



UNIÓN INTERNACIONAL DE TELECOMUNICACIONES

**CCITT**

COMITÉ CONSULTIVO  
INTERNACIONAL  
TELEGRÁFICO Y TELEFÓNICO

**X.481**

(09/92)

**REDES DE COMUNICACIÓN DE DATOS**

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**PROTOCOLO P2: FORMULARIO DE  
ENUNCIADO DE CONFORMIDAD DE  
IMPLEMENTACIÓN DE PROTOCOLO**



**Recomendación X.481**

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## PREFACIO

El CCITT (Comité Consultivo Internacional Telegráfico y Telefónico) es un órgano permanente de la Unión Internacional de Telecomunicaciones (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 Asamblea Plenaria del CCITT, que se celebra cada cuatro años, establece los temas que han de estudiarse y aprueba las Recomendaciones preparadas por sus Comisiones de Estudio. La aprobación de Recomendaciones por los miembros del CCITT entre las Asambleas Plenarias de éste es el objeto del procedimiento establecido en la Resolución N.º 2 del CCITT (Melbourne, 1988).

La Recomendación X.481 ha sido preparada por la Comisión de Estudio VII y fue aprobada por el procedimiento de la Resolución N.º 2 el 10 de septiembre de 1992.

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## NOTA DEL CCITT

En esta Recomendación, la expresión «Administración» se utiliza para designar, en forma abreviada, tanto una Administración de telecomunicaciones como una empresa privada de explotación reconocida de telecomunicaciones.

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## INTRODUCCIÓN

La presente Recomendación forma parte de un conjunto de Recomendaciones sobre tratamiento de mensajes. Dicho conjunto ofrece un plan muy completo de un sistema de tratamiento de mensajes (MHS) constituido por cualquier número de sistemas abiertos que cooperan entre sí.

La finalidad de un MHS es permitir a los usuarios intercambiar mensajes con un sistema de almacenamiento y envío («store-and-forward»). El mensaje presentado en nombre de un usuario, el originador, es transportado por el sistema de transferencia de mensajes (MTS) y entregado a los agentes de uno o más usuarios, los recibientes. Las unidades de acceso (AU) conectan el MTS con sistemas de comunicación de otro tipo (por ejemplo, sistemas postales). Un agente de usuario presta asistencia al usuario en la preparación, almacenamiento y visualización de los mensajes. El usuario también puede ser asistido, con carácter facultativo, por una memoria de mensajes (MS, *message store*). El MTS comprende cierto número de agentes de transferencia de mensajes (MTA), que desempeñan colectivamente la función de transferencia de mensajes con almacenamiento y envío.

Para evaluar la calidad de funcionamiento de una implementación particular es necesario disponer de un enunciado de las capacidades y opciones utilizadas para un protocolo OSI determinado. Dicho enunciado se denomina Enunciado de Conformidad de Implementación de Protocolo (PICS, *protocol implementation conformance statement*).

La presente Recomendación contiene el formulario de PICS para el protocolo P2, según se define en la Recomendación X.420.

**PROTOCOLO P2: FORMULARIO DE ENUNCIADO DE CONFORMIDAD  
DE IMPLEMENTACIÓN DE PROTOCOLO**

(1992)

**1 Alcance**

Esta Recomendación define formulario PICS para el protocolo P2 especificado en la Recomendación X.420. Ese formulario de PICS cumple los requisitos pertinentes y las directrices aplicables al formulario de PICS de ISO/CEI 9642-2.

En el anexo A se dan detalles sobre la utilización de ese formulario.

La finalidad de la presente Recomendación es la especificación de los enunciados de conformidad correspondientes a un agente de usuario de sistema de mensajería interpersonal (IPMS-UA) y una memoria de mensajes de sistema de mensajería interpersonal (IPMS-MS).

**2 Referencias normativas**

- Recomendación X.400 del CCITT, *Sistemas de tratamiento de mensajes: Visión de conjunto del sistema y del servicio.*
- Recomendación X.402 del CCITT, *Sistemas de tratamiento de mensajes: Arquitectura global.*
- Recomendación X.408 del CCITT, *Sistemas de tratamiento de mensajes: Reglas de conversión de tipos de información codificada.*
- Recomendación X.420 del CCITT, *Sistemas de tratamiento de mensajes: Sistema de mensajería interpersonal.*

ISO/CEI 9646-1: 1991, *Information technology – Open systems interconnection – Conformance testing methodology and framework – Part 1: General concepts.* [Véase asimismo la Recomendación X.290 (1991) del CCITT].

ISO/CEI 9646-2: 1991, *Information technology – Open systems interconnection – Conformance testing methodology and framework – Part 2: Abstract test suite specification.* [Véase asimismo la Recomendación X.291 (1991) del CCITT].

Guía del implementador de MHS, versión 8.

**3 Definiciones**

En la presente Recomendación se utilizan los términos definidos en la Recomendación X.420.

Se utilizan asimismo los siguientes términos definidos en ISO/CEI 9646-1:

- formulario de PICS;
- enunciado de conformidad de implementación de protocolo (PICS).

#### 4 Abreviaturas

ADMD	Dominio de gestión de Administración ( <i>administration management domain</i> )
AU	Unidad de acceso ( <i>access unit</i> )
EOS	Elemento de servicio ( <i>element of service</i> )
I	Implementado
IPM	Mensaje interpersonal
IPMS-MS	Memoria de mensajes de sistema de mensajería interpersonal ( <i>interpersonal messaging system message store</i> )
IPMS-UA	Agente de usuario de sistema de mensajería interpersonal ( <i>interpersonal messaging system user agent</i> )
IPN	Notificación interpersonal ( <i>Interpersonal notification</i> )
IUT	Realización sometida a prueba ( <i>implementation under test</i> )
MHS	Sistema de tratamiento de mensajes ( <i>message handling system</i> )
MS	Memoria de mensajes ( <i>message store</i> )
MTA	Agente de transferencia de mensajes ( <i>message transfer agent</i> )
MTS	Sistema de transferencia de mensajes ( <i>message transfer system</i> )
O/R	Originador/recibiente ( <i>originator/recipient</i> )
OSI	Interconexión de sistemas abiertos ( <i>open systems interconnection</i> )
P2	Protocolo 2 ( <i>protocol 2</i> )
PDU	Unidad de datos de protocolo ( <i>protocol data unit</i> )
PEL	Elemento de protocolo ( <i>protocol element</i> )
PICS	Enunciado de conformidad de implementación ( <i>protocol implementation conformance statement</i> )
UA	Agente de usuario ( <i>user agent</i> )

#### 5 Convenios

El formulario de PICS se designa como un anexo a la presente Recomendación (véase el anexo A).

#### 6 Conformidad

El suministrador de una implementación de protocolo que pretende ser conforme a la Recomendación X.420 debe rellenar una copia del formulario de PICS que figura en el anexo A y proporcionar la información necesaria para identificar tanto al suministrador como la realización.

ANEXO A  
(a la Recomendación X.481)

**Protocolo 2: Formulario de enunciado de conformidad de implementación de protocolo (PICS)**

(Este anexo es parte integrante de esta Recomendación)

A.1 *Identifications*

A.1.1 *Identification of 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 <sup>1)</sup>	
8	Other Information	

- 1) Please enter here one of the following configurations:
- conf. 1: IPMS-UA collocated with an MTA;
  - conf. 2: remote IPMS-UA;
  - conf. 3: IPMS-UA making use of a Message Store;
  - conf. 4: IPMS-MS.

Comunicado sobre derechos de autor del formulario de PICS:

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

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 the Protocol*

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

A.3 *Global statement of Conformance*

Ref. No.	Question	D	I
1	Are all mandatory capabilities implemented?	m	[ ]

Note – Answering “No” to this section 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.6.9, “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:

- to generate the corresponding service parameters (either automatically or because the end user explicitly requires that capability);
- 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 origination if the IUT is able to generate it under some circumstances (either automatically or because end-user explicitly requires a related capability).

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

##### A.4.2 *D (Defined) column*

This column indicates the level of support required for conformance to Recommendation X.420.

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, Physical Delivery or Message Store options are not supported the corresponding items shall be considered as not applicable.

##### A.4.3 *I (Implemented) column*

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

- Y Yes, the item has been implemented;
- N No, the item has not been implemented;
- The item is not applicable.

In the PICS Proforma tables, every leading items marked 'm' should be supported by the IUT. Sub-items 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/values supported columns*

In the column marked “PERMIT. RANGE OF VALUES”, the upper-bounds values (e.g. length and occurrences) have been stated according to the standard. For each line for which an entry in this column is made, the constraints or supported values should be indicated in the “VALUES SUPPORTED” column.

The minimum and maximum lengths and numbers of occurrences shall be entered for originator.

The maximum length and number of occurrences shall be entered for reception.

#### A.4.5 *Note column*

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

Not $xx$  Refers to Note  $xx$ ;

p $xx$  Refers to predicate  $xx$  (see A.4.7);

# $yy$  Refers to A.6.6.4  $yy$ ;

d A value defined as defaultable in the Recommendation, when absent in the PDU shall be interpreted as having the default value specified in the Recommendation;

PHY Physical item;

SEC Security item;

X.500 See X.500-Series Recommendations for a complete definition.

#### A.4.6 *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.6.3/1, which refers to the Authorising Users Indication element of service.

#### A.4.7 *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 if the related predicate is true. Otherwise support of the item is optional.

Within that annex predicates are clearly defined or are defined as follow:

p $x$  = "Item\_number".Y

or

p $x$  = S.Y.Z

where

S (Service) takes the value A.6.3

Y Takes the values "O" for originator or "R" for recipient

Z Is the number of the element of service in A.6.3

#### *List of predicates*

p1 p17 or p16;

p2 Blind copy recipient indication EOS supported in ORIGINATION (S.O.3);

p3 Obsoleting indication EOS supported in ORIGINATION (S.O.14);

p4 Cross-referencing indication EOS supported in ORIGINATION (S.O.5);

p5 Expiry date indication EOS supported in ORIGINATION (S.O.6);

p6 Reply request indication EOS supported in ORIGINATION (S.O.18);

- p7 Reply request indication EOS supported in ORIGINATION (S.O.19);
- p8 Auto-forwarded indication EOS supported in ORIGINATION (S.O.2);
- p9 p10 or p12;
- p10 Incomplete copy indication EOS supported in ORIGINATION (S.O.9);
- p11 Incomplete copy indication EOS supported in RECEPTION (S.R.9);
- p12 Language indication EOS supported in ORIGINATION (S.O.11);
- p13 ipm-return PEL supported in RECEPTION (A.6.6.4.1/1.2.3.R);
- p14 ipm-return PEL supported in ORIGINATION (A.6.6.4.1/1.2.3.O);
- p15 Receipt notification request indication EOS supported in RECEPTION (S.R.17);
- p16 Receipt notification request indication EOS supported in ORIGINATION (S.O.17);
- p17 Non Receipt notification request indication EOS supported in ORIGINATION (S.O.13);
- p19 Importance indication EOS supported in ORIGINATION (S.O.8);
- p20 Authorizing users indication EOS supported in ORIGINATION (S.O.1);
- p22 Forwarded IP-message indication EOS supported in ORIGINATION (S.O.7);
- p23 At least one of the EXTENSION fields is supported in ORIGINATION;
- p24 At least one of the EXTENSION fields is supported in RECEPTION;
- p25 The implementation is a conf.3 or conf.4 (see A.1.2/7 for definitions).

*Examples:*

- p19 S.O.8 means that p19 is true if the Importance indication element of service is supported.
- p19 A.6.3/8.O has the same meaning.
- p13 A.6.6.4.1/1.2.3.R means that p13 is true if the ipm-return protocol element is supported in reception.

A.4.8 *Additional comments*

- 1) Parameters which are not supported for reception should normally not be regarded as a protocol violation.
- 2) In the following tables, every leading parameter marked “m” should be supported by the IUT in order to fulfill the static conformance requirements. Sub-parameters marked “m” should be supported if the corresponding leading parameter is supported by the IUT.
- 3) For ORNames relating to a user of the own system (“local ORName”) the IUT might choose to make certain restrictions on the supported forms of ORAddresses. Users of another system (“remote ORName”), however, shall be addressable without any restrictions.
- 4) Where an upper bound is used to specify the size of a teletex string the value applies to the number of characters and the double of the value applies to the number of octets.

A.5 *Abbreviations*

The following abbreviations are used in this PICS Proforma:

- D Defined
- I Implemented
- m mandatory
- N NO

n/a Not Applicable

o optional

c conditional

d default

O/R O = Origination / R = Reception

PHY PHYsical Delivery

SEC SECurity

Y YES

EOS Element of Service

PEL Protocol ELe ment

## A.6 *Capabilities and Options*

### *Introduction*

In this part of the PICS Proforma the supported application contexts, the major capabilities of the supported application contexts and functions are identified. Further the PDUs and Operations are identified. And finally the operation Arguments and PDU Parameters are identified.

### *Mapping between X.400 keys and PICS entry*

Rec. X.400	PICS
BASIC MT SERVICE	m
ESSENTIAL OPTIONAL	m
ADDITIONAL OPTIONAL PER MESSAGE	o
ADDITIONAL OPTIONAL CONTRACTUAL	o

### A.6.1 *Initiator/Responder capability*

“N/A”.

### A.6.2 *Supported Application Contexts and Options*

#### *Supported Application Contexts*

“N/A”.

#### *Supported Options*

Ref. No.	Question	D (ISO)	D (CCITT)	I
1	Are all Security capabilities implemented?	o	o	[ ]
2	Are all Physical Delivery capabilities implemented?	o	o	[ ]

### A.6.3 *Major Capabilities*

*Note* – Within the following tables “O/R” means “Origination/Reception”.

Message Transfer, Physical Delivery, Security and Message Store elements of service have been listed into separate tables.

*IPM elements of service*

Ref. No.	MHS Element of service	O/R	D	I	Clause ref. (Rec. X.400)
1	Authorizing users indication	O R	o m	[ ] [ ]	B.5
2	Auto-forwarded indication	O R	o m	[ ] [ ]	B.6
3	Blind copy recipient indication	O R	o m	[ ] [ ]	B.8
4	Body part encryption indication	O R	o m	[ ] [ ]	B.9
5	Cross-referencing indication	O R	o m	[ ] [ ]	B.18
6	Expiry date indication	O R	o m	[ ] [ ]	B.29
7	Forwarded IP-message indication	O R	o m	[ ] [ ]	B.31
8	Importance indication	O R	o m	[ ] [ ]	B.35
9	Incomplete copy indication	O R	o o	[ ] [ ]	B.36
10	IP-message identification	O R	m m	[ ] [ ]	B.37
11	Language indication	O R	o m	[ ] [ ]	B.38
12	Multi-part body	O R	o m	[ ] [ ]	B.46
13	Non-receipt notification request indication	O R	o m	[ ] [ ]	B.48
14	Obsoleting indication	O R	o m	[ ] [ ]	B.52
15	Originator indication	O R	m m	[ ] [ ]	B.55
16	Primary and copy recipients indication	O R	m m	[ ] [ ]	B.62
17	Receipt notification request indication	O R	o o	[ ] [ ]	B.67
18	Reply request indication	O R	o m	[ ] [ ]	B.72
19	Reply IP-message indication	O R	m m	[ ] [ ]	B.73
20	Sensitivity indication	O R	o m	[ ] [ ]	B.80
21	Subject indication	O R	m m	[ ] [ ]	B.88
22	Typed body	O R	m m	[ ] [ ]	B.90

Message Transfer services

Ref. No.	MHS Element of service	O/R	D	I	Clause ref. (Rec. X.400)
23	Access management	O R	m m	[ ] [ ]	B.1
24	Alternate recipient allowed	O R	o o	[ ] [ ]	B.3
25	Alternate recipient assignment	O R	n/a o	[ ] [ ]	B.4
26	Content type indication	O R	m m	[ ] [ ]	B.12
27	Conversion prohibition	O R	m m	[ ] [ ]	B.13
28	Conversion prohibition in case of loss of information	O R	o o	[ ] [ ]	B.14
29	Converted indication	O R	n/a m	[ ] [ ]	B.15
30	Deferred delivery	O R	m n/a	[ ] [ ]	B.19
31	Deferred delivery cancellation	O R	o n/a	[ ] [ ]	B.20
32	Delivery notification	O R	m n/a	[ ] [ ]	B.21
33	Delivery time stamp indication	O R	n/a m	[ ] [ ]	B.22
34	Designation of recipient by directory name	O R	o n/a	[ ] [ ]	B.24
35	Disclosure of other recipients	O R	o m	[ ] [ ]	B.25
36	DL Expansion history indication	O R	n/a m	[ ] [ ]	B.26
37	DL Expansion prohibited	O R	o n/a	[ ] [ ]	B.27
38	Explicit conversion	O R	o n/a	[ ] [ ]	B.30
39	Grade of delivery selection	O R	m m	[ ] [ ]	B.32
40	Hold for delivery	O R	n/a o	[ ] [ ]	B.33

Ref. No.	MHS Element of service	O/R	D	I	Clause ref. (Rec. X.400)
41	Implicit conversion	O R	n/a o	[ ] [ ]	B.34
42	Latest delivery designation	O R	o n/a	[ ] [ ]	B.39
43	Message identification	O R	m m	[ ] [ ]	B.41
44	Multi-destination delivery	O R	n/a m		
45	Non-delivery notification	O R	n/a m	[ ] [ ]	B.47
46	Original encoded information types indication	O R	m m	[ ] [ ]	B.54
47	Originator requested alternate recipient	O R	o n/a	[ ] [ ]	B.56
48	Prevention of non-delivery notification	O R	o n/a	[ ] [ ]	B.61
49	Probe	O R	o n/a	[ ] [ ]	B.63
50	Redirection disallowed by originator	O R	o n/a	[ ] [ ]	B.68
51	Redirection of incoming messages	O R	n/a o	[ ] [ ]	B.69
52	Requested preferred delivery method	O R	o o	[ ] [ ]	B.76
53	Restricted delivery	O R	n/a o	[ ] [ ]	B.77
54	Return of content	O R	o n/a	[ ] [ ]	B.78
55	Submission time stamp indication	O R	m m	[ ] [ ]	B.89
56	Use of distribution list	O R	o n/a	[ ] [ ]	B.92
57	User/UA capabilities registration	O R	m m	[ ] [ ]	B.93

*Physical Delivery services*

This table shall be filled in only if Physical Delivery is supported (see A.6.2/2).

Ref. No.	MHS Element of service	O/R	D	I	Clause ref. (Rec. X.400)
58	Additional physical rendition	O R	o o	[ ] [ ]	B.2
59	Basic physical rendition	O R	o n/a (Note)	[ ] [ ]	B.7
60	Counter collection	O R	o n/a (Note)	[ ] [ ]	B.16
61	Counter collection with advice	O R	o o	[ ] [ ]	B.17
62	Delivery via Bureaufax service	O R	o o	[ ] [ ]	B.23
63	EMS (Express Mail Service)	O R	o n/a (Note)	[ ] [ ]	B.28
64	Ordinary mail	O R	o n/a (Note)	[ ] [ ]	B.53
65	Physical delivery notification by MHS	O R	o o	[ ] [ ]	B.57
66	Physical delivery notification by PDS	O R	o n/a (Note)	[ ] [ ]	B.58
67	Physical forwarding allowed	O R	o n/a (Note)	[ ] [ ]	B.59
68	Physical forwarding prohibited	O R	o n/a (Note)	[ ] [ ]	B.60
69	Registered mail	O R	o o	[ ] [ ]	B.70
70	Registered mail to addresses in person	O R	o o	[ ] [ ]	B.71
71	Request for forwarding address	O R	o o	[ ] [ ]	B.75
72	Special delivery	O R	o n/a (Note)	[ ] [ ]	B.81
73	Undeliverable mail with return of physical message	O R	o n/a (Note)	[ ] [ ]	B.91

*Note* – PDAU feature.



Security services

This table shall be filled in only if Security is supported (see A.6.2/1).

Ref. No.	MHS Element of service	O/R	D	I	Clause ref. (Rec. X.400)
74	Content confidentiality	O R	o o	[ ] [ ]	B.10
75	Content integrity	O R	o o	[ ] [ ]	B.11
76	Message flow confidentiality	O R	o n/a	[ ] [ ]	B.40
77	Message origin authentication	O R	o o	[ ] [ ]	B.42
78	Message security labelling	O R	o o	[ ] [ ]	B.43
79	Message sequence integrity	O R	o o	[ ] [ ]	B.44
80	Non-repudiation of delivery	O R	o o	[ ] [ ]	B.49
81	Non-repudiation of origin	O R	o o	[ ] [ ]	B.50
82	Non-repudiation of submission	O R	o o	[ ] [ ]	B.51
83	Probe origin authentication	O R	o n/a	[ ] [ ]	B.64
84	Proof of delivery	O R	o o	[ ] [ ]	B.65
85	Proof of submission	O R	o n/a	[ ] [ ]	B.66
86	Report origin authentication	O R	o o	[ ] [ ]	B.74
87	Secure access management	O R	o o	[ ] [ ]	B.79

*MS elements of service*

This table shall be filled in only if predicate p25 is TRUE.

Ref. No.	MHS Element of service	O/R	D	I	Clause ref. (Rec. X.400)
87	MS register	O R	n/a o	[ ] [ ]	B.4n
88	Stored message alert	O R	n/a o	[ ] [ ]	B.82
89	Stored message auto-forward	O R	n/a o	[ ] [ ]	B.83
90	Stored message deletion	O R	n/a m (Note 1)	[ ] [ ]	B.84
91	Stored message fetching	O R	n/a m (Note 1)	[ ] [ ]	B.85
92	Stored message listing	O R	n/a m (Note 2)	[ ] [ ]	B.86
93	Stored message summary	O R	n/a m (Note 2)	[ ] [ ]	B.87

*Note 1* – Mandatory service applying to MSs and UAs.

*Note 2* – Mandatory service applying to MSs and optional service applying to UAs.

**A.6.4** *Timers and Protocol parameters*

“N/A”.

**A.6.5** *Supported PDUs*

Ref. No.	Supported PDUs	O/R	D	I	Clause ref. (Rec. X.420)
1	Interpersonnal Message (IPM)	O R	m m	[ ] [ ]	7
2	Interpersonnal Notification (IPN)	O R	m c p1	[ ] [ ]	8

## A.6.6 Supported PDU parameters

Consistency between this section and section A.6.3 is guarded by section A.4.7.

### A.6.6.1 IPM

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
1 Heading	O R	m m	[ ] [ ]				7.2
1.1 this-IPM	O R	m m	[ ] [ ]	#1.3			7.2.1
1.2 originator	O R	m m	[ ] [ ]	#1.2			7.2.2
1.3 authorizing-users	O R	c m	[ ] [ ]	p20 #1.2			7.2.3
1.4 primary-recipients	O R	m m	[ ] [ ]	#1.1			7.2.4
1.5 copy-recipients	O R	m m	[ ] [ ]	#1.1			7.2.5
1.6 blind-copy-recipients	O R	c m	[ ] [ ]	p2 #1.1			7.2.6
1.7 replied-to-IPM	O R	m m	[ ] [ ]	#1.3			7.2.7
1.8 obsoleted-IPMs	O R	c m	[ ] [ ]	p3 #1.3			7.2.8
1.9 related-IPMs	O R	c m	[ ] [ ]	p4 #1.3			7.2.9
1.10 subject	O R	m m	[ ] [ ]		128 128		7.2.10
1.11 expiry-time	O R	c m	[ ] [ ]	p5			7.2.11
1.12 reply-time	O R	c m	[ ] [ ]	p6			7.2.12
1.13 reply-recipients	O R	c m	[ ] [ ]	p6 #1.2			7.2.13
1.14 importance	O R	m m	[ ] [ ]	d d			7.2.14
1.14.1 low	O R	o m	[ ] [ ]				
1.14.2 normal	O R	o m	[ ] [ ]				
1.14.3 high	O R	o m	[ ] [ ]				

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
1.15 sensitivity	O R	c m	[ ] [ ]	p7			7.2.15
1.16 auto-forwarded	O R	c m	[ ] [ ]	p8			7.2.16
1.17 extensions	O R	c m	[ ] [ ]	p9			7.2.17
1.17.1 incomplete-copy	O R	c c	[ ] [ ]	p10 p11			Annex A.1
1.17.2 languages	O R	c m	[ ] [ ]	p12			Annex A.2
2 Body	O R	m m	[ ] [ ]				7.3
2.1 ia5-text	O R	o o	[ ] [ ]				7.3.1
2.1.1 IA5TextParameters	O R	m m	[ ] [ ]				
2.1.1.1 Repertoire	O R	m m	[ ] [ ]	d d			
2.1.1.1.1 ita2	O R	o m	[ ] [ ]				
2.1.1.1.2 ita5	O R	o o	[ ] [ ]				
2.1.2 IA5TextData	O R	m m	[ ] [ ]				
2.2 voice	O R	Note 4 Note 4	[ ] [ ]				7.3.2
2.3 g3-facsimile	O R	o o	[ ] [ ]				7.3.3
2.3.1 G3FacsimileParameters	O R	m m	[ ] [ ]				
2.3.1.1 number-of-pages	O R	o o	[ ] [ ]				
2.3.1.2 G3FacsimileNonBasic Parameters	O R	m m	[ ] [ ]				
2.3.2 G3FacsimileData	O R	m m	[ ] [ ]				
2.4 g4-class1	O R	o o	[ ] [ ]				7.3.4
2.5 teletex	O R	o o	[ ] [ ]				7.3.5
2.5.1 TeletexParameters	O R	m m	[ ] [ ]				
2.5.1.1 number-of-pages	O R	o o	[ ] [ ]				

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
2.5.1.2 telex-compatible	O R	m m	[ ] [ ]	d d			
2.5.1.3 TeletexNonBasicParameters	O R	m m	[ ] [ ]				
2.5.1.3.1 graphic-character-sets	O R	o o	[ ] [ ]				
2.5.1.3.2 control-character-sets	O R	o o	[ ] [ ]				
2.5.1.3.3 page-formats	O R	o o	[ ] [ ]				
2.5.1.3.4 miscellaneous-terminal-capabilities	O R	o o	[ ] [ ]				
2.5.1.3.5 private-use	O R	o o	[ ] [ ]				
2.5.2 TeletexData	O R	m m	[ ] [ ]				
2.6 videotex	O R	o o	[ ] [ ]				7.3.6
2.6.1 VideotexParameters	O R	m m	[ ] [ ]				
2.6.1.1 VideotexSyntax	O R	o o	[ ] [ ]				
2.6.1.1.1 ids	O R	o o	[ ] [ ]				
2.6.1.1.2 data-syntax1	O R	o o	[ ] [ ]				
2.6.1.1.3 data-syntax2	O R	o o	[ ] [ ]				
2.6.1.1.4 data-syntax3	O R	o o	[ ] [ ]				
2.6.2 VideotextData	O R	m m	[ ] [ ]				
2.7 encrypted	O R	Note 4 Note 4	[ ] [ ]				7.3.7
2.8 message	O R	c m	[ ] [ ]	p22			7.3.8
2.8.1 MessageParameters	O R	m m	[ ] [ ]				
2.8.1.1 delivery-time	O R	o o	[ ] [ ]				
2.8.1.2 delivery-envelope	O R	o o	[ ] [ ]				

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
2.8.1.2.1 content-type	O R	o o	[ ] [ ]				
2.8.1.2.2 originator-name	O R	o o	[ ] [ ]				
2.8.1.2.3 original-encoded-information-types	O R	o o	[ ] [ ]				
2.8.1.2.4 priority	O R	o o	[ ] [ ]				
2.8.1.2.5 delivery-flags	O R	o o	[ ] [ ]				
2.8.1.2.6 other-recipient-names	O R	o o	[ ] [ ]				
2.8.1.2.7 this-recipient-names	O R	o o	[ ] [ ]				
2.8.1.2.8 originally-intended-recipient-names	O R	o o	[ ] [ ]				
2.8.1.2.9 converted-encoded-information-types	O R	o o	[ ] [ ]				
2.8.1.2.10 message-submission-time	O R	o o	[ ] [ ]				
2.8.1.2.11 content-identifier	O R	o o	[ ] [ ]				
2.8.1.2.12 extensions	O R	c c	[ ] [ ]	p 23 p 24			
2.8.1.2.13 conversion-with-loss-prohibited	O R	o o	[ ] [ ]				
2.8.1.2.14 requested-delivery-method	O R	o o	[ ] [ ]				
2.8.1.2.15 physical-forwarding-prohibited	O R	o o	[ ] [ ]				
2.8.1.2.16 physical-forwarding-address-request	O R	o o	[ ] [ ]				
2.8.1.2.17 physical-delivery-modes	O R	o o	[ ] [ ]				
2.8.1.2.18 registered-mail-type	O R	o o	[ ] [ ]				
2.8.1.2.19 recipient-number-for-advise	O R	o o	[ ] [ ]				
2.8.1.2.20 physical-rendition-attributes	O R	o o	[ ] [ ]				
2.8.1.2.21 origintaor-return-address	O R	o o	[ ] [ ]				

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
2.8.1.2.22 physical-delivery-report-request	O R	o o	[ ] [ ]				
2.8.1.2.23 originator-certificate	O R	o o	[ ] [ ]				
2.8.1.2.24 message-token	O R	o o	[ ] [ ]				
2.8.1.2.25 content-confidentiality-algorithm-identifier	O R	o o	[ ] [ ]				
2.8.1.2.26 content-integrity-check	O R	o o	[ ] [ ]				
2.8.1.2.27 message-origin-authentication-check	O R	o o	[ ] [ ]				
2.8.1.2.28 message-security-label	O R	o o	[ ] [ ]				
2.8.1.2.29 proof-of-delivery-request	O R	o o	[ ] [ ]				
2.8.1.2.30 rediction-history	O R	o o	[ ] [ ]				
2.8.1.2.31 d1-expansion-history	O R	o o	[ ] [ ]				
2.8.2 MessageData (IPM)	O R	m m	[ ] [ ]				
2.9 mixed-mode	O R	o o	[ ] [ ]				7.3.9
2.10 bilaterally-defined	O R	o o	[ ] [ ]				7.3.10
2.11 nationally-defined	O R	o o	[ ] [ ]				7.3.11
2.12 externally-defined	O R	o o	[ ] [ ]				7.3.12
2.12.1 ExternallyDefined Parameters	O R	m m	[ ] [ ]				
2.12.2 ExternallyDefinedData	O R	m m	[ ] [ ]				

Note – Encoding not standardized.

A.6.6.2 IPN

	Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
1	subject-ipm	O R	m m	[ ] [ ]	#1.3			8.1.1
2	ipn-originator	O R	o m	[ ] [ ]	#1.2			8.1.2
3	ipm-preferred-recipient	O R	m m	[ ] [ ]	#1.2			8.1.3
4	conversion-eits	O R	m m	[ ] [ ]				8.1.4
5	notification-extensions	O R	o o	[ ] [ ]				
6	NonReceiptFields	O R	m c	[ ] [ ]	p17			8.2
6.1	non-receipt-reason	O R	m m	[ ] [ ]				8.2.1
6.1.1	ipm-discarded	O R	m m	[ ] [ ]				
6.1.2	ipm-auto-forwarded	O R	c m	[ ] [ ]	p22			
6.2	discard-reason	O R	m m	[ ] [ ]				8.2.2
6.2.1	ipm-expired	O R	m m	[ ] [ ]				
6.2.2	ipm-obsolete	O R	m m	[ ] [ ]				
6.2.3	ipm-subscription-terminated	O R	m m	[ ] [ ]				
6.3	auto-forward-comment	O R	c m	[ ] [ ]	p22	256 256		8.2.3
6.4	returned-ipm	O R	c c	[ ] [ ]	p13 p14			8.2.4
6.5	nrn-extensions	O R	o o	[ ] [ ]				
7	ReceiptFields	O R	c c	[ ] [ ]	p15 p16			8.3
7.1	receipt-time	O R	m m	[ ] [ ]				8.3.1
7.2	acknowledgement-mode	O R	m m	[ ] [ ]	d d			8.3.2
7.2.1	manual	O R	m m	[ ] [ ]				
7.2.2	automatic	O R	o m	[ ] [ ]				
7.3	suppl-receipt-info	O R	o m	[ ] [ ]	256 256			8.3.3
7.4	rn-extensions	O R	o o	[ ] [ ]				
8	other-notification-type-fields	O R	o o	[ ] [ ]				



### A.6.6.3 Message Store Attributes

As described in Recommendation X.413, an MS maintains and provides access to certain attributes (e.g. the importance) of each information object it holds. An attribute comprises a type and, depending upon the type, one or more values.

This section classifies the MS attributes specific to Interpersonal Messaging and only applies to conf.3 and conf.4 (see A.1.2/7).

For each IPM or IPN it holds or handled the implementation shall support the following attributes. Support level for these attributes is detailed in Annex C of Recommendation X.420 and Table C-1/X.420.

Attributes	D	I	Note
Acknowledgment Mode	o	[ ]	
Authorizing Users	o	[ ]	
Auto-forward Comment	o	[ ]	
Auto-forwarded	o	[ ]	
Bilaterally Defined Body Parts	o	[ ]	
Blind Copy Recipients	o	[ ]	
Body	m	[ ]	
Conversion EITs	o	[ ]	
Copy Recipients	o	[ ]	
Discard Reason	o	[ ]	
Encrypted Body Parts	o	[ ]	
Encrypted Data	o	[ ]	
Encrypted Parameters	o	[ ]	
Expiry Time	o	[ ]	
Extended Body Part Types	o	[ ]	
G3 Facsimile Body Parts	o	[ ]	
G3 Facsimile Data	o	[ ]	
G3 Facsimile Parameters	o	[ ]	
G4 Class 1 Body Parts	o	[ ]	
Heading	m	[ ]	
IA5 Text Body Parts	o	[ ]	
IA5 Text Data	o	[ ]	
IA5 Text Parameters	o	[ ]	
Importance	o	[ ]	
Incomplete Copy	o	[ ]	
IPM Entry Type	m	[ ]	
IPM Preferred Recipient	o	[ ]	
IPM Synopsis	o	[ ]	
IPN Originator	o	[ ]	
Languages	o	[ ]	

Attributes	D	I	Note
Message Body Parts	o	[ ]	
Message Data	o	[ ]	
Message Parameters	o	[ ]	
Mixed-mode Body Parts	o	[ ]	
Nationally Defined Body Parts	o	[ ]	
Non-receipt Reason	o	[ ]	
NRN Requestors	o	[ ]	
Obsoleted IPMs	o	[ ]	
Originator	o	[ ]	
Primary Recipients	o	[ ]	
Receipt Time	o	[ ]	
Related IPMs	o	[ ]	
Replied-to IPM	o	[ ]	
Reply Recipients	o	[ ]	
Reply Requestors	o	[ ]	
Reply Time	o	[ ]	
Returned IPM	o	[ ]	
RN Requestors	o	[ ]	
Sensitivity	o	[ ]	
Subject	o	[ ]	
Subject IPM	m	[ ]	
Suppl Receipt Info	o	[ ]	
Teletex Body Parts	o	[ ]	
Teletex Data	o	[ ]	
Teletex Parameters	o	[ ]	
This IPM	m	[ ]	
Videotext Body Parts	o	[ ]	
Videotex Data	o	[ ]	
Videotex Parameters	o	[ ]	
Voice Body Parts	o	[ ]	
Voice Data	o	[ ]	
Voice Parameters	o	[ ]	

A.6.6.4 *Common data types and ORNames*

A.6.6.4.1 *Common data types*

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
1 RecipientSpecifier							7.1.2
1.1 Recipient	O R	m m	[ ] [ ]	#1.2			
1.2 Notification-requests	O R	c m	[ ] [ ]	p1			
1.2.1 m	O R	c c	[ ] [ ]	p16 p15			
1.2.2 nrm	O R	c m	[ ] [ ]	p17			
1.2.3 ipm-return	O R	o o	[ ] [ ]				
1.3 reply-requested	O R	c m	[ ] [ ]	p6			
1.4 recipient-extensions	O R	o o	[ ] [ ]				
2 ORDescriptor							7.1.3
2.1 FormalName	O R	m m	[ ] [ ]				
2.1.1 ORName	O R	m m	[ ] [ ]	#2			
2.2 FreeFormName	O R	m m	[ ] [ ]		64 64		
2.3 TelephoneNumber	O R	m m	[ ] [ ]		32 32		
3 IPMIdentifier							7.1.1
3.1 ORName	O R	m m	[ ] [ ]	#2			
3.2 LocalIPMIdentifier	O R	m m	[ ] [ ]		64 64		

A.6.6.4.2 *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 forms of ORAddresses. These forms are presented in the following table.

This clause 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 ORName shall be rejected if it is already assigned to another MTS-user.

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.420)
ORAddress forms:							
1 MnemonicORAddress	O R	m	[ ] [ ]	A			18.5.1
2 NumericORAddress	O R	m	[ ] [ ]	A			18.5.2
3 TerminalORAddress	O R	m	[ ] [ ]	A			18.5.4
4 FormattedPostalORAddress	O R	m	[ ] [ ]	PHY			18.5.3
5 UnformattedPostalORAddress	O R	m	[ ] [ ]	PHY			18.5.3

The following tables specify for each ORName form classification of their constituent components.

The Notes used in the following tables are defined hereafter:

*Note 1* – A numeric value can be encoded with a printable string and has the same significance as if encoded as a numeric string.

*Note 2* – Shall be present when the issuing management domain is not an ADMD.

*Note 3* – This ORName form allows only the following extension attribute types, all other are prohibited.

*Note 4* – When an Extension-attribute field is supported, it is assumed that the corresponding “extension-attribute-type” and “extension-attribute-values” are also supported.

*Note 5* – See CCITT Rec. ISO/IEC 9594-2 | CCITT Rec. X.501.

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
6	ORName with MnemonicORAddress						
6.1	address						
6.1.1	O R	m m	[ ] [ ]				
6.1.1.1	O R	m m	[ ] [ ]		3 3		
6.1.1.2	O R	m m	[ ] [ ]		2 2		
6.1.2	O R	m m	[ ] [ ]				
6.1.2.1	O R	m m	[ ] [ ]		16 16		
6.1.2.2	O R	m m	[ ] [ ]	(Note 1)	16 16		
6.1.3	O R	m m	[ ] [ ]	(Note 2)			
6.1.3.1	O R	m m	[ ] [ ]		16 16		
6.1.3.2	O R	m m	[ ] [ ]	(Note 1)	16 16		
6.1.4	O R	m m	[ ] [ ]		64 64		
6.1.5	O R	m m	[ ] [ ]				
6.1.5.1	O R	m m	[ ] [ ]		40 40		
6.1.5.2	O R	m m	[ ] [ ]		16 16		
6.1.5.3	O R	m m	[ ] [ ]		5 5		
6.1.5.4	O R	m m	[ ] [ ]		3 3		
6.1.6	O R	m m	[ ] [ ]		4 4		
6.1.6.1	O R	m m	[ ] [ ]		32 32		
6.1.7	O R	o o	[ ] [ ]		4 4		
6.2	O R	m m	[ ] [ ]	(Note 3) (Note 4)	256 256		
6.2.1	O R	m m	[ ] [ ]		64 64		
6.2.2	O R	m m	[ ] [ ]		64 64		
6.2.3	O R	m m	[ ] [ ]		64 64		

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
6.2.4 TeletexPersonalName	O R	m m	[ ] [ ]				
6.2.4.1 surname	O R	m m	[ ] [ ]		40 40		
6.2.4.2 given-name	O R	m m	[ ] [ ]		16 16		
6.2.4.3 initials	O R	m m	[ ] [ ]		5 5		
6.2.4.4 generation-qualifier	O R	m m	[ ] [ ]		3 3		
6.2.5 TeletexOrganizationalUnitNames	O R	m m	[ ] [ ]		4 4		
6.2.5.1 TeletexOrganizationalUnit Name	O R	m m	[ ] [ ]		32 32		
6.2.6 TeletexDomainDefinedAttributes	O R	o o	[ ] [ ]		4 4		
6.3 directory-name	O R	o o	[ ] [ ]	(Note 5)			
7 ORName with NumericORAddress							
7.1 address							
7.1.1 CountryName	O R	m m	[ ] [ ]				
7.1.1.1 x121-dcc-code	O R	m m	[ ] [ ]		3 3		
7.1.2 AdministrationDomainName	O R	m m	[ ] [ ]				
7.1.2.1 numeric	O R	m m	[ ] [ ]		16 16		
7.1.3 PrivateDomainName	O R	m m	[ ] [ ]	(Note 2)			
7.1.3.1 numeric	O R	m m	[ ] [ ]		16 16		
7.1.4 NumericUserIdentifier	O R	m m	[ ] [ ]		32 32		
7.1.5 DomainDefinedAttributes	O R	o o	[ ] [ ]		4 4		
7.2 directory-name	O R	o o	[ ] [ ]	(Note 5)			
8 ORName with TerminalORAddress							
8.1 address							
8.1.1 CountryName	O R	m m	[ ] [ ]				
8.1.1.1 x121-dcc-code	O R	m m	[ ] [ ]		3 3		
8.1.1.2 iso-3166-alpha2-code	O R	m m	[ ] [ ]		2 2		

Parameter	O/R	D	I	Note	Permitted range of Values	Values supported	Clause Reference (Rec. X.402)
8.1.2 AdministrationDomainName	O R	m m	[ ] [ ]				
8.1.2.1 numeric	O R	m m	[ ] [ ]		16 16		
8.1.2.2 printable	O R	m m	[ ] [ ]	(Note 1)	16 16		
8.1.3 NetworkAddress	O R	m m	[ ] [ ]		16 16		
8.1.4 TerminalIdentifier	O R	m m	[ ] [ ]		24 24		
8.1.5 PrivateDomainName	O R	m m	[ ] [ ]	(Note 2)			
8.1.5.1 numeric	O R	m m	[ ] [ ]		16 16		
8.1.5.2 printable	O R	m m	[ ] [ ]	(Note 1)	16 16		
8.1.6 DomainDefinedAttributes	O R	o o	[ ] [ ]		4 4		
8.2 Extensions	O R	m m	[ ] [ ]	(Note 3) (Note 4)	256 256		
8.2.1 ExtendedNetworkAddress	O R	m m	[ ] [ ]				
8.2.1.1 el63-4-address	O R	m m	[ ] [ ]				
8.2.1.1.1 number	O R	m m	[ ] [ ]		15 15		
8.2.1.1.2 sub-address	O R	m m	[ ] [ ]		40 40		
8.2.1.2 psap-address	O R	m m	[ ] [ ]	X.500			
8.2.2 TerminalType	O R	m m	[ ] [ ]				
8.2.2.1 telex	O R	m m	[ ] [ ]				
8.2.2.2 teletex	O R	m m	[ ] [ ]				
8.2.2.3 g3-facsimile	O R	m m	[ ] [ ]				
8.2.2.4 g4-facsimile	O R	m m	[ ] [ ]				
8.2.2.5 ia5-terminal	O R	m m	[ ] [ ]				
8.2.2.6 videotex	O R	m m	[ ] [ ]				
8.3 directory-name	O R	m m	[ ] [ ]	(Note 5)			

This table shall be filled in only if Physical Delivery is supported (see A.6.2/2).

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
9	ORName with FormattedPostalORAddress						
9.1	address						
9.1.1	O R	m m	[ [ ] ]				
9.1.1.1	O R	m m	[ [ ] ]		3 3		
9.1.1.2	O R	m m	[ [ ] ]		2 2		
9.1.2	O R	m m	[ [ ] ]				
9.1.2.1	O R	m m	[ [ ] ]		16 16		
9.1.2.2	O R	m m	[ [ ] ]	(Note 1)	16 16		
9.1.3	O R	m m	[ [ ] ]	(Note 2)			
9.1.3.1	O R	m m	[ [ ] ]		16 16		
9.1.3.2	O R	m m	[ [ ] ]	(Note 1)	16 16		
9.2	O R	m m	[ [ ] ]	(Note 3) (Note 4)	256 256		
9.2.1	O R	m m	[ [ ] ]				
9.2.1.1	O R	m m	[ [ ] ]		3 3		
9.2.1.2	O R	m m	[ [ ] ]		2 2		
9.2.2	O R	m m	[ [ ] ]				
9.2.2.1	O R	m m	[ [ ] ]		30 30		
9.2.2.2	O R	m m	[ [ ] ]		30 30		



Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
9.2.3 PhysicalDeliveryOfficeNumber	O R	m m	[ ] [ ]				
9.2.3.1 printable-string	O R	o o	[ ] [ ]		30 30		
9.2.3.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.4 PhysicalDeliveryOrganizationName	O R	m m	[ ] [ ]				
9.2.4.1 printable-string	O R	o o	[ ] [ ]		30 30		
9.2.4.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.5 PhysicalDeliveryPersonalName	O R	m m	[ ] [ ]				
9.2.5.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.5.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.6 PostalCode	O R	m m	[ ] [ ]				
9.2.6.1 numeric-code	O R	m m	[ ] [ ]		16 16		
9.2.6.2 printable-code	O R	m m	[ ] [ ]	(Note 1)	16 16		
9.2.7 PosteRestanteAddress	O R	m m	[ ] [ ]				
9.2.7.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.7.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.8 PostOfficeBoxAddress	O R	m m	[ ] [ ]				
9.2.8.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.8.2 teletex-string	O R	m m	[ ] [ ]		30 30		

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
9.2.9 PDSName	O R	m m	[ ] [ ]		16 16		
9.2.10 StreetAddress	O R	m m	[ ] [ ]				
9.2.10.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.10.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.11 UniquePostalName	O R	m m	[ ] [ ]				
9.2.11.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.11.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.12 ExtensionORAddressComponents	O R	m m	[ ] [ ]				
9.2.12.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.12.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.13 ExtensionPhysicalDelivery AddressComponents	O R	m m	[ ] [ ]				
9.2.13.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.13.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.2.14 LocalPostalAttributes	O R	m m	[ ] [ ]				
9.2.14.1 printable-string	O R	m m	[ ] [ ]		30 30		
9.2.14.2 teletex-string	O R	m m	[ ] [ ]		30 30		
9.3 directory-name	O R	m m	[ ] [ ]	(Note 5)			

This table shall be filled in only if Physical Delivery is supported (see A.6.2/2).

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
10 ORName with UnformattedPostalORAddress							
10.1 address							
10.1.1 CountryName	O R	m m	[ ] [ ]				
10.1.1.1 x121-dcc-code	O R	m m	[ ] [ ]		3 3		
10.1.1.2 iso-3166-alpha2-code	O R	m m	[ ] [ ]		2 2		
10.1.2 AdministrationDomainName	O R	m m	[ ] [ ]				
10.1.2.1 numeric	O R	m m	[ ] [ ]		16 16		
10.1.2.2 printable	O R	m m	[ ] [ ]	(Note 1)	16 16		
10.1.3 PrivateDomainName	O R	m m	[ ] [ ]	(Note 2)			
10.1.3.1 numeric	O R	m m	[ ] [ ]		16 16		
10.1.3.2 printable	O R	m m	[ ] [ ]	(Note 1)	16 16		
10.2 Extensions	O R	m m	[ ] [ ]	(Note 3) (Note 4)	256 256		
10.2.1 UnformattedPostalAddress	O R	m m	[ ] [ ]				
10.2.1.1 printable-address	O R	m m	[ ] [ ]		6 6		
10.2.1.1.1 PrintableString	O R	m m	[ ] [ ]		30 30		
10.2.1.2 teletex-string	O R	m m	[ ] [ ]		180 180		
10.2.2 PhysicalDeliveryCountryName	O R	m m	[ ] [ ]				
10.2.2.1 x121-dc-code	O R	m m	[ ] [ ]		3 3		

Parameter	O/R	D	I	Note	Permitted range of values	Values supported	Clause reference (Rec. X.402)
10.2.2.2 iso-3166-alpha2-code	O R	m m	[ ] [ ]		2 2		
10.2.3 PostalCode	O R	m m	[ ] [ ]				
10.2.3.1 numeric-code	O R	m m	[ ] [ ]		16 16		
10.2.3.2 printable-code	O R	m m	[ ] [ ]	(Note 1)	16 16		
10.2.4 PDSName	O R	m m	[ ] [ ]		16 16		
10.3 directory-name	O R	m m	[ ] [ ]	(Note 5)			

A.6.7 *Negotiation Capabilities*

“N/A”.

A.6.8 *Protocol Error Handling*

“N/A”.

A.6.9 *Other Information*

This table can be used to provide any other relevant information.

Ref. No.	Other information

A.7 *Multi-layer Dependencies*

A.7.1 *Upper layers*

“N/A”.

A.7.2 *Lower layers*

No modifications are imposed to the requirements on lower layers.



