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UIT-T

SECTOR DE NORMALIZACIÓN
DE LAS TELECOMUNICACIONES
DE LA UIT

X.481

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SERIE X: REDES DE DATOS Y COMUNICACIÓN
ENTRE SISTEMAS ABIERTOS

Sistemas de tratamiento de mensajes

**Sistemas de tratamiento de mensajes –
Formulario de declaración de conformidad
de implementación de protocolo para el
protocolo P2**

Recomendación UIT-T X.481

(Anteriormente Recomendación del CCITT)

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RECOMENDACIÓN UIT-T X.481

SISTEMAS DE TRATAMIENTO DE MENSAJES – FORMULARIO DE DECLARACIÓN DE CONFORMIDAD DE IMPLEMENTACIÓN DE PROTOCOLO PARA EL PROTOCOLO P2

Resumen

Esta Recomendación proporciona el formulario de declaración de conformidad de implementación de protocolo (PICS, *protocol implementation conformance statement*) para el protocolo P2 de sistemas de tratamiento de mensajes (MHS, *message handling systems*), especificado en la Rec. UIT-T X.420 | ISO/CEI 10021-7. El formulario de PICS presenta en forma tabular los elementos obligatorios y facultativos del protocolo P2.

Orígenes

La Recomendación UIT-T X.481, ha sido revisada por la Comisión de Estudio 7 (1997-2000) del UIT-T y fue aprobada por el procedimiento de la Resolución N.º 1 de la CMNT el 25 de septiembre de 1998.

Según la decisión de la Comisión de Estudio 7 (18 de junio de 1999) de publicar una nueva edición de las Recomendaciones relativas a los sistemas de tratamiento de mensajes, se decidió, de acuerdo con el Director de la TSB, publicar también las Recomendaciones X.481, X.482, X.483, X.484 y X.486 con fecha 1999.

PREFACIO

La UIT (Unión Internacional de Telecomunicaciones) es el organismo especializado de las Naciones Unidas en el campo de las telecomunicaciones. El UIT-T (Sector de Normalización de las Telecomunicaciones de la UIT) es un órgano permanente de la UIT. Este órgano estudia los aspectos técnicos, de explotación y tarifarios y publica Recomendaciones sobre los mismos, con miras a la normalización de las telecomunicaciones en el plano mundial.

La Conferencia Mundial de Normalización de las Telecomunicaciones (CMNT), que se celebra cada cuatro años, establece los temas que han de estudiar las Comisiones de Estudio del UIT-T, que a su vez producen Recomendaciones sobre dichos temas.

La aprobación de Recomendaciones por los Miembros del UIT-T es el objeto del procedimiento establecido en la Resolución N.º 1 de la CMNT.

En ciertos sectores de la tecnología de la información que corresponden a la esfera de competencia del UIT-T, se preparan las normas necesarias en colaboración con la ISO y la CEI.

NOTA

En esta Recomendación, la expresión *empresa de explotación reconocida (EER)* designa a toda persona, compañía, empresa u organización gubernamental que explote un servicio de correspondencia pública. Los términos *Administración, EER y correspondencia pública* están definidos en la *Constitución de la UIT (Ginebra, 1992)*.

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Introducción

La presente Recomendación forma parte de un conjunto de Recomendaciones que definen el tratamiento de mensajes en un entorno de sistemas abiertos distribuidos.

La finalidad del tratamiento de mensajes es el intercambio de mensajes entre usuarios con un sistema de almacenamiento y reenvío. Un mensaje presentado por un usuario (el originador) es transferido a través del sistema de transferencia de mensajes (MTS, *message transfer system*) y es entregado a uno o más usuarios (los recibientes). El acceso de usuario se hace a través de un agente de usuario (UA, *user agent*).

Para evaluar las capacidades de una implementación particular, es necesario disponer de una declaración que indique las capacidades y opciones que han sido implementadas para un protocolo OSI determinado. Dicha declaración se denomina declaración de conformidad de implementación de protocolo (PICS).

SISTEMAS DE TRATAMIENTO DE MENSAJES – FORMULARIO DE DECLARACIÓN DE CONFORMIDAD DE IMPLEMENTACIÓN DE PROTOCOLO PARA EL PROTOCOLO P2¹

1 Alcance

Esta Recomendación proporciona el formulario de declaración de conformidad de implementación de protocolo (PICS) para el protocolo P2 especificado en la Rec. UIT-T X.420 | ISO/CEI 10021-7. El formulario de PICS presenta en forma tabular los elementos obligatorios y facultativos del protocolo P2.

Este formulario de PICS se basa en las directrices pertinentes sobre formularios de PICS que figuran en la Rec. UIT-T X.296 | ISO/CEI 9646-7.

2 Referencias normativas

Las siguientes Recomendaciones y Normas Internacionales contienen disposiciones que, mediante su referencia en este texto, constituyen disposiciones de la presente Recomendación | Norma Internacional. Al efectuar esta publicación, estaban en vigor las ediciones indicadas. Todas las Recomendaciones y Normas son objeto de revisiones, por lo que se preconiza que los participantes en acuerdos basados en la presente Recomendación | Norma Internacional investiguen la posibilidad de aplicar las ediciones más recientes de las Recomendaciones y las Normas Internacionales actualmente vigentes. La Oficina de Normalización de las Telecomunicaciones de la UIT mantiene una lista de las Recomendaciones UIT-T actualmente vigentes.

2.1 Recomendaciones | Normas Internacionales idénticas

- Recomendación UIT-T X.402 (1999) | ISO/CEI 10021-2:1999, *Tecnología de la información – Sistemas de tratamiento de mensajes: Arquitectura global*.
- Recomendación UIT-T X.420 (1999) | ISO/CEI 10021-7:1999, *Tecnología de la información – Sistema de tratamiento de mensajes: Sistema de mensajería interpersonal*.

2.2 Pares de Recomendaciones | Normas Internacionales de contenido técnico equivalente

- Recomendación UIT-T X.290 (1995), *Metodología y marco de las pruebas de conformidad de interconexión de sistemas abiertos de las Recomendaciones sobre los protocolos para aplicaciones del UIT-T – Conceptos generales*.

ISO/CEI 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts*.
- Recomendación UIT-T X.296 (1995), *Metodología y marco de las pruebas de conformidad de interconexión de sistemas abiertos de las Recomendaciones sobre los protocolos para aplicaciones del UIT-T – Declaraciones de conformidad de implementación*.

ISO/CEI 9646-7:1995, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation conformance statements*.

3 Definiciones

Los términos utilizados en esta Recomendación se definen en las Recomendaciones | Normas Internacionales referenciadas.

¹ El anexo A de la presente Recomendación coincide desde el punto de vista técnico con el anexo A de ISO/CEI ISP 12062-2, *Information technology – International Standardized Profiles AMH2n – Message Handling Systems – Interpersonal Messaging – Part 2: AMH21 – IPM Content*.

4 Abreviaturas

En esta Recomendación se utilizan las siguientes siglas.

ISP	Perfil normalizado internacional (<i>International standardized profile</i>)
MHS	Sistemas de tratamiento de mensajes (<i>message handling systems</i>)
MS	Memoria de mensajes (<i>message store</i>)
MTA	Agente de transferencia de mensajes (<i>message transfer agent</i>)
OSI	Interconexión de sistemas abiertos (<i>open systems interconnection</i>)
PDU	Unidad de datos de protocolo (<i>protocol data unit</i>)
PICS	Declaración de conformidad de implementación de protocolo (<i>protocol implementation conformance statement</i>)
UA	Agente de usuario (<i>user agent</i>).

5 Conformidad

Un formulario de PICS conforme será equivalente técnicamente al texto del formulario de PICS de esta Recomendación y observará la numeración y el orden de los elementos del formulario de PICS de esta Recomendación.

Un formulario de PICS conforme a esta Recomendación deberá:

- a) describir una implementación conforme a la Rec. UIT-T X.420 | ISO/CEI 10021-7;
- b) ser un formulario de PICS conforme, completado según las instrucciones que se dan en el anexo A.
- c) incluir la información necesaria para identificar de manera única tanto al proveedor como a la implementación.

Anexo A²

Formulario de declaración de conformidad de implementación de protocolo (PICS) para el protocolo P2 de mensajería interpersonal

(Este anexo es parte integrante de la presente Recomendación)

Contents of the PICS proforma

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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 that in ISO/IEC ISP 12062-2, "Information technology – International Standardized Profiles AMH2n – Message Handling Systems – Interpersonal Messaging – Part 2: AMH21 – IPM Content".

A.0 Instructions and identification

A.0.1 Instructions

A.0.1.1 Purpose of the proforma

The purpose of the PICS proforma is to provide suppliers of implementations of the P2 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.

² **Comunicado sobre derechos de autor del formulario de PICS**

Los usuarios de esta Recomendación pueden reproducir libremente el formulario de PICS de este anexo a fin de que pueda ser utilizado para los fines previstos, y pueden además publicar el PICS cumplimentado.

A.0.1.2 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.0.1.3 Base column

In each table, the "Base" column reflects the level of support required for conformance to the base standard.

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

NOTE 1 – The Profile column is used for functional profiles and uses the same classification.

The classification of information objects and items (elements) is relative to that of the containing information 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 shall be 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.

NOTE 2 – In the case of character repertoires, mandatory support implies that the IPM UA implementation is able to generate and/or receive the encodings of all characters within those repertoires. How graphic characters are originated and rendered is outside the scope of this Recommendation.

NOTE 3 – Where required by the base standards, mandatory support also implies that the IPM UA implementation is able to pass the element on the origination port/reception port to/from the corresponding element on the submission port/delivery port/retrieval port.

optional support (o): An implementation is not required to support the element. If support is claimed, then the element shall be treated as if it were specified as mandatory support. If the element is not supported on reception, then it shall be ignored.

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.0.1.4 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 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.0.1.5 References column

The "References" 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).

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 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.

Corrigenda to ITU-T Recommendation X.481

Cor:
Cor:
Cor:
Cor:
Implementors' Guide version:

A.0.3 Identification of the implementation

A.0.3.1 Date of statement

Ref.	Question	Response
1	Date of statement (YYYY-MM-DD)	

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 Global statement of conformance

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

A.1 Basic requirements

A.1.1 Supported information objects

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	Interpersonal Message (IPM)	m		m			
1.1	heading	m		m			see A.1.2
1.2	body	m		m			see A.1.3
2	Interpersonal Notification (IPN)	m		o			see A.1.4

A.1.2 IPM heading fields

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	this-IPM	m		m			see A.1.5/3
2	originator	m		m			see A.1.5/2
3	authorizing-users	o		m			see A.1.5/2
4	primary-recipients	m		m			see A.1.5/1
5	copy-recipients	m		m			see A.1.5/1
6	blind-copy-recipients	o		m			see A.1.5/1
7	replied-to-IPM	m		m			see A.1.5/3
8	obsoleted-IPMs	o		m			see A.1.5/3
9	related-IPMs	o		m			see A.1.5/3
10	subject	m		m			
11	expiry-time	o		m			
12	reply-time	o		m			
13	reply-recipients	o		m			see A.1.5/2
14	importance	o		m			
15	sensitivity	o		m			
16	auto-forwarded	o		m			
17	extensions	m		m			
17.1	incomplete-copy	o		o			
17.2	languages	o		m			
17.3	auto-submitted	o		o			
17.4	body-part-signatures	o		o			see A.1.2.1/1
17.5	ipm-security-label	o		o			see A.1.2.1/2
17.6	authorization-time	o		o			
17.7	circulation-list-recipients	o		m			see A.1.2.1/3
17.8	distribution-codes	o		o			see A.1.2.1/4
17.9	extended-subject	m		m			
17.10	information-category	o		o			see A.1.2.1/5
17.11	manual-handling-instructions	o		o			
17.12	originators-reference	o		o			
17.13	precedence-policy-identifier	o		o			

A.1.2.1 IPM heading subfields

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	BodyPartSignatures						
1.1	body-part-number	m		m			
1.2	body-part-signature	m		m			
1.2.1	signature-algorithm-identifier	m		m			
1.2.2	body-part	m		m			see A.1.3
1.2.3	body-part-security-label	m ¹		m ¹			See A.1.6/3 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
1.3	originator-certificate-selector	o		o			See A.1.5/11 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
1.4	originator-certificates	o		o			See A.1.6/11 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
2	IPMSecurityLabel						
2.1	content-security-label	m		m			See A.1.6/3 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
2.2	heading-security-label	o		o			See A.1.6/3 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
2.3	body-part-security-labels	m		m			See A.1.6/3 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
3	CirculationMember						
3.1	member-name	m		m			see A.1.5/1
3.2	checked	m		m			
3.2.1	simple	o		o			
3.2.2	timestamped	o		o			
3.2.3	signed	o		o			
3.2.3.1	algorithm-identifier	m		m			
3.2.3.2	this-IPM	m		m			see A.1.5/3
3.2.3.3	timestamp	m		m			
4	DistributionCode						
4.1	oid-code	o		o			
4.2	alphanumeric-code	o		o			
4.3	or-descriptor	o		o			see A.1.5/2
5	InformationCategory						
5.1	reference	o		o			
5.2	description	o		o			
¹ Shall be present if the corresponding body-part-security-labels component is present IPMSecurityLabel.							

A.1.3 IPM body

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	ia5-text	o		o			
1.1	parameters	m		m			
1.1.1	repertoire	o		m			
1.2	data	m		m			

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
2	voice	i		i			
3	g3-facsimile	o		o			
3.1	parameters	m		m			
3.1.1	number-of-pages	o		o			
3.1.2	non-basic-parameters	o		o			
3.1.2.1	two-dimensional	o		o			
3.1.2.2	fine-resolution	o		o			
3.1.2.3	unlimited-length	o		o			
3.1.2.4	b4-length	o		o			
3.1.2.5	a3-width	o		o			
3.1.2.6	b4-width	o		o			
3.1.2.7	uncompressed	o		o			
3.2	data	m		m			
4	g4-class-1	o		o			
5	teletex	o		o			see Note
5.1	parameters	m		m			
5.1.1	number-of-pages	o		o			
5.1.2	telex-compatible	o		m			
5.1.3	non-basic-parameters	o		o			
5.2	data	m		m			
6	videotex	o		o			
6.1	parameters	m		m			
6.1.1	syntax	o		o			
6.2	data	m		m			
7	encrypted	o		o			
7.1	parameters	m		m			
7.2	data	m		m			
8	message	o		o			
8.1	parameters	m		m			
8.1.1	delivery-time	o		o			
8.1.2	delivery-envelope	o		o			
8.2	data	m		m			
9	mixed-mode	o		o			
10	bilaterally-defined	o		o			
11	nationally-defined	o		o			
12	extended	m		m			see A.1.3.1
Note – The teletex body part type should be used purely for teletex documents, obeying page rules, etc. It should not be used to transfer unstructured T.61 character data.							

A.1.3.1 Extended body part support

It shall be indicated below which standard extended body part types are supported. It shall be stated in A.3.4 whether any other specific extended body part types are supported.

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	ia5-text-body-part	o		o			see A.1.3/1
2	g3-facsimile-body-part	o		o			see A.1.3/3
3	g4-class1-body-part	o		o			see A.1.3/4
4	teletex-body-part	o		o			see A.1.3/5
5	videotex-body-part	o		o			see A.1.3/6
6	encrypted-body-part	o		o			
7	message-body-part	o		o			see A.1.3/8
8	mixed-mode-body-part	o		o			
9	bilaterally-defined-body-part	o		o			
10	nationally-defined-body-part	o		o			
11	general-text-body-part	o		o			see Note 1
12	file-transfer-body-part	o		o			see Note 3
13	voice-body-part	o		o			
14	oda-body-part	o		o			see ITU-T Rec. T.415 ISO/IEC 8613-5
15	report-body-part	o		o			
16	notification-body-part	o		o			
17	ContentBodyParts	o		o			
18	pkcs7-body-part	o		o			
NOTE 1 – This body part type is the preferred means of carrying unstructured character data, except when interworking with 1984 implementations.							
NOTE 3 – The octet-aligned EXTERNAL encoding should be used. Only one EXTERNAL component should be used. Where the file to be conveyed contains a compound structure, this may be represented as a SEQUENCE OF EXTERNALS. The primary data should be placed in the first EXTERNAL. Receiving systems may ignore all but the first EXTERNAL in the SEQUENCE.							

A.1.3.2 General text repertoire support

It shall be indicated below which character repertoires are supported for support of the General Text body part type. An implementation shall meet the requirements of one or both of repertoire groups A and B.

Ref.	Repertoire set description	Repertoire identifier(s)	Origination		Reception		Support
			A	B	A	B	
1	Basic (ISO 646)	{1,6}	m	m	m	m	
2	Basic-1 (ISO 8859-1)	{1,6,100}	o	m	o	m	
3	Basic + Chinese (1)	{1,6,58}	o	o	o	o	
4	Basic + Chinese (2)	{1,6,165}	o	o	o	o	
5	Basic + Japanese (1)	{1,6,13,87}	o	o	o	o	
6	Basic + Japanese (2)	{1,6,13,168}	o	o	o	o	
7	Basic + Korean	{1,6,149}	o	o	o	o	
8	Basic-1 + Cyrillic (ISO 8859-5)	{1,6,100,144}	o	o	o	o	
9	Basic-1 + Arabic (ISO 8859-6)	{1,6,100,127}	o	o	o	o	
10	Basic-1 + Greek (ISO 8859-7)	{1,6,100,126}	o	o	o	o	
11	Basic-1 + Hebrew (ISO 8859-8)	{1,6,100,138}	o	o	o	o	
12	Basic + suppl. (ISO 8859-10)	{1,6,157}	o	o	o	o	
13	Full Latin (1)	{1,6,100,154}	o	o	o	o	
14	Full Latin (2) (ISO 6937)	{1,6,156}	o	o	o	o	
15	Teletex Basic Latin	{102,103,106,107}	o	o	o	o	
16	ISO/IEC 10646-1 Basic Multilingual Plane	{1,176}	m	m	m	m	

A.1.3.3 File transfer parameters

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	related-stored-file	o		o			
1.1	file-identifier	m		m			
1.1.1	pathname-and-version	o		o			
1.1.1.1	pathname	m		m			
1.1.1.2	file-version	o		o			
1.1.2	cross-reference	o		o			
1.1.2.1	application-cross-reference	m		m			
1.1.2.2	message-reference	o		o			
1.1.2.2.1	user	o		o			
1.1.2.2.2	user-relative-identifier	m		m			
1.1.2.3	body-part-reference	o		o			
1.2	relationship	o		o			
1.2.1	explicit-relationship	o		o			
1.2.2	descriptive-relationship	o		o			

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
2	contents-type	o		o			
2.1	document-type	o		o			
2.1.1	document-type-name	m		m			
2.1.2	parameter	o		o			
2.2	constraint-set-and-abstract-syntax	o		o			
2.2.1	constraint-set-name	m		m			
2.2.2	abstract-syntax-name	m		m			
3	environment	o		o			
3.1	application-reference	o		o			
3.1.1	registered-identifier	o		o			
3.1.2	descriptive-identifier	o		o			
3.2	machine	o		o			
3.2.1	registered-identifier	o		o			
3.2.2	descriptive-identifier	o		o			
3.3	operating-system	o		o			
3.4	user-visible-string	o		o			
4	compression	o		o			
4.1	compression-algorithm-id	m		m			
4.2	compression-algorithm-param	m		m			
5	file-attributes	o		o			
5.1	pathname	o		o			
5.1.1	incomplete-pathname	o		o			
5.1.2	complete-pathname	o		o			
5.2	permitted-actions	o		o			
5.3	storage-account	o		o			
5.3.1	no-value-available	o		o			
5.3.2	actual-values	o		o			
5.4	date-and-time-of-creation	o		o			
5.5	date-and-time-of-last-modification	o		o			
5.6	date-and-time-of-last-read-access	o		o			
5.7	date-and-time-of-last-attribute-modification	o		o			
5.8	identity-of-creator	o		o			
5.8.1	no-value-available	o		o			
5.8.2	actual-values	o		o			
5.9	identity-of-last-modifier	o		o			
5.9.1	no-value-available	o		o			
5.9.2	actual-values	o		o			
5.10	identity-of-last-reader	o		o			
5.10.1	no-value-available	o		o			
5.10.2	actual-values	o		o			

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
5.11	identity-of-last-attribute-modifier	o		o			
5.11.1	no-value-available	o		o			
5.11.2	actual-values	o		o			
5.12	object-availability	o		o			
5.13	object-size	o		o			
5.13.1	no-value-available	o		o			
5.13.2	actual-values	o		o			
5.14	future-object-size	o		o			
5.15	access-control	o		o			
5.15.1	no-value-available	o		o			
5.15.2	actual-values	o		o			
5.15.2.1	action-list	m		m			
5.15.2.2	concurrency-access	o		o			
5.15.2.3	identity	o		o			
5.15.2.4	password	o		o			
5.15.2.5	location	o		o			
5.16	legal-qualifications	o		o			
5.17	private-use	o		o			
5.18	attribute-extensions	o		o			
6	extensions	o		o			

A.1.4 IPN fields

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	subject-ipm	m		m			see A.1.5/3
2	ipn-originator	o		m			see A.1.5/2
3	ipm-intended-recipient	m		m			see A.1.5/2
4	conversion-cits	o		m			
5	notification-extensions	o		o			
5.1	ipn-security-response	o		o			
5.1.1	content-or-arguments	m		m			
5.1.1.1	original-content	o		o			
5.1.1.2	original-security-arguments	o		o			
5.1.1.2.1	original-content-integrity-check	o		o			
5.1.1.2.2	original-message-origin-authentication-check	o		o			
5.1.1.2.3	original-message-token	o		o			
5.1.2	security-diagnostic-code	o		o			

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
6	non-receipt-fields	m		o			
6.1	non-receipt-reason	m		m			
6.2	discard-reason	m		m			
6.3	auto-forward-comment	o		m			
6.4	returned-ipm	o		o			
6.5	nrn-extensions	o		o			
7	receipt-fields	o		o			
7.1	receipt-time	m		m			
7.2	acknowledgement-mode	o		m			
7.3	suppl-receipt-info	o		o			
7.4	rn-extensions	o		o			
8	other-notification-type-fields	o		o			
8.1	absence-advice	o		o			
8.2	change-of-address-advice	o		o			

A.1.5 Common data types

Ref.	Element	Origination		Reception		Support	Notes/References
		Base	Profile	Base	Profile		
1	RecipientSpecifier						
1.1	recipient	m		m			see A.1.5/2
1.2	notification-requests	o		m			
1.2.1	rn	o		o			
1.2.2	nrn	o		m			
1.2.3	ipm-return	o		o			
1.2.4	an-supported	o		o			
1.2.5	suppress-an	o		o			
1.3	reply-requested	o		m			
1.4	recipient-extensions	o		o			
1.4.1	recipient-security-request	o		o			
1.4.2	circulation-list-indicator	o		o			
1.4.3	precedence	o		o			
2	ORDescriptor						
2.1	formal-name	m		m			see A.1.7 in ITU-T Rec. X.482 ISO/IEC ISP 10611-3
2.2	free-form-name	o		o			
2.3	telephone-number	o		o			
3	IPMIdentifier						
3.1	user	m		m			
3.2	user-relative-identifier	m		m			

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 that in ISO/IEC ISP 12062-2.

A.3 Additional information

A.3.1 IPM Element of Service support

The following table shall be completed to indicate (Y or ✓), for each IPM Element of Service, whether the Element of Service is made available to the MHS user and, if so, how this is achieved. Where support for origination and reception cannot be covered by a single indication, then both shall be indicated.

The columns have the following meanings:

Service	the EoS can be made dynamically selectable by the MHS user (i.e. for invocation and/or notification, as appropriate) without requiring reconfiguration of the UA or other intervention in each instance (whether the semantics of the EoS are available at a human user interface, programmatic interface or by other means may be specified in the Comments column);
Auto	the EoS is automatically invoked/actioned by the UA without reference to the MHS user (whether selection is dynamically determined based on some other knowledge or criteria may be specified in the Comments column);
Config	the UA may be configured to select the EoS by the execution of some off-line process;
Other	any other means of using the EoS.

Ref.	Element of Service	Service	Auto	Config	Comments/Other
1	Access Management				
2	Additional Physical Rendition				
3	Alternate Recipient Allowed				
4	Alternate Recipient Assignment				
5	Authorization Time Indication				
6	Authorizing Users Indication				
7	Auto-acknowledgement of IP-messages				
8	Auto-action Log				
9	Auto-advise				
10	Auto-assignment of Annotations				
11	Auto-assignment of Group Names				
12	Auto-assignment of Storage Period				
13	Auto-correlation of IP-messages				
14	Auto-correlation of IP-notifications				
15	Auto-correlation of Reports				
16	Auto-deletion after Storage Period				
17	Auto-discarding of IP-messages				
18	Auto-forwarded Indication				
19	Auto-forwarding of IP-messages				
20	Auto-submitted Indication				
21	Basic Physical Rendition				
22	Blind Copy Recipient Indication				
23	Body Part Authentication and Integrity				
24	Body Part Encryption				
25	Circulation List Recipients Indication				

Ref.	Element of Service	Service	Auto	Config	Comments/Other
26	Content Confidentiality				
27	Content Integrity				
28	Content Type Indication				
29	Conversion Prohibition				
30	Conversion Prohibition in Case of Loss of Information				
31	Converted Indication				
32	Counter Collection				
33	Counter Collection with Advice				
34	Cover Page Suppression				
35	Cross-referencing Indication				
36	Deferred Delivery				
37	Deferred Delivery Cancellation				
38	Delivery Log				
39	Delivery Notification				
40	Delivery Time Stamp Indication				
41	Delivery via Bureau Fax Service				
42	Designation of Recipient by Directory Name				
43	Disclosure of Other Recipients				
44	Distribution Codes Indication				
45	DL Exempted Recipients				
46	DL Expansion History Indication				
47	DL Expansion Prohibited				
48	EMS (Express Mail Service)				
49	Expiry Date Indication				
50	Explicit Conversion				
51	Forwarded IP-message Indication				
52	Grade of Delivery Selection				
53	Hold for Delivery				
54	Implicit Conversion				
55	Importance Indication				
56	Incomplete Copy Indication				
57	Information Category Indication				
58	IP-message Action Status				
59	IP-message Identification				
60	IP-message Security Labelling				
61	Language Indication				
62	Latest Delivery Designation				
63	Manual Handling Instructions Indication				
64	Message Flow Confidentiality				
65	Message Identification				
66	Message Origin Authentication				
67	Message Security Labelling				

Ref.	Element of Service	Service	Auto	Config	Comments/Other
68	Message Sequence Integrity				
69	MS Register				
70	Multi-destination Delivery				
71	Multi-part Body				
72	Non-delivery Notification				
73	Non-receipt Notification Request Indication				
74	Non-repudiation of Content Received				
75	Non-repudiation of Delivery				
76	Non-repudiation of IP-notification				
77	Non-repudiation of Origin				
78	Non-repudiation of Submission				
79	Obsoleting Indication				
80	Ordinary Mail				
81	Original Encoded Information Types Indication				
82	Originator Indication				
83	Originator Reference Indication				
84	Originator Requested Alternate Recipient				
85	Physical Delivery Notification by MHS				
86	Physical Delivery Notification by PDS				
87	Physical Forwarding Allowed				
88	Physical Forwarding Prohibited				
89	Precedence Indication				
90	Prevention of Non-delivery Notification				
91	Primary and Copy Recipients Indication				
92	Probe				
93	Probe Origin Authentication				
94	Proof of Content Received				
95	Proof of Delivery				
96	Proof of IP-notification				
97	Proof of Submission				
98	Receipt Notification Request Indication				
99	Redirection Disallowed by Originator				
100	Redirection of Incoming Messages				
101	Registered Mail				
102	Registered Mail to Addressee in Person				
103	Reply Request Indication				
104	Replying IP-message Indication				
105	Report Origin Authentication				
106	Request for Forwarding Address				
107	Request for Non-repudiation of Content Received				
108	Request for Non-repudiation of IP-notification				
109	Request for Proof of Content Received				

Ref.	Element of Service	Service	Auto	Config	Comments/Other
110	Request for Proof of IP-notification				
111	Requested Preferred Delivery Method				
112	Restricted Delivery				
113	Return of Content				
114	Secure Access Management				
115	Sensitivity Indication				
116	Special Delivery				
117	Storage of Draft Messages				
118	Storage on Submission				
119	Storage Period Assignment				
120	Stored Message Alert				
121	Stored Message Annotation				
122	Stored Message Deletion				
123	Stored Message Fetching				
124	Stored Message Grouping				
125	Stored Message Listing				
126	Stored Message Summary				
127	Subject Indication				
128	Submission Log				
129	Submission of IP-messages Incorporating Stored Messages				
130	Submission Time Stamp Indication				
131	Typed Body				
132	Undeliverable Mail with Return of Physical Message				
133	Use of Distribution List				
134	User/UA Capabilities Registration				

A.3.2 Encoded information type conversion requests supported

If IPM conversion is supported, the following table shall be completed to indicate (Y or ✓) which encoded information type conversions the implementation can request.

Ref.	Encoded Information Type Conversion	Supported	Comments
1.1	ia5-text-to-teletex (0)		
1.2	ia5-text-to-g3-facsimile (8)		
1.3	ia5-text-to-g4-class-1 (9)		
1.4	ia5-text-to-videotex (10)		
1.5	teletex-to-ia5-text (11)		
1.6	teletex-to-g3-facsimile (12)		
1.7	teletex-to-g4-class-1 (13)		
1.8	teletex-to-videotex (14)		
1.9	videotex-to-ia5-text (16)		
1.10	videotex-to-teletex (17)		

A.3.3 Non-standard integer body part types supported

The following table shall be completed to indicate (Y or ✓) which (if any) non-standard integer body part types the implementation is capable of originating and/or receiving. It shall be stated in the Comments column how such capability is implemented.

NOTE – Use of such non-standard body part types for messaging between 1988 UAs is deprecated. Any rules for accepting or rejecting submission of such body parts will be a local matter.

Ref.	Body Part Type	Orig.	Rec.	Comments
1	ODA (12)			
2	ISO6937Text (13)			
3	USA nationally-defined body part types (310)			
4	JP1 (440)			
5	other (specify)			

A.3.4 Extended body part types supported

The following table shall be completed to indicate (Y or ✓) which (if any) specific extended body part types the implementation is capable of originating and/or receiving (in addition to those specified in A.1.3.1), and the object identifier value(s) supported for the data object, the parameters object (if used) and encoded information types in each case. It shall be stated in the Comments column how such capability is implemented.

Ref.	Extended Body Part Type	Orig.	Rec.	Object Identifier Value(s) / Comments
1				
2				
3				
4				
5				

It should be indicated below whether the implementation can be configured to allow other extended body part types to be used, and how this is achieved.

--

A.3.5 Other general text body part repertoire support

The following table shall be completed to indicate (Y or ✓) which (if any) other character repertoires the implementation is capable of originating and/or receiving for support of the General Text body part type (in addition to those specified in A.1.3.2). It shall be stated in the Comments column how such capability is implemented.

Ref.	Repertoire set description	Repertoire identifier(s)	Orig.	Rec.	Comments
1					
2					
3					
4					
5					

It should be indicated below whether the implementation can be configured to allow other General Text character repertoires to be used, and how this is achieved.

--

A.3.6 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) (see Note 1)		
2	limit on the number of recipients that may be specified in an IPM heading (if any) (see Note 2)		
3	other (specify)		
NOTE 1 – Any limit on the maximum size of message content shall be stated.			
NOTE 2 – Any limit on the number of recipients that may be specified in an IPM heading shall be stated.			

Anexo B

Enmiendas y corrigenda

Las Recomendaciones y Normas Internacionales están sujetas a examen y revisión constantes por parte del UIT-T y la ISO/CEI. Las siguientes enmiendas y corrigenda han sido aprobadas por el UIT-T y la ISO/CEI y se consideran referencias normativas en esta Recomendación.

Ninguno.

SERIES DE RECOMENDACIONES DEL UIT-T

Serie A	Organización del trabajo del UIT-T
Serie B	Medios de expresión: definiciones, símbolos, clasificación
Serie C	Estadísticas generales de telecomunicaciones
Serie D	Principios generales de tarificación
Serie E	Explotación general de la red, servicio telefónico, explotación del servicio y factores humanos
Serie F	Servicios de telecomunicación no telefónicos
Serie G	Sistemas y medios de transmisión, sistemas y redes digitales
Serie H	Sistemas audiovisuales y multimedios
Serie I	Red digital de servicios integrados
Serie J	Transmisiones de señales radiofónicas, de televisión y de otras señales multimedios
Serie K	Protección contra las interferencias
Serie L	Construcción, instalación y protección de los cables y otros elementos de planta exterior
Serie M	RGT y mantenimiento de redes: sistemas de transmisión, circuitos telefónicos, telegrafía, facsímil y circuitos arrendados internacionales
Serie N	Mantenimiento: circuitos internacionales para transmisiones radiofónicas y de televisión
Serie O	Especificaciones de los aparatos de medida
Serie P	Calidad de transmisión telefónica, instalaciones telefónicas y redes locales
Serie Q	Conmutación y señalización
Serie R	Transmisión telegráfica
Serie S	Equipos terminales para servicios de telegrafía
Serie T	Terminales para servicios de telemática
Serie U	Conmutación telegráfica
Serie V	Comunicación de datos por la red telefónica
Serie X	Redes de datos y comunicación entre sistemas abiertos
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Serie Z	Lenguajes y aspectos generales de soporte lógico para sistemas de telecomunicación