" column is provided for completion by the supplier of the implementation as follows:

Y	The element or feature is fully supported (i.e. satisfying the requirements of the m profile support classification).
Y-	The element or feature is minimally supported (i.e. satisfying the requirements of the m- profile support classification).
N	The element or feature is not supported, further qualified to indicate the action taken on receipt of such an element as follows: ND – the element is discarded/ignored; NR – the PDU is rejected (with an appropriate error indication where applicable).
– or blank	The element or feature is not applicable (i.e. a major feature or composite protocol element which includes this element or feature is not supported or is minimally supported).

A.0.3 Identification of the implementation

A.0.3.1 Date of statement

Ref.	Question	Response
1	Date of statement (DD/MM/YY)	

A.0.3.2 Identification of IUT

Ref.	Question	Response
1	Implementation name	
2	Implementation version	
3	Hardware name	
4	Hardware version	
5	Operating system name	
6	Operating system version	
7	Special configuration	
8	Other information	

A.0.3.3 Identification of supplier

Ref.	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.0.3.4 Identification of protocol

Ref.	Question	Response
1	Title, reference number and date of publication of the protocol standard	
2	Protocol version(s)	not applicable
3	Addenda/amendments/corrigenda implemented	
4	MHS Implementors' Guide version implemented	

A.0.3.5 Type of implementation

Ref.	Implementation Type	Response
1	MS-user (UA)	
2	MS (co-located with MTA)	
3	MS (P3 interface to MTA)	

NOTE – A separate PICS shall be completed for each implementation type for which conformance is claimed.

A.0.3.6 Global statement of conformance

Ref.	Question	Response	Comments
1	Are all mandatory base standards requirements implemented?		

A.1 Basic requirements

A.1.1 Supported application contexts

Ref.	Application Context	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ms-access	m		m			
2	ms-reliable-access	o		o			

A.1.2 Supported operations

A.1.2.1 Bind and Unbind

Ref.	Operation	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	MSBind	m		m			A.1.3.1
2	MSUnbind	m		m			

A.1.2.2 Message Submission Service Element (MSSE)

Ref.	Operation	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	MessageSubmission	m		m			A.1.3.2
2	ProbeSubmission	o		m			A.1.3.3
3	CancelDeferredDelivery	o		m			A.1.3.4
4	SubmissionControl	o		o			A.1.3.5

NOTE – An MS is only required to be able to copy the syntax of the arguments and results of these operations to the MTA or UA, as appropriate; it is not required to be able to originate such elements or to take any explicit action based on the semantics of such elements.

A.1.2.3 Message Retrieval Service Element (MRSE)

Ref.	Operation	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	Summarize	o		m			A.1.3.6
2	List	o		m			A.1.3.7
3	Fetch	m		m			A.1.3.8
4	Delete	m		m			A.1.3.9
5	Register-MS	o		m			A.1.3.10
6	Alert	o		o			A.1.3.11

A.1.2.4 Message Administration Service Element (MASE)

Ref.	Operation	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	Register	o		o			A.1.3.12
2	ChangeCredentials[1)] (MTA to UA via MS)	o		o			A.1.3.13
3	ChangeCredentials (UA to MTA via MS)	o		o			A.1.3.13
[1)] This operation is removed in the second edition of the base standard in the context of P7.							

A.1.3 Operation arguments/results

A.1.3.1 MSBind

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	initiator-name	m		m			
1.2	initiator-credentials	m		m			
1.2.1	simple	m		m			
1.2.1.1	IA5String	o		m			
1.2.1.2	OCTET STRING	o		m			
1.2.2	strong	o		o			
1.2.2.1	bind-token	m		m			
1.2.2.1.1	signature-algorithm-identifier	m		m			

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Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1.2.2.1.2	name	m		m			
1.2.2.1.3	time	m		m			
1.2.2.1.4	signed-data	o		o			
1.2.2.1.5	encryption-algorithm-identifier	o		o			
1.2.2.1.6	encrypted-data	o		o			
1.2.2.2	certificate	o		o			
1.3	security-context	o		o			A.1.9/3
1.4	fetch-restrictions	o		o			
1.4.1	allowed-content-types	o		o			
1.4.2	allowed-EITs	o		o			
1.4.3	maximum-content-length	o		o			
1.5	ms-configuration-request	o		o			
2	RESULT						
2.1	responder-credentials	m		m			
2.1.1	simple	m		m			
2.1.1.1	IA5String	m		o			
2.1.1.2	OCTET STRING	m		o			
2.1.2	strong	o		o			
2.1.2.1	bind-token	m		m			
2.1.2.1.1	signature-algorithm-identifier	m		m			
2.1.2.1.2	name	m		m			
2.1.2.1.3	time	m		m			
2.1.2.1.4	signed-data	o		o			
2.1.2.1.5	encryption-algorithm-identifier	o		o			
2.1.2.1.6	encrypted-data	o		o			
2.2	available-auto-actions	o		m			
2.2.1	auto-alert	o		o			
2.2.2	auto-forward	o		o			
2.3	available-attribute-types	o		m			
2.4	alert-indication	o		o			
2.5	content-types-supported	o		m			

A.1.3.2 MessageSubmission

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	envelope	m		m			A.1.4
1.2	content	m		m			
2	RESULT						
2.1	message-submission-identifier	m		m			A.1.8/8
2.2	message-submission-time	m		m			
2.3	content-identifier	o		m			
2.4	extensions	m		m			A.1.9/1
2.4.1	originating-MTA-certificate	o		o			
2.4.2	proof-of-submission	o		o			A.1.9/6

A.1.3.3 ProbeSubmission

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	envelope	m		m			A.1.5
2	RESULT						
2.1	probe-submission-identifier	m		m			A.1.8/8
2.2	probe-submission-time	m		m			
2.3	content-identifier	o		m			

A.1.3.4 CancelDeferredDelivery

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	message-submission-identifier	m		m			A.1.8/8
2	RESULT						
2.1	NULL	m		m			

A.1.3.5 SubmissionControl

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	controls	m		m			
1.1.1	restrict	m		o			
1.1.2	permissible-operations	m		o			
1.1.3	permissible-maximum-content-length	m		o			
1.1.4	permissible-lowest-priority	m		o			
1.1.5	permissible-security-context	o		o			A.1.9/3
2	RESULT						
2.1	waiting	m		m			
2.1.1	waiting-operations	o		m			
2.1.2	waiting-messages	o		m			
2.1.3	waiting-content-types	o		m			
2.1.4	waiting-encoded-information-types	o		m			A.1.8/10

A.1.3.6 Summarize

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	information-base-type	o		m			A.1.8/5
1.2	selector	m		m			A.1.8/7
1.3	summary-requests	o		m			
2	RESULT						
2.1	next	m		m			
2.2	count	m		m			
2.3	span	m		m			
2.4	summaries	o		m			
2.4.1	absent	m		m			
2.4.2	present	m		m			
2.4.2.1	type	m		m			
2.4.2.2	value	m		m			
2.4.2.3	count	m		m			

A.1.3.7 List

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	information-base-type	o		m			A.1.8/5
1.2	selector	m		m			A.1.8/7
1.3	requested-attributes	m		m			A.1.8/1
2	RESULT						
2.1	next	m		m			
2.2	requested	m		m			A.1.8/2

A.1.3.8 Fetch

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	information-base-type	o		m			A.1.8/5
1.2	item	m		m			
1.2.1	search	o		o			A.1.8/7
1.2.2	precise	o		o			
1.3	requested-attributes	m		m			A.1.8/1
2	RESULT						
2.1	entry-information	m		m			A.1.8/2
2.2	list	o		o			
2.3	next	o		o			

A.1.3.9 Delete

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	information-base-type	o		m			A.1.8/5
1.2	items	m		m			
1.2.1	selector	o		m			A.1.8/7
1.2.2	sequence-numbers	o		m			
2	RESULT						
2.1	NULL	m		m			

A.1.3.10 Register-MS

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	auto-action-registrations	o		o			
1.1.1	auto-forward	o		o			A.1.6
1.1.2	auto-alert	o		o			A.1.7
1.2	auto-action-deregistrations	o		o			
1.2.1	auto-forward	o		o			
1.2.2	auto-alert	o		o			
1.3	list-attribute-defaults	o		o			
1.4	fetch-attribute-defaults	o		o			
1.5	change-credentials	m		m			
1.5.1	old-credentials	m		m			
1.5.1.1	simple	m		m			
1.5.1.1.1	IA5 String	o		m			
1.5.1.1.2	OCTET STRING	o		m			
1.5.1.2	strong	o		o			
1.5.1.2.1	bind-token	m		m			A.1.3.1
1.5.1.2.2	certificate	o		o			
1.5.2	new-credentials	m		m			
1.5.2.1	simple	m		m			
1.5.2.1.1	IA5 String	o		m			
1.5.2.1.2	OCTET STRING	o		m			
1.5.2.2	strong	o		o			
1.5.2.2.1	bind-token	m		m			A.1.3.1
1.5.2.2.2	certificate	o		o			
1.6	user-security-labels	o		o			A.1.9/3
2	RESULT						
2.1	NULL	m		m			

A.1.3.11 Alert

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	alert-registration-identifier	m		m			
1.2	new-entry	o		m			A.1.8/2
2	RESULT						
2.1	NULL	m		m			

A.1.3.12 Register

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	user-name	o		o			Table A.1.10.b
1.2	user-address	o		o			
1.3	deliverable-encoded-information-types	o		o			A.1.8/10
1.4	deliverable-maximum-content-length	o		o			
1.5	default-delivery-controls	o		o			
1.5.1	restrict	o		o			
1.5.2	permissible-operations	o		o			
1.5.3	permissible-maximum-content-length	o		o			
1.5.4	permissible-lowest-priority	o		o			
1.5.5	permissible-content-types	o		o			
1.5.6	permissible-encoded-information-types	o		o			A.1.8/10
1.6	deliverable-content-types	o		o			
1.7	labels-and-redirections	o		o			
1.7.1	user-security-label	o		o			A.1.9/3
1.7.2	recipient-assigned-alternate-recipient	o		o			
2	RESULT						
2.1	NULL	m		m			

A.1.3.13 ChangeCredentials

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ARGUMENT						
1.1	old-credentials	m		m			
1.1.1	simple	m		m			
1.1.1.1	IA5String	o		m			
1.1.1.2	OCTET STRING	o		m			
1.1.2	strong	o		o			
1.1.2.1	bind-token	m		m			A.1.3.1
1.1.2.2	certificate	o		o			
1.2	new-credentials	m		m			
1.2.1	simple	m		m			
1.2.1.1	IA5String	o		m			
1.2.1.2	OCTET STRING	o		m			
1.2.2	strong	o		o			
1.2.2.1	bind-token	m		m			A.1.3.1
1.2.2.2	certificate	o		o			
2	RESULT						
2.1	NULL	m		m			

A.1.4 MessageSubmissionEnvelope

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	originator-name	m		m			Table A.1.10.b
2	original-encoded-information-types	m		m			A.1.8/10
3	content-type	m		m			A.1.8/11
4	content-identifier	o		m			
5	priority	m		m			
6	per-message-indicators	m		m			A.1.8/12
7	deferred-delivery-time	o		m			
8	extensions	m		m			A.1.9/1
8.1	recipient-reassignment-prohibited	o		o			

Superseded by a more recent version

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
8.2	dl-expansion-prohibited	o		o			
8.3	conversion-with-loss-prohibited	o		o			
8.4	latest-delivery-time	o		o			
8.5	originator-return-address	o		o			Table A.1.10.a
8.6	originator-certificate	o		o			
8.7	content-confidentiality-algorithm-identifier	o		o			
8.8	message-origin-authentication-check	o		o			A.1.9/2
8.9	message-security-label	o		o			A.1.9/3
8.10	proof-of-submission-request	o		o			
8.11	content-correlator	o		m			
8.12	forwarding-request	o		o			
9	per-recipient-fields	m		m			
9.1	recipient-name	m		m			Table A.1.10.a
9.2	originator-report-request	m		m			
9.3	explicit-conversion	o		o			
9.4	extensions	m		m			A.1.9/1
9.4.1	originator-requested-alternate-recipient	o		o			Table A.1.10.a
9.4.2	requested-delivery-method	o		o			
9.4.3	physical-forwarding-prohibited	o		o			
9.4.4	physical-forwarding-address-request	o		o			
9.4.5	physical-delivery-modes	o		o			
9.4.6	registered-mail-type	o		o			
9.4.7	recipient-number-for-advice	o		o			
9.4.8	physical-rendition-attributes	o		o			
9.4.9	physical-delivery-report-request	o		o			
9.4.10	message-token	o		o			A.1.9/4
9.4.11	content-integrity-check	o		o			
9.4.12	proof-of-delivery-request	o		o			

A.1.5 ProbeSubmissionEnvelope

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	originator-name	m		m			Table A.1.10.b
2	original-encoded-information-types	m		m			A.1.8/10
3	content-type	m		m			A.1.8/11
4	content-identifier	o		m			
5	content-length	o		m			
6	per-message-indicators	m		m			A.1.8/12
7	extensions	m		m			A.1.9/1
7.1	recipient-reassignment-prohibited	o		o			
7.2	dl-expansion-prohibited	o		o			
7.3	conversion-with-loss-prohibited	o		o			
7.4	originator-certificate	o		o			
7.5	message-security-label	o		o			A.1.9/3
7.6	content-correlator	o		m			
7.7	probe-origin-authentication-check	o		o			A.1.9/5
8	per-recipient-fields	m		m			
8.1	recipient-name	m		m			Table A.1.10.b
8.2	originator-report-request	m		m			
8.3	explicit-conversion	o		o			
8.4	extensions	m		m			A.1.9/1
8.4.1	originator-requested-alternate-recipient	o		o			Table A.1.10.b
8.4.2	requested-delivery-method	o		o			
8.4.3	physical-rendition-attributes	o		o			

A.1.6 AutoForwardRegistrationParameter

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	filter	o		m			A.1.8/3
2	auto-forward-arguments	m		m			
2.1	originator-name	m		m			Table A.1.10.b
2.2	content-identifier	o		o			

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
2.3	priority	o		o			
2.4	per-message-indicators	o		m			A.1.8/12
2.5	deferred-delivery-time	o		o			
2.6	extensions	o		o			A.1.4/8
2.7	per-recipient-fields	o		m			A.1.4/9
3	delete-after-auto-forwarding	o		m			
4	other-parameters	o		o			

A.1.7 AutoAlertRegistrationParameter

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	filter	o		m			A.1.8/3
2	alert-addresses	o		o			
2.1	address	m		m			
2.2	alert-qualifier	o		o			
3	requested-attributes	o		m			A.1.8/1

A.1.8 Common data types

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	AttributeSelection						
1.1	type	m		m			
1.2	from	o		o			
1.3	count	o		o			
2	EntryInformation						
2.1	sequence-number	m		m			
2.2	attributes	m		m			
3	Filter						
3.1	item	m		m			A.1.8/4
3.2	and	o		m			
3.3	or	o		m			
3.4	not	o		m			
4	FilterItem						
4.1	equality	o		m			

Superseded by a more recent version

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
4.2.1	type	m		m			
4.2.2	strings	m		m			
4.2.2.1	initial	o		m			
4.2.2.2	any	o		m			
4.2.2.3	final	o		m			
4.3	greater-or-equal	o		m			
4.4	less-or-equal	o		m			
4.5	present	o		m			
4.6	approximate-match	o		o			
5	InformationBase						
5.1	stored-messages	m		m			
5.2	inlog	–		–			
5.3	outlog	–		–			
6	Range						
6.1	sequence-number-range	o		m			
6.1.1	from	o		m			
6.1.2	to	o		m			
6.2	creation-time-range	o		m			
6.2.1	from	o		m			
6.2.2	to	o		m			
7	Selector						
7.1	child-entries	o		m			
7.2	range	o		m			A.1.8/6
7.3	filter	o		m			A.1.8/3
7.4	limit	o		m			
7.5	override	o		o			
8	MTSIdentifier						
8.1	global-domain-identifier	m		m			A.1.8/9
8.2	local-identifier	m		m			
9	GlobalDomainIdentifier						
9.1	country-name	m		m			
9.2	administration-domain-name	m		m			
9.3	private-domain-identifier	o		o			
10	EncodedInformationTypes						
10.1	built-in-encoded-information-types	m		m			

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
10.2	(non-basic parameters)	o		o			
10.3	extended-encoded-information-types	o		o			
11	ContentType						
11.1	built-in	o		o			
11.2	extended	o		o			
12	PerMessageIndicators						
12.1	disclosure-of-other-recipients	o		m			
12.2	implicit-conversion-prohibited	m		m			
12.3	alternate-recipient-allowed	o		m			
12.4	content-return-request	o		o			
12.5	reserved	o		o			
12.6	bit-5	o		o			
12.7	bit-6	o		o			
12.8	service-message	o		o			

A.1.9 Extension data types

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	ExtensionField						
1.1	type	o		m			
1.1.1	standard-extension	m		m			
1.1.2	private-extension	o		m			not in CCITT Rec. X.411
1.2	criticality	m		m			
1.3	value	m		m			
2	MessageOriginAuthenticationCheck						
2.1	algorithm-identifier	m		m			
2.2	content	m		m			
2.3	content-identifier	o		o			
2.4	message-security-label	o		o			A.1.9/3
3	MessageSecurityLabel						
3.1	security-policy-identifier	o		o			
3.2	security-classification	o		o			

Superseded by a more recent version

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
3.3	privacy-mark	o		o			
3.4	security-categories	o		o			
4	MessageToken						
4.1	token-type-identifier	m		m			
4.2	asymmetric-token	m		m			
4.2.1	signature-algorithm-identifier	m		m			
4.2.2	name	m		m			
4.2.3	time	m		m			
4.2.4	signed-data	o		o			
4.2.4.1	content-confidentiality-algorithm-identifier	o		o			
4.2.4.2	content-integrity-check	o		o			
4.2.4.3	message-security-label	o		o			A.1.9/3
4.2.4.4	proof-of-delivery-request	o		o			
4.2.4.5	message-sequence-number	o		o			
4.2.5	encryption-algorithm-identifier	o		o			
4.2.6	encrypted-data	o		o			
4.2.6.1	content-confidentiality-key	o		o			
4.2.6.2	content-integrity-check	o		o			
4.2.6.3	message-security-label	o		o			A.1.9/3
4.2.6.4	content-integrity-key	o		o			
4.2.6.5	message-sequence-number	o		o			
5	ProbeOriginAuthenticationCheck						
5.1	algorithm-identifier	m		m			
5.2	content-identifier	o		o			
5.3	message-security-label	o		o			A.1.9/3
6	ProofOfSubmission						
6.1	algorithm-identifier	m		m			
6.2	message-submission-envelope	m		m			
6.3	content	m		m			
6.4	message-submission-identifier	m		m			
6.5	message-submission-time	m		m			

A.1.10 O/R names

TABLE A.1.10.a
O/R name forms for identification of remote MTS-user

Ref.	O/R Name Form	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	mnemonic O/R address	m		m			A.1.10.1
2	numeric O/R address	o		m			A.1.10.2
3	terminal O/R address	o		m			A.1.10.3
4	formatted postal O/R address	o		m			A.1.10.4
5	unformatted postal O/R address	o		m			A.1.10.5
6	directory-name	o		m			

TABLE A.1.10.b
O/R name forms for binding to the MTS-user

Ref.	O/R Name Form	MTS-user		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	mnemonic O/R address	o		o			A.1.10.1
2	numeric O/R address	o		o			A.1.10.2
3	terminal O/R address	o		o			A.1.10.3
4	formatted postal O/R address	-		-			
5	unformatted postal O/R address	-		-			
6	directory-name	o		o			

The following tables shall be completed according to the O/R address forms for which support is claimed above.

A.1.10.1 Mnemonic O/R address

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	built-in-standard-attributes	m		m			
1.1	country-name	m		m			
1.2	administration-domain-name	m		m			
1.3	private-domain-name	o		m			
1.4	organization-name	o		m			
1.5	personal-name	o		m			
1.5.1	surname	m		m			

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1.5.2	given-name	o		m			
1.5.3	initials	o		m			
1.5.4	generation-qualifier	o		m			
1.6	organizational-unit-names	o		m			
2	built-in-domain-defined-attributes	o		m			
3	extension-attributes	o		m			
3.1	common-name	o		m			
3.2	teletex-common-name	o		m			
3.3	teletex-organization-name	o		m			
3.4	teletex-personal-name	o		m			
3.4.1	surname	m		m			
3.4.2	given-name	o		m			
3.4.3	initials	o		m			
3.4.4	generation-qualifier	o		m			
3.5	teletex-organizational-unit-names	o		m			
3.6	teletex-domain-defined-attributes	o		m			

A.1.10.2 Numeric O/R address

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	built-in-standard-attributes	m		m			
1.1	country-name	m		m			
1.2	administration-domain-name	m		m			
1.3	private-domain-name	o		m			
1.4	numeric-user-identifier	m		m			
2	built-in-domain-defined-attributes	o		m			
3	extension-attributes	o		m			
3.1	teletex-domain-defined-attributes	o		m			

A.1.10.3 Terminal O/R address

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	built-in-standard-attributes	m		m			
1.1	country-name	o		m			
1.2	administration-domain-name	o		m			
1.3	network-address	m		m			
1.4	terminal-identifier	o		m			
1.5	private-domain-name	o		m			
1.6	organization-name	o		o			
1.7	personal-name	o		o			
1.8	organizational-unit-names	o		o			
2	built-in-domain-defined-attributes	o		m			
3	extension-attributes	o		m			
3.1	extended-network-address	m		m			
3.1.1	e163-4-address	o		m			
3.1.2	psap-address	o		m			
3.2	terminal-type	o		m			
3.3	common-name	o		o			
3.4	teletex-common-name	o		o			
3.5	teletex-organization-name	o		o			
3.6	teletex-personal-name	o		o			
3.7	teletex-organizational-unit-names	o		o			
3.8	unformatted-postal-address	o		o			
3.9	teletex-domain-defined-attributes	o		m			

A.1.10.4 Formatted postal O/R address

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	built-in-standard-attributes	m		m			
1.1	country-name	m		m			
1.2	administration-domain-name	m		m			

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1.3	private-domain-name	o		m			
2	extension-attributes	m		m			
2.1	physical-delivery-country-name	m		m			
2.2	physical-delivery-office-name	o		m			
2.3	physical-delivery-office-number	o		m			
2.4	physical-delivery-organization-name	o		m			
2.5	physical-delivery-personal-name	o		m			
2.6	postal-code	m		m			
2.7	poste-restante-address	o		m			
2.8	post-office-box-address	o		m			
2.9	pds-name	o		m			
2.10	street-address	o		m			
2.11	unique-postal-name	o		m			
2.12	extension-OR-address-components	o		m			
2.13	extension-physical-delivery-address-components	o		m			
2.14	local-postal-attributes	o		m			

A.1.10.5 Unformatted postal O/R address

Ref.	Element	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	built-in-standard-attributes	m		m			
1.1	country-name	m		m			
1.2	administration-domain-name	m		m			
1.3	private-domain-name	o		m			
2	extension-attributes	m		m			
2.1	unformatted-postal-address	m		m			
2.2	physical-delivery-country-name	m		m			
2.3	postal-code	m		m			
2.4	pds-name	o		m			

A.1.11 General attributes

Ref.	Attribute	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
1	child-sequence-numbers	o		m			
2	content	m		m			
3	content-confidentiality-algorithm-identifier	o		o			
4	content-correlator	o		o			
5	content-identifier	o		o			
6	content-integrity-check	o		o			
7	content-length	o		o			
8	content-returned	o		o			
9	content-type	m		m			
10	conversion-with-loss-prohibited	o		o			
11	converted-eits	o		o			
12	creation-time	o		m			
13	delivered-eits	o		o			
14	delivery-flags	o		o			
15	dl-expansion-history	o		o			
16	entry-status	m		m			
17	entry-type	o		m			
18	intended-recipient-name	o	o	o	o		
19	message-delivery-envelope	m		m			
20	message-delivery-identifier	o		o			
21	message-delivery-time	o		o			
22	message-origin-authentication-check	o		o			
23	message-security-label	o		o			
24	message-submission-time	o		o			
25	message-token	o		o			
26	original-eits	o		o			
27	originator-certificate	o		o			
28	originator-name	o		o			
29	other-recipient-names	o		o			
30	parent-sequence-number	o		m			

Ref.	Attribute	UA		MS		Support	Notes/References
		Base	Profile	Base	Profile		
31	per-recipient-report-delivery-fields	o		m			
32	priority	o		o			
33	proof-of-delivery-request	o		o			
34	redirection-history	o		o			
35	report-delivery-envelope	m		m			
36	reporting-dl-name	o		o			
37	reporting-mta-certificate	o		o			
38	report-origin-authentication-check	o		o			
39	security-classification	o		o			
40	sequence-number	m		m			
41	subject-submission-identifier	o		m			
42	this-recipient-name	o		o			

A.2 Optional functional groups

Not applicable for the base standard PICS.

NOTE – The numbering of subclauses and items in this annex is identical to the one in ISO/IEC 10611-5.

A.3 Additional information

A.3.1 Content types supported

The following table shall be completed to indicate (Y or ✓) which content type(s) the implementation can support on submission and on retrieval.

If support on retrieval is claimed, then support of MS attributes may also be claimed by so indicating (Y or ✓) in the "Supported Attributes" column. A claim of support of MS attributes means that any mandatory requirements in the relevant content type-specific base standards for support of MS attributes are met.

Ref.	Content Type	Supported		Supported Attributes	Comments
		Submission	Retrieval		
1	built-in			–	
1.1	unidentified (0)			–	
1.2	interpersonal-messaging-1984 (2)			–	
1.3	interpersonal-messaging-1988 (22)				
1.4	(EDI messaging) (35)				
2	extended (specify)				

A.3.2 Encoded information types supported

The following table shall be completed to indicate (Y or ✓) which encoded information type(s) the implementation can support on submission and on retrieval.

Ref.	Encoded Information Type	Supported		Comments
		Submission	Retrieval	
1	built-in			
1.1	undefined (0)			
1.2	ia5-text (2)			
1.3	g3-facsimile (3)			
1.4	g4-class-1 (4)			
1.5	teletex (5)			
1.6	videotex (6)			
1.7	voice (7)			
1.8	mixed-mode (9)			
1.9	other (specify)			
2	extended (specify)			

A.3.3 Support of filter

The following table shall be completed to indicate any constraints on the support of filter.

Ref.	Constraint	Value	Comments
1	Maximum number of levels of recursion/nesting of filter supported		
2	Maximum number of elements that can be logically combined at any one level		

A.3.4 Implementation constraints

The following table shall be completed to indicate any constraints imposed by the implementation.

Ref.	Constraint	Limit	Comments
1	limit on message size (if any) (Note 1)		
2	limit on the number of recipients that may be specified in a message envelope (if any) (Note 2)		
3	other (specify)		

NOTES

1 Any limit on the maximum size of message content and/or envelope shall be stated.

2 Any limit on the number of recipients that may be specified in a message envelope shall be stated (this does not imply a static capability to register the number of users for delivery at a single MTA).

A.3.5 Support of attributes by the MS-user

The following table shall be completed for the MS-user to indicate, for each supported MS attribute, all the operations, arguments, results and filter items for which the attribute is supported.

Ref.	Attribute	Comments
1	child-sequence-numbers	
2	content	
3	content-confidentiality-algorithm-identifier	
4	content-correlator	
5	content-identifier	
6	content-integrity-check	
7	content-length	
8	content-returned	
9	content-type	
10	conversion-with-loss-prohibited	
11	converted-eits	
12	creation-time	
13	delivered-eits	
14	delivery-flags	
15	dl-expansion-history	
16	entry-status	
17	entry-type	
18	intended-recipient-name	
19	message-delivery-envelope	
20	message-delivery-identifier	
21	message-delivery-time	
22	message-origin-authentication-check	
23	message-security-label	
24	message-submission-time	
25	message-token	
26	original-eits	
27	originator-certificate	
28	originator-name	
29	other-recipient-names	
30	parent-sequence-number	
31	per-recipient-report-delivery-fields	

Ref.	Attribute	Comments
32	priority	
33	proof-of-delivery-request	
34	redirection-history	
35	report-delivery-envelope	
36	reporting-dl-name	
37	reporting-mta-certificate	
38	report-origin-authentication-check	
39	security-classification	
40	sequence-number	
41	subject-submission-identifier	
42	this-recipient-name	

Annex B

Amendments and corrigenda

(This annex forms an integral part of this Recommendation)

Corrigenda to the referenced Recommendations are contained in the joint MHS Implementors' Guide, Version 11, March 1994 (ITU Special Rapporteur's Group on Message Handling Systems and ISO/IEC JTC1/SC18/WG4 SWG on Messaging).

The following amendments and corrigenda to the equivalent International Standards are considered as normative references in this Recommendation.

ISO/IEC 10021-1/Cor.1:1991
ISO/IEC 10021-1/Cor.2:1991
ISO/IEC 10021-1/Cor.3:1992
ISO/IEC 10021-1/Cor.4:1992
ISO/IEC 10021-1/Cor.5:1992
ISO/IEC 10021-1/Cor.6:1994
ISO/IEC 10021-2/Cor.1:1991
ISO/IEC 10021-2/Cor.2:1991
ISO/IEC 10021-2/Cor.3:1992
ISO/IEC 10021-2/Cor.4:1992
ISO/IEC 10021-2/Cor.5:1993
ISO/IEC 10021-2/Cor.6:1994
ISO/IEC 10021-2/Cor.7:1994
ISO/IEC 10021-4/Cor.1:1991
ISO/IEC 10021-4/Cor.2:1991
ISO/IEC 10021-4/Cor.3:1992
ISO/IEC 10021-4/Cor.4:1992
ISO/IEC 10021-4/Cor.5:1992
ISO/IEC 10021-4/Cor.6:1993
ISO/IEC 10021-4/Cor.7:1994
ISO/IEC 10021-4/Cor.8:1994
ISO/IEC 10021-5/Cor.1:1991
ISO/IEC 10021-5/Cor.7:1994
ISO/IEC 10021-5/Cor.2:1991
ISO/IEC 10021-5/Cor.3:1992
ISO/IEC 10021-5/Cor.4:1992
ISO/IEC 10021-5/Cor.5:1992
ISO/IEC 10021-5/Cor.6:1993
ISO/IEC 10021-6/Cor.1:1991
ISO/IEC 10021-6/Cor.2:1991
ISO/IEC 10021-6/Cor.3:1992
ISO/IEC 10021-6/Cor.4:1992
ISO/IEC 10021-6/Cor.5:1992
ISO/IEC 10021-6/Cor.6:1993
ISO/IEC 10021-6/Cor.7:1994
ISO/IEC 10021-1/Am.2:1994
ISO/IEC 10021-2/Am.1:1994
ISO/IEC 10021-2/Am.2:1994
ISO/IEC 10021-4/Am.1:1994

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