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X.482

(09/92)

REDES DE COMUNICACIÓN DE DATOS

**PROTOCOLO P1 – FORMULARIO
DE ENUNCIADO DE CONFORMIDAD
DE IMPLEMENTACIÓN DE PROTOCOLO**



Recomendación X.482

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.482 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.

NOTAS DEL CCITT

- 1) 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.
- 2) En el anexo B, figura la lista de abreviaturas utilizadas en la presente Recomendación.

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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 distribuido.

El tratamiento de mensajes permite el intercambio de mensajes con almacenamiento y envío (store-and-forward) entre usuarios. El mensaje presentado por un usuario (el originador) se transfiere a través del sistema de transferencia de mensajes (MTS) y se entrega a uno o más usuarios (los recibientes).

El MTS comprende cierto número de agentes de transferencia de mensajes (MTA), que transfieren mensajes y los entregan a los recibientes deseados.

Para evaluar la calidad de funcionamiento de una implementación es necesario disponer de un enunciado de las capacidades y opciones utilizadas para un protocolo OSI determinado. Dicha declaración se denomina enunciado de conformidad de implementación de protocolo (PICS, *protocol implementation conformance statement*).

Esta Recomendación contiene el formulario PICS para el protocolo P1, según se define en la Recomendación X.419.

Recomendación X.482

PROTOCOLO P1 – FORMULARIO DE ENUNCIADO DE CONFORMIDAD DE IMPLEMENTACIÓN DE PROTOCOLO

(1992)

1 Alcance

Esta Recomendación define el formulario de PICS para el protocolo P1 especificado en la Recomendación X.419. Ese formulario de PICS cumple los requisitos pertinentes y las directrices aplicables a los formularios de PICS, consignados en ISO/CEI 9646-2. El anexo A contiene mayores detalles sobre la utilización de este formulario.

2 Referencias normativas

Recomendación X.411 del CCITT (1988), *Sistemas de tratamiento de mensajes: Sistema de transferencia de mensajes: Definición del servicio abstracto y procedimientos.*

Recomendación X.419 del CCITT (1988), *Sistemas de tratamiento de mensajes: Especificaciones de protocolo.*

ISO 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 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.]

3 Definiciones

En esta Recomendación se utilizan los términos definidos en las Recomendaciones de la serie X.400.

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

- capacidades de una implementación sometida a prueba (IUT, *implementation under test*)
- pruebas de conformidad;
- requisitos de conformidad dinámica;
- implementación sometida a prueba (IUT);
- formulario PICS;
- unidad de datos de protocolo (PDU);
- enunciado de conformidad de implementación de protocolo (PICS);
- requisitos de conformidad estática;
- examen de conformidad estática;
- sistema sometido a prueba (SUT, *system under test*).

4 Abreviaturas

En esta Recomendación se utilizan las abreviaturas definidas en las Recomendaciones X.400.

5 Convenios

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

6 Cláusula de conformidad

El suministrador de una implementación de protocolo que pretende ser conforme a la cláusula 4 de la Recomendación X.419 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 implementación.

ANEXO A
(a la Recomendación X.482)

**Protocolo P1 – Formulario de enunciado de conformidad
de implementación de protocolo**

(Este anexo es parte integrante de esta Recomendación)

A.1 *Identification of the implementation*

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 | |
| 8 | Other information | |

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.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 | [] |

Answering “No” to this question indicates non-conformance to the protocol specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conformant. Such information shall be provided in A.6.10, “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 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 protocol element marked “O” in the “O/R” column is said to be supported if the IUT is able to generate it under some circumstances (either automatically or because the end-user explicitly requires a related service).

A protocol element marked “R” in the “O/R” column is said to be supported if it is correctly interpreted and handled and also, when required, made available to the end-user.

All protocol elements shall be supported for relay. When downgrading rules apply the implementation shall react as described in Recommendation X.419, Annex B.

A.4.2 *D (Defined) column*

This column indicates the level of support required for conformance to Recommendation X.419. 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 the capability is subject to a predicate which is referenced in the Note column;
- The item is not applicable.

If Security or Physical Delivery options are not supported, corresponding items shall be considered as not applicable.

A.4.3 *I (Implemented) column*

This column shall be completed by the supplier or implementor 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 item marked “m” should be supported by the IUT. Sub-items marked “m” should be supported if the corresponding leading item 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. lengths 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:

- Notexx Refers to Note XX ;
- pxx Refers to predicate xx (see A.4.7) ;
- #yy Refers to A.6.7.6.yy.

E.g. the following references must be interpreted as follows:

- 1/1 means: see A.6.7.6.1: Common Data Types /1: MTSIdentifier
- 2/3 means: see A.6.7.6.2: Extension Data Types /3: RequestedDeliveryMethod
- 3 means: see A.6.7.6.3: Orname;

- 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;
- SEC Indicates Security item (optional);
- PHY Indicates Physical Delivery item (optional);
- Rec. 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. This referencing is used both inside the PICS proforma, and for references from other Test Specification documents.

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;
- d) if, and only if, more than one response occurs in the row identified by the reference number, then each possible entry is implicitly labelled a), b), c), etc. from left to right, and this letter is appended to the sequence.

An example of the use of this notation would be A.6.7.5/1.1.7b), which refers to the support for the receipt of PerMessageIndicators in a ProbeTransfer PDU.

A.4.7 *Predicate definitions*

In the definition of predicates the letter “O” means “origination” and “R” means “reception”. Definition of predicates:

p1 = A.6.4.1/3

p2 = A.6.4.1/29

p5 = A.6.4.1/28

p6 = A.6.4.1/15

p7 = “the MTA can act as a DL expansion point”

p8 = A.6.4.1/6

p9 = A.6.4.1/19

p11 = A.6.4.1/20

p13 = p9 or p14

p14 = A.6.4.1/16

p16 = A.6.4.1/25

p18 = p1 or p16 or A.6.4.1/29

p19 = A.6.7.3/1.1.5.O

p20 = A.6.4.1/32

p22 = A.6.7.3/1.1.11.10.O

p23 = “the MTA acts within a PRMD”

p24 = A.6.4.1/2

p25 = p1 or p9 or p16

p26 = p25 or p7

p29 = A.6.4.3/52

p30 = A.6.4.3/53

p31 = A.6.4.3/54

p32 = A.6.4.3/55

p33 = A.6.4.3/56

p34 = A.6.4.3/57

p35 = A.6.4.3/58

p36 = A.6.4.3/59

p37 = A.6.4.3/60

p38 = A.6.4.3/61

p39 = A.6.4.3/62
p40 = A.6.4.3/63
p41 = A.6.4.3/64
p42 = A.6.4.3/65
p43 = A.6.7.1/1.2.2.2.O
p47 = A.6.7.1/1.2.2.2.2.O
p48 = A.6.7.1/1.2.3.O
p49 = A.6.7.1/2.2.2.2.O
p50 = A.6.7.1/3.4.O
p51 = A.6.7.3/1.1.11.6.O
p52 = A.6.7.3/1.1.11.7.O
p53 = A.6.7.3/1.1.11.8.O
p54 = A.6.7.3/1.1.11.9.O
p55 = A.6.7.3/1.2.5.10.O
p56 = A.6.7.3/1.2.5.11.O
p57 = A.6.7.3/1.2.5.12.O
p58 = A.6.7.4/1.4.1.O
p59 = A.6.7.4/1.4.4.O
p60 = A.6.7.4/1.4.5.O
p61 = A.6.7.4/2.2.7.3.O
p62 = A.6.7.4/2.2.7.4.O
p63 = A.6.7.5/1.1.10.4.O
p64 = A.6.7.5/1.1.10.5.O
p65 = A.6.7.5/1.1.10.7.O
p66 = A.6.7.6.2/1.4.O
p67 = A.6.7.6.2/2.1.O
p68 = A.6.7.6.2/2.2.O
p69 = A.6.7.6.2/2.3.O
p70 = A.6.7.6.2/2.4.O
p71 = A.6.7.6.2/4.1.O
p72 = A.6.7.6.2/4.2.O
p73 = A.6.7.6.2/4.3.O
p74 = A.6.7.6.2/4.4.O
p75 = A.6.7.6.2/4.5.O
p76 = A.6.7.6.2/5.O
p77 = A.6.7.6.2/6.O
p78 = A.6.7.6.2/6.1.O
p79 = A.6.7.6.2/6.2.O
p80 = A.6.7.6.2/6.3.O
p81 = A.6.7.6.2/6.4.O
p82 = A.6.7.6.2/6.5.O
p83 = A.6.7.6.2/11.2.O
p84 = A.6.7.6.2/11.3.O
p85 = A.6.7.6.2/12.4.O
p86 = A.6.7.6.2/12.6.O

p87 = A.6.7.6.2/12.7.O
 p88 = A.6.7.6.2/13.2.O
 p89 = A.6.7.6.2/13.3.O
 p90 = A.6.7.6.2/14.1.2.O
 p91 = A.6.7.6.2/14.1.3.O
 p92 = A.6.7.6.2/14.1.3.1.3.O
 p93 = A.6.7.6.2/14.1.3.1.4.O
 p94 = A.6.7.6.2/14.1.4.O
 p95 = A.6.4.2/43
 p96 = A.6.4.2/39
 p97 = A.6.4.2/40
 p98 = A.6.4.2/44
 p99 = A.6.4.1/30
 p100= A.6.4.3/55 or A.6.4.3/52 or A.6.4.3/53 or A.6.4.3/59 or A.6.4.3/56
 p101= A.6.7.6.1/6.1.2.2.2.O

The predicate definitions have to be read as follows:

“p1 = A.6.4.1/3” means that p1 is true if the element of service “Alternate recipient assignment” is supported (see A.6.4.1).

“p19 = A.6.7.3/1.1.5.O” means that p19 is true if the protocol element “ContentIdentifier” is supported in origination (see A.6.7.3).

Example of the conditional classification with predicate:

Alternate Recipient Allowed c p1

This means that support of the capability is mandatory if p1 is true. Otherwise support of the capability is optional.

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 tables below, 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 e.g. for the length. 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 | Origination/Reception |
| PHY | Physical Delivery |
| SEC | Security |
| Y | YES |

A.6 Capabilities and options

A.6.1 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.

A.6.1.1 Mapping between Rec. X.400 keys and PICS entries

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

A.6.2 Initiator/Responder capability

| Ref. No. | Role | D | I |
|----------|-----------|---|-----|
| 1 | Initiator | m | [] |
| 2 | Responder | m | [] |

A.6.3 Supported Application Contexts and Options

| Ref. No. | Application Context | D (CCITT) | D (ISO) | I |
|----------|----------------------------|-----------|---------|-----|
| 1 | mts-transfer-protocol-1984 | m | o | [] |
| 2 | mts-transfer-protocol | m | o | [] |
| 3 | mts-transfer | o | m | [] |

| Ref. No. | Options | D | I |
|----------|-------------------|---|-----|
| 4 | Physical Delivery | o | [] |
| 5 | Security | o | [] |

A.6.4 Major capabilities

A.6.4.1 Message Transfer services

| Ref. No. | MHS Element of Service | D | I | Clause reference (Rec. X.400) |
|----------|---|------------|-----|----------------------------------|
| 1 | Access management | m | [] | B.1 |
| 2 | Alternate recipient allowed | m | [] | B.3 |
| 3 | Alternate recipient assignment | o | [] | B.4 |
| 4 | Content type indication | m | [] | B.12 |
| 5 | Conversion prohibition | m | [] | B.13 |
| 6 | Conversion prohibition in case of loss of information | o | [] | B.14 |
| 7 | Converted indication | m | [] | B.15 |
| 8 | Deferred delivery | m | [] | B.19 |
| 9 | Deferred delivery cancellation | m | [] | B.20 |
| 10 | Delivery notification | m | [] | B.21 |
| 11 | Delivery time stamp indication | m | [] | B.22 |
| 12 | Designation of recipient by directory name | o | [] | B.24 |
| 13 | Disclosure of other recipients | m | [] | B.25 |
| 14 | DL Expansion history indication | m | [] | B.26 |
| 15 | DL Expansion prohibited | o | [] | B.27 |
| 16 | Explicit conversion | o | [] | B.30 |
| 17 | Grade of delivery selection | m | [] | B.32 |
| 18 | Hold for delivery | o | [] | B.33 |
| 19 | Implicit conversion | o | [] | B.34 |
| 20 | Latest delivery designation | o | [] | B.39 |
| 21 | Message identification | m | [] | B.41 |
| 22 | Multi-destination delivery | m | [] | B.45 |
| 23 | Non-delivery notification | m | [] | B.47 |
| 24 | Original encoded information types indication | m | [] | B.54 |
| 25 | Originator requested alternate recipient | o | [] | B.56 |
| 26 | Prevention of non-delivery notification | o | [] | B.61 |
| 27 | Probe | m | [] | B.63 |
| 28 | Redirection disallowed by originator | o | [] | B.68 |
| 29 | Redirection of incoming messages | o | [] | B.69 |
| 30 | Requested preferred delivery method | o (Note 2) | [] | B76 |

| Ref. No. | MHS Element of Service | D | I | Clause reference (Rec. X.400) |
|----------|-----------------------------------|---|-----|-------------------------------|
| 31 | Restricted delivery | o | [] | B.77 |
| 32 | Return of content | o | [] | B.78 |
| 33 | Submission time stamp indication | m | [] | B.89 |
| 34 | Use of distribution list | o | [] | B.92 |
| 35 | User/UA capabilities registration | m | [] | B.93 |

Note 1 – These elements of service are defined for the MTS which consists of one or more MTAs. Support of services may be distributed among the MTAs comprising an MD.

Note 2 – If supported this does not imply the provision of all delivery methods.

A.6.4.2 *Physical Delivery services*

The table below shall be filled in only if Physical Security is supported (see A.6.3).

| Ref. No. | MHS Element of Service | D | I | Clause reference (Rec. X.400) |
|----------|--|----------|-----|-------------------------------|
| 36 | Additional physical rendition | o | [] | B.2 |
| 37 | Basic physical rendition | m | [] | B.7 |
| 38 | Counter collection | m | [] | B.16 |
| 39 | Counter collection with advice | o | [] | B.17 |
| 40 | Delivery via Bureau fax service | o | [] | B.23 |
| 41 | EMS (Express Mail Service) | m (Note) | [] | B.28 |
| 42 | Ordinary Mail | m | [] | B.53 |
| 43 | Physical delivery notification by MHS | o | [] | B.57 |
| 44 | Physical delivery notification by PDS | o | [] | B.58 |
| 45 | Physical forwarding allowed | m | [] | B.59 |
| 46 | Physical forwarding prohibited | o | [] | B.60 |
| 47 | Registered mail | o | [] | B.70 |
| 48 | Registered mail to addresses in person | o | [] | B.71 |
| 49 | Request for forwarding address | o | [] | B.75 |
| 50 | Special delivery | m (Note) | | B.81 |
| 51 | Undeliverable mail with return of physical message | m | | B.91 |

Note – At least one or the other shall be supported by the PDAU and the associated PDS.

A.6.4.3 *Security services*

The table below shall be filled in only if Security is supported (see A.6.3).

| Ref. No. | MHS Element of Service | D | I | Clause reference (Rec. X.400) |
|----------|-------------------------------|-----------------------|-----|-------------------------------|
| 52 | Content confidentiality | <input type="radio"/> | [] | B.10 |
| 53 | Content integrity | <input type="radio"/> | [] | B.11 |
| 54 | Message flow confidentiality | <input type="radio"/> | [] | B.40 |
| 55 | Message origin authentication | <input type="radio"/> | [] | B.42 |
| 56 | Message security labelling | <input type="radio"/> | [] | B.43 |
| 57 | Message sequence integrity | <input type="radio"/> | [] | B.44 |
| 58 | Non-repudiation of delivery | <input type="radio"/> | [] | B.49 |
| 59 | Non-repudiation of origin | <input type="radio"/> | [] | B.50 |
| 60 | Non-repudiation of submission | <input type="radio"/> | [] | B.51 |
| 61 | Probe origin authentication | <input type="radio"/> | [] | B.64 |
| 62 | Proof of delivery | <input type="radio"/> | [] | B.65 |
| 63 | Proof of submission | <input type="radio"/> | [] | B.66 |
| 64 | Report origin authentication | <input type="radio"/> | [] | B.74 |
| 65 | Secure access management | <input type="radio"/> | [] | B.79 |

Please answer Y or N in the table below according to your implementation.

| Ref. No. | Capability | I |
|----------|---------------------------|-----|
| 1 2 | Management domain ADMD | [] |
| 3 4 | Private domain PRMD | [] |
| 5 | Explicit conversion | [] |
| 6 | no-explicit-conversion | [] |
| 7 | ia5-text-to-teletex | [] |
| 8 | ia5-text-to-g3-facsimile | [] |
| 9 | ia5-text-to-g4-class-1 | [] |
| 10 | ia5-text-to-videotex | [] |
| 11 | teletex-to-ia5-text | [] |
| 12 | teletex-to-g3-facsimile | [] |
| 13 | teletex-to-g4-class-1 | [] |
| 14 | teletex-to-videotex | [] |
| 15 | videotex-to-ia5-text | [] |
| 16 | videotex-to-teletex | [] |

| Ref. No. | Capability | I |
|----------|---|-----|
| 17 | Implicit conversion | |
| 18 | no-implicit-conversion | [] |
| 19 | ia5-text-to-teletex | [] |
| 20 | ia5-text-to-g3-facsimile | [] |
| 21 | ia5-text-to-g4-class-1 | [] |
| 22 | ia5-text-to-videotex | [] |
| 23 | teletex-to-ia5-text | [] |
| 24 | teletex-to-g3-facsimile | [] |
| 25 | teletex-to-g4-class-1 | [] |
| 26 | teletex-to-videotex | [] |
| 27 | videotex-to-ia5-text | [] |
| 28 | videotex-to-teletex | [] |
| 29 | Original encoded information types | |
| 30 | undefined | [] |
| 31 | ia5-text | [] |
| 32 | g3-facsimile | [] |
| 33 | g4-class-1 | [] |
| 34 | teletex | [] |
| 35 | videotex | [] |
| 36 | voice | [] |
| 37 | sfd | [] |
| 38 | mixed-mode | [] |
| 39 | External encoded information types (Note) | [] |

Note – Indicate in space above which types are supported.

| Ref. No. | Capability | I |
|----------|---------------------------|-----|
| 40 | Requested delivery-method | |
| 41 | any-delivery-method | [] |
| 42 | mhs-delivery | [] |
| 43 | physical-delivery | [] |
| 44 | telex-delivery | [] |
| 45 | teletex-delivery | [] |
| 46 | g3-facsimile-delivery | [] |
| 47 | g4-facsimile-delivery | [] |
| 48 | ia5-terminal-delivery | [] |
| 49 | videotex-delivery | [] |
| 50 | telephone-delivery | [] |

A.6.5 Timers and Protocol parameters

“N/A”.

A.6.6 PDUs and Operations

Note – “O/R” means “Origination/Reception” in the tables below.

A.6.6.1 PDUs

| Ref. No. | PDU | O/R | D | I | Clause reference (Rec. X.400) |
|----------|-----------------|--------|--------|------------|-------------------------------|
| 1 | MessageTransfer | O R | m m | [] [] | 13 |
| 2 | ReportTransfer | O R | m m | [] [] | 13 |
| 3 | Probe | O R | m m | [] [] | 13 |

A.6.6.2 Operations

| Ref. No. | PDU | O/R | D | I | Clause reference (Rec. X.400) |
|----------|-----------|--------|--------|------------|-------------------------------|
| 1 | MTABind | O R | m m | [] [] | 13 |
| 2 | MTAUnbind | O R | m m | [] [] | 13 |

A.6.7 Operation Arguments and PDU Parameters

Consistency between this section and section A.6.4 is guarded by predicates defined in A.4.7. When an Extension field is supported it is assumed that the corresponding TYPE, CRITICALITY and VALUE sub-fields are also supported. Even if an extension field is not supported the IUT shall comply with the criticality procedures.

Note – “O/R” means “Origination/Reception” in the tables below.

A.6.7.1 MTA-bind Arguments

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|-----------------------------|--------|--------|------------|-------------------|---------------------------|------------------|-------------------------------|
| 1 BindArguments | O R | m m | [] [] | | | | 12.1.1.1.1 |
| 1.1 NULL | O R | m m | [] [] | | | | |
| 1.2 SET | O R | m m | [] [] | | | | |
| 1.2.1 Initiator-name | O R | m m | [] [] | | 32 32 | | 12.1.1.1.1.1 |
| 1.2.2 Initiator Credentials | O R | m m | [] [] | | | | 12.1.1.1.1.2 |
| 1.2.2.1 simple | O R | m m | [] [] | | 62 62 | | |
| 1.2.2.2 strong | O R | c c | [] [] | SEC p42 p43 | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|------------|------------|----------------|------------------------------|---------------------------|------------------|-------------------------------|
| 1.2.2.2.1 bind-token | O R | m m | [] [] | SEC | | | |
| 1.2.2.2.1.1 signature-algorithm-identifier | O R | m m | [] [] | SEC | | | |
| 1.2.2.2.1.2 name | O R | m m | [] [] | SEC | | | |
| 1.2.2.2.1.3 time | O R | m m | [] [] | SEC | | | |
| 1.2.2.2.1.4 signed-data | O R | m m | [] [] | SEC | | | |
| 1.2.2.2.2 certificate | O R | o c | [] [] | SEC p47 | | | |
| 1.2.3 SecurityContext | O R | c c | [] [] | SEC p42 and p33 p48 | 256 256 | | 12.1.1.1.1.3 |
| 2 BindResults | O R | m m | [] [] | | | | 12.1.1.1.2 |
| 2.1 NULL | O R | m m | [] [] | | | | |
| 2.2 SET | O R | m m | [] [] | | | | |
| 2.2.1 responder-name | O R | m m | [] [] | | | | 12.1.1.1.2.1 |
| 2.2.2 ResponderCredentials | O R | m m | [] [] | | | | 12.1.1.1.2.2 |
| 2.2.2.1 simple | O R | m m | [] [] | | 62 62 | | |
| 2.2.2.2 strong | O R | c c | [] [] | SEC p42 p49 | | | |
| 3 BindError | O R | m m | [] [] | | 256 256 | | 12.1.2 |
| 3.1 busy | O R | m m | [] [] | | | | 12.1.2.2 |
| 3.2 authentication-error | O R | m m | [] [] | | | | 12.1.2.1 |
| 3.3 unacceptable-dialogue-mode | O R | m m | [] [] | | | | 12.1.2.3 |
| 3.4 unacceptable-security-context | O R | c c | [] [] | SEC p42 p50 | | | 12.1.2.4 |

A.6.7.2 MTA-unbind Arguments

“N/A”.

A.6.7.3 *MessageTransfer PDU Parameters*

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|---------------------------------|---------------------------|------------------|-------------------------------|
| 1 MessageTransferEnvelope | O R | m m | [] [] | | | | 12.2.1.1 |
| 1.1 PerMessageTransfer Fields | O R | m m | [] [] | | | | |
| 1.1.1 MessageIdentifier | O R | m m | [] [] | 1/1 | | | 12.2.1.1.1.1 |
| 1.1.2 OriginatorName | O R | m m | [] [] | 3 | | | 8.2.1.1.1.1 |
| 1.1.3 OriginalEncoded InformationTypes | O R | m m | [] [] | 1/3 | | | 8.2.1.1.1.33 |
| 1.1.4 ContentType | O R | m m | [] [] | 1/9 | | | 8.2.1.1.1.34 |
| 1.1.5 ContentIdentifier | O R | o m | [] [] | | 16 16 | | 8.2.1.1.1.35 |
| 1.1.6 Priority | O R | m m | [] [] | d | | | 8.2.1.1.1.8 |
| 1.1.7 PerMessage Indicators | O R | m m | [] [] | d 1/4 | 16 16 | | |
| 1.1.8 DeferredDelivery Time | O R | m m | [] [] | | | | 12.2.1.1.1.7 |
| 1.1.9 PerDomain BilateralInformation | O R | o o | [] [] | 1/5 | 512 512 | | 12.2.1.1.1.2 |
| 1.1.10 TraceInformation | O R | m m | [] [] | 1/6 | | | 12.2.1.1.1.3 |
| 1.1.11 Extensions | O R | m m | [] [] | | | | |
| 1.1.11.1 RecipientReassignmentProhibited | O R | c c | [] [] | p5 p2 | | | 8.2.1.1.1.4 |
| 1.1.11.2 DLExpansion Prohibited | O R | c c | [] [] | p6 p7 | | | 8.2.1.1.1.6 |
| 1.1.11.3 ConversionWith LossProhibited | O R | c c | [] [] | p8 p8 | | | 8.2.1.1.1.10 |
| 1.1.11.4 LatestDelivery Time | O R | c c | [] [] | p11 p11 | | | 8.2.1.1.1.13 |
| 1.1.11.5 Originator ReturnAddress | O R | m m | [] [] | PHY 3 | | | 8.2.1.1.1.21 |
| 1.1.11.6 Originator Certificate | O R | o c | [] [] | SEC Rec. X.500 p51 | | | 8.2.1.1.1.25 |
| 1.1.11.7 ContentConfidentiality AlgorithmId | O R | c c | [] [] | SEC Rec. X.500 p29 p52 | | | 8.2.1.1.1.27 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|---------------------------|---------------------------|------------------|-------------------------------|
| 1.1.11.8 MessageOrigin AuthenticationCheck | O R | o c | [] [] | SEC 2/1 (Note) p53 | | | 8.2.1.1.1.29 |
| 1.1.11.9 MessageSecurityLabel | O R | c c | [] [] | SEC 2/2 p33 p54 | | | 8.2.1.1.1.30 |
| 1.1.11.10 Content Correlator | O R | o m | [] [] | | | | 8.2.1.1.1.36 |
| 1.1.11.11 DLExpansion History | O R | c m | [] [] | p7 2/9 | 512 512 | | 8.3.1.1.1.7 |
| 1.1.11.12 InternalTrace Information | O R | m m | [] [] | d 2/10 | 512 512 | | 12.2.1.1.1.4 |
| 1.2 PerRecipientMessage TransferFields | O R | m m | [] [] | | | | |
| 1.2.1 RecipientName | O R | m m | [] [] | 3 | | | 8.2.1.1.1.2 |
| 1.2.2 OriginallySpecified RecipientNumber | O R | m m | [] [] | | 32767 32767 | | 12.2.1.1.1.5 |
| 1.2.3 PerRecipient Indicators | O R | m m | [] [] | 1/7 | 16 16 | | |
| 1.2.4 Explicit Conversion | O R | c c | [] [] | p14 p14 | 256 256 | | 8.2.1.1.1.11 |
| 1.2.5 Extensions | O R | m m | [] [] | | | | |
| 1.2.5.1 Originator RequestedAlternateRec. | O R | c c | [] [] | p16 p16 | | | 8.2.1.1.1.5 |
| 1.2.5.2 Requested DeliveryMethod | O R | c c | [] [] | 2/3 p99 p99 | 256 256 | | 8.2.1.1.1.14 |
| 1.2.5.3 Physical ForwardingProhibited | O R | m m | [] [] | PHY d | | | 8.2.1.1.1.15 |
| 1.2.5.4 PhysicalForwarding AddressRequest | O R | c c | [] [] | PHY p95 p95 | | | 8.2.1.1.1.16 |
| 1.2.5.5 Physical DeliveryModes | O R | m m | [] [] | PHY 2/4 | 16 16 | | 8.2.1.1.1.17 |
| 1.2.5.6 RegisteredMail Type | O R | m m | [] [] | PHY d | 256 256 | | 8.2.1.1.1.18 |
| 1.2.5.7 RecipientNumber ForAdvice | O R | c c | [] [] | PHY p96 or p97 p96 or p97 | 32 32 | | 8.2.1.1.1.19 |
| 1.2.5.8 Physical RenditionAttributes | O R | m m | [] [] | PHY d | | | 8.2.1.1.1.20 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|------------|------------|----------------|----------------------------------|---------------------------|------------------|-------------------------------|
| 1.2.5.9 Physical DeliveryReportRequest | O R | m m | [] [] | PHY 2/5 d | 256 256 | | 8.2.1.1.1.24 |
| 1.2.5.10 MessageToken | O R | c c | [] [] | SEC 2/6 (Note) p100 p55 | | | 8.2.1.1.1.26 |
| 1.2.5.11 Content IntegrityCheck | O R | c c | [] [] | SEC 2/7 p30 p56 | | | 8.2.1.1.1.28 |
| 1.2.5.12 ProofOf DeliveryRequest | O R | c c | [] [] | SEC p39 or p35 p57 | | | 8.2.1.1.1.32 |
| 1.2.5.13 Redirection History | O R | c m | [] [] | d p18 2/8 | 512 512 | | |
| 2 Content | O R | m m | [] [] | | | | 8.2.1.1.1.37 |

Note – If A.6.4.3/55 is supported, at least one of those shall be supported.

A.6.7.4 ReportTransfer PDU Parameters

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|------------|------------|----------------|-----------------------|---------------------------|------------------|-------------------------------|
| 1 ReportTransfer Envelope | O R | m m | [] [] | | | | 12.2.1.3 |
| 1.1 ReportIdentifier | O R | m m | [] [] | 1/1 | | | 12.2.1.3.1.1 |
| 1.2 ReportDestination Name | O R | m m | [] [] | 3 | | | 12.2.1.3.1.2 |
| 1.3 TraceInformation | O R | m m | [] [] | 1/6 | | | 12.2.1.1.1.3 |
| 1.4 Extensions | O R | m m | [] [] | | | | |
| 1.4.1 MessageSecurity Label | O R | c c | [] [] | SEC 2/2 p33 p58 | | | 8.2.1.1.1.30 |
| 1.4.2 OriginatorAndDL ExpansionHistory | O R | m m | [] [] | 2/9 | 512 512 | | 8.3.1.2.1.3 |
| 1.4.3 ReportingDLName | O R | o m | [] [] | 3 | | | 8.3.1.2.1.4 |
| 1.4.4 ReportingMTA Certificate | O R | o c | [] [] | SEC Rec. X.500 p59 | | | 8.3.1.2.1.12 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|-------------|---------------------------|------------------|-------------------------------|
| 1.4.5 ReportOrigin AuthenticationCheck | O R | c c | [] [] | SEC p41 p60 | | | 8.3.1.2.1.13 |
| 1.4.6 InternalTrace Information | O R | m m | [] [] | d 2/10 | 512 512 | | 12.2.1.1.1.4 |
| 2 ReportTransfer Content | O R | m m | [] [] | | | | |
| 2.1 PerReportTransfer Fields | O R | m m | [] [] | | | | |
| 2.1.1 SubjectIdentifier | O R | m m | [] [] | | | | 12.2.1.3.1.3 |
| 2.1.2 SubjectIntermediateTraceInformation | O R | m o | [] [] | | | | 12.2.1.3.1.4 |
| 2.1.3 OriginalEncoded InformationTypes | O R | m m | [] [] | 1/3 | | | 8.2.1.1.1.33 |
| 2.1.4 ContentType | O R | m m | [] [] | 1/9 | | | 8.2.1.1.1.34 |
| 2.1.5 ContentIdentifier | O R | m c | [] [] | p19 | 16 16 | | 8.2.1.1.1.35 |
| 2.1.6 ReturnedContent | O R | c c | [] [] | p20 p20 | | | 8.3.1.2.1.14 |
| 2.1.7 Additional Information | O R | o o | [] [] | | | | 12.2.1.3.1.6 |
| 2.1.8 Extensions | O R | m m | [] [] | | | | |
| 2.1.8.1 Content Correlator | O R | m c | [] [] | d p22 | | | 8.2.1.1.1.36 |
| 2.2 PerRecipientReport TransferFields | O R | m m | [] [] | | | | |
| 2.2.1 ActualRecipient Name | O R | m m | [] [] | 3 | | | 8.3.1.2.1.2 |
| 2.2.2 OriginallySpecified RecipientNumber | O R | m m | [] [] | | 32767 32767 | | 12.2.1.1.1.8 |
| 2.2.3 PerRecipient Indicators | O R | m m | [] [] | 1/7 | 16 16 | | |
| 2.2.4 LastTrace Information | O R | m m | [] [] | 1/8 | | | |
| 2.2.5 Originally IntendedRecipientName | O R | m m | [] [] | 3 | | | |
| 2.2.6 Supplementary Information | O R | o o | [] [] | | 256 256 | | 8.3.1.2.1.6 |
| 2.2.7 Extensions | O R | m m | [] [] | | | | |
| 2.2.7.1 Redirection History | O R | m m | [] [] | 2/8 | 512 512 | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|------------------------------------|--------|--------|------------|---------------------|---------------------------|------------------|-------------------------------|
| 2.2.7.2 Physical ForwardingAddress | O R | c c | [] [] | PHY p95 3/4 3/5 p95 | | | |
| 2.2.7.3 Recipient Certificate | O R | o c | [] [] | SEC Rec. X.500 p61 | | | 8.3.1.1.2.1 |
| 2.2.7.4 ProofOfDelivery | O R | c c | [] [] | d SEC p39 p62 | | | |

A.6.7.5 ProbeTransfer PDU Parameters

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|----------|---------------------------|------------------|-------------------------------|
| 1 ProbeTransfer Envelope | O R | m m | [] [] | | | | 12.2.1.2 |
| 1.1 PerProbeTransfer Fields | O R | m m | [] [] | | | | |
| 1.1.1 ProbeIdentifier | O R | m m | [] [] | 1/1 | | | 12.2.1.2.1.1 |
| 1.1.2 OriginatorName | O R | m m | [] [] | 3 | | | 8.2.1.1.1.1 |
| 1.1.3 OriginalEncoded InformationTypes | O R | m m | [] [] | 1/3 | | | 8.2.1.1.1.33 |
| 1.1.4 ContentType | O R | m m | [] [] | 1/9 | | | 8.2.1.1.1.34 |
| 1.1.5 ContentIdentifier | O R | o m | [] [] | | 16 16 | | 8.2.1.1.1.35 |
| 1.1.6 ContentLength | O R | o m | [] [] | | (Note) (Note) | | 8.2.1.2.1.2 |
| 1.1.7 PerMessage Indicators | O R | m m | [] [] | d 1/4 | 16 16 | | |
| 1.1.8 PerDomain BilateralInformation | O R | o o | [] [] | 1/5 | 512 512 | | 12.2.1.1.1.2 |
| 1.1.9 TraceInformation | O R | m m | [] [] | 1/6 | | | 12.2.1.1.1.3 |
| 1.1.10 Extensions | O R | m m | [] [] | | | | |
| 1.1.10.1 Recipient ReassignmentProhibited | O R | c c | [] [] | p5 p2 | | | 8.2.1.1.1.4 |
| 1.1.10.2 DLExpansion Prohibited | O R | c c | [] [] | p6 p7 | | | 8.2.1.1.1.6 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|---------------------------|---------------------------|------------------|-------------------------------|
| 1.1.10.3 ConversionWith LossProhibited | O R | c c | [] [] | p8 p8 | | | 8.2.1.1.1.10 |
| 1.1.10.4 Originator Certificate | O R | o c | [] [] | SEC Rec. X.500 p63 | | | 8.2.1.1.1.25 |
| 1.1.10.5 Message SecurityLabel | O R | c c | [] [] | SEC p33 p64 | | | 8.2.1.1.1.30 |
| 1.1.10.6 ContentCorrelator | O R | o m | [] [] | | | | 8.2.1.1.1.36 |
| 1.1.10.7 ProbeOrigin AuthenticationCheck | O R | c c | [] [] | SEC 2/11 p38 p65 | | | 8.2.1.2.1.1 |

Note – '7FFFFFFF'H

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|-------------------|---------------------------|------------------|-------------------------------|
| 1.1.10.8 DLExpansion History | O R | c m | [] [] | p7 2/9 | 512 512 | | 8.3.1.1.1.7 |
| 1.1.10.9 InternalTrace Information | O R | m m | [] [] | d 2/10 | 512 512 | | 12.2.1.1.1.4 |
| 1.2 PerRecipientProbe TransferFields | O R | m m | [] [] | | | | |
| 1.2.1 RecipientName | O R | m m | [] [] | 3 | | | 8.2.1.1.1.2 |
| 1.2.2 OriginallySpecified RecipientNumber | O R | m m | [] [] | | 32767 32767 | | 12.2.1.1.1.5 |
| 1.2.3 PerRecipient Indicators | O R | m m | [] [] | 1/7 | 16 16 | | |
| 1.2.4 Explicit Conversion | O R | c c | [] [] | p14 p14 | 256 256 | | 8.2.1.1.1.11 |
| 1.2.5 Extensions | O R | m m | [] [] | | | | |
| 1.2.5.1 Originator RequestedAlternateRec. | O R | c c | [] [] | 3 | | | 8.2.1.1.1.5 |
| 1.2.5.2 Requested DeliveryMethod | O R | c c | [] [] | 2/3 p99 p99 | 256 256 | | 8.2.1.1.1.14 |
| 1.2.5.3 Physical RenditionAttributes | O R | m m | [] [] | PHY d | | | 8.2.1.1.1.20 |
| 1.2.5.4 Redirection History | O R | c m | [] [] | d p18 2/8 | 512 512 | | |

A.6.7.6 *Supported Data types and ORNames*

A.6.7.6.1 *Common Data types*

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|-----------|--------|--------|------------|------|---------------------------|------------------|-------------------------------|
| 1 | | | | | | | |
| 1.1 | O R | m m | [] [] | 1/2 | | | 8.5.2 |
| 1.2 | O R | m m | [] [] | | 32 32 | | |
| 2 | | | | | | | |
| 2.1 | O R | m m | [] [] | | | | |
| 2.1.1 | O R | m m | [] [] | | 3 3 | | |
| 2.1.2 | O R | m m | [] [] | | 2 2 | | |
| 2.2 | O R | m m | [] [] | | | | |
| 2.2.1 | O R | m m | [] [] | | 16 16 | | |
| 2.2.2 | O R | m m | [] [] | | 16 16 | | |
| 2.3 | O R | c m | [] [] | p23 | | | |
| 2.3.1 | O R | m m | [] [] | | 16 16 | | |
| 2.3.2 | O R | m m | [] [] | | 16 16 | | |
| 3 | | | | | | | |
| 3.1 | O R | m m | [] [] | | 32 32 | | |
| 3.2 | O R | o o | [] [] | | | | |
| 3.2.1 | O R | o o | [] [] | | | | |
| 3.2.1.1 | O R | o o | [] [] | | | | |
| 3.2.1.2 | O R | o o | [] [] | | | | |
| 3.2.1.3 | O R | o o | [] [] | | | | |
| 3.2.1.4 | O R | o o | [] [] | | | | |
| 3.2.1.5 | O R | o o | [] [] | | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|------------|---------------------------|------------------|-------------------------------|
| 3.2.1.6 b4-width | O R | o o | [] [] | | | | |
| 3.2.1.7 uncompressed | O R | o o | [] [] | | | | |
| 3.2.2 TeletexNonBasic Parameters | O R | o o | [] [] | | | | |
| 3.2.2.1 graphic-character-sets | O R | o o | [] [] | | | | |
| 3.2.2.2 control-character-sets | O R | o o | [] [] | | | | |
| 3.2.2.3 page-formats | O R | o o | [] [] | | | | |
| 3.2.2.4 miscellaneous-terminal-capabilities | O R | o o | [] [] | | | | |
| 3.2.2.5 private-use | O R | o o | [] [] | | 128 128 | | |
| 3.2.3 G4Class1AndMixed ModeNonBasicParameters | O R | o o | [] [] | | | | |
| 3.3 ExternalEncoded InformationTypes | O R | m m | [] [] | | 1024 1024 | | |
| 4 PerMessageIndicators | | | | | | | |
| 4.1 disclosure-of-recipients | O R | m m | [] [] | | | | 8.2.1.1.1.7 |
| 4.2 implicit-conversion-prohibited | O R | m c | [] [] | p9 | | | 8.2.1.1.1.9 |
| 4.3 alternate-recipient-allowed | O R | m c | [] [] | p24 | | | 8.2.1.1.1.3 |
| 4.4 content-return-request | O R | c c | [] [] | p20 p20 | | | 8.2.1.1.1.23 |
| 4.5 reserved | O R | o o | [] [] | | | | |
| 4.6 bit-5 | O R | o o | [] [] | | | | |
| 4.7 bit-6 | O R | o o | [] [] | | | | |
| 4.8 service-message | O R | o o | [] [] | | | | |
| 5 PerDomainBilateralInformation | | | | | | | |
| 5.1 CountryName | O R | m m | [] [] | | | | |
| 5.2 Administration DomainName | O R | m m | [] [] | | | | |
| 5.3 PrivateDomain Identifier | O R | c m | [] [] | p23 | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|-------------|---------------------------|------------------|-------------------------------|
| 5.4 Bilateral Information | O R | m m | [] [] | | 1024 1024 | | |
| 6 TraceInformation | | | | | | | |
| 6.1 TraceInformation Element | O R | m m | [] [] | | | | |
| 6.1.1 GlobalDomain Identifier | O R | m m | [] [] | 1/2 | | | |
| 6.1.2 DomainSupplied Information | O R | m m | [] [] | | | | |
| 6.1.2.1 ArrivalTime | O R | m m | [] [] | | | | |
| 6.1.2.2 RoutingAction | O R | m m | [] [] | | | | |
| 6.1.2.2.1 relayed | O R | m m | [] [] | | | | |
| 6.1.2.2.2 rerouted | O R | o m | [] [] | | | | |
| 6.1.2.3 attempted domain | O R | c o | [] [] | p101 1/2 | | | |
| 6.1.2.4 Additional Actions | O R | m m | [] [] | | | | |
| 6.1.2.4.1 DeferredTime | O R | m m | [] [] | | | | |
| 6.1.2.4.2 Converted EncodedInformationTypes | O R | c m | [] [] | p13 1/3 | | | |
| 6.1.2.4.3 OtherActions | O R | c m | [] [] | p26 | 16 16 | | |
| 6.1.2.4.3.1 redirected | O R | c m | [] [] | p25 | | | |
| 6.1.2.4.3.2 dl-operation | O R | c m | [] [] | p7 | | | |
| 7 PerRecipientIndicators | | | | | | | |
| 7.1 responsibility | O R | m m | [] [] | | | | 12.2.1.1.1.6 |
| 7.2 originating-MTA-report | O R | m m | [] [] | | | | |
| 7.3 originating-MTA-non-delivery-report | O R | m m | [] [] | | | | |
| 7.4 originator-report | O R | m m | [] [] | | | | |
| 7.5 originator-non-delivery-report | O R | m m | [] [] | | | | |
| 8 LastTraceInformation | | | | | | | |
| 8.1 ArrivalTime | O R | m m | [] [] | | | | 12.2.1.3.1.5 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|-------------------|---------------------------|------------------|-------------------------------|
| 8.2 ConvertedEncoded InformationTypes | O R | m m | [] [] | 1/3 | | | 8.3.1.2.1.5 |
| 8.3 ReportType | O R | m m | [] [] | | | | |
| 8.3.1 DeliveryReport | O R | m m | [] [] | | | | |
| 8.3.1.1 Message DeliveryTime | O R | m m | [] [] | | | | 8.3.1.2.1.8 |
| 8.3.1.2 TypeOfMTSUser | O R | m m | [] [] | d | | | 8.3.1.2.1.9 |
| 8.3.1.2.1 public | O R | o m | [] [] | | | | |
| 8.3.1.2.2 private | O R | o m | [] [] | | | | |
| 8.3.1.2.3 ms | O R | o m | [] [] | | | | |
| 8.3.1.2.4 dl | O R | o m | [] [] | | | | |
| 8.3.1.2.5 pdau | O R | o m | [] [] | PHY | | | |
| 8.3.1.2.6 physical-recipient | O R | c c | [] [] | PHY p95 p95 | | | |
| 8.3.1.2.7 other | O R | o m | [] [] | | | | |
| 8.3.2 NonDelivery Report | O R | m m | [] [] | | | | |
| 8.3.2.1 NonDelivery ReasonCode | O R | m m | [] [] | | 32767 32767 | | 8.3.1.2.1.10 |
| 8.3.2.1.1 transfer-failure | O R | m m | [] [] | | | | |
| 8.3.2.1.2 unable-to-transfer | O R | m m | [] [] | | | | |
| 8.3.2.1.3 conversion-not-performed | O R | m m | [] [] | | | | |
| 8.3.2.1.4 physical-rendition-not-performed | O R | m m | [] [] | PHY | | | |
| 8.3.2.1.5 physical-delivery-not-performed | O R | c c | [] [] | PHY p95 p95 | | | |
| 8.3.2.1.6 restricted-delivery | O R | m m | [] [] | | | | |
| 8.3.2.1.7 directory-operation-unsuccessful | O R | m m | [] [] | | | | |
| 8.3.2.2 NonDelivery DiagnosticCode | O R | o m | [] [] | | 32767 32767 | | 8.3.1.2.1.11 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|-----------|--------|--------|------------|------|---------------------------|------------------|-------------------------------|
| 9 | | | | | | | |
| 9.1 | O R | m m | [] [] | | 32767 32767 | | |
| 9.1.1 | O R | o o | [] [] | | | | |
| 9.1.2 | O R | o o | [] [] | | | | |
| 9.1.3 | O R | o o | [] [] | | | | |
| 9.1.4 | O R | o o | [] [] | | | | |
| 9.2 | O R | o o | [] [] | | | | |

A.6.7.6.2 Extension Data types

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|-----------|------------|------------|------------|--------------------------|---------------------------|------------------|-------------------------------|
| 1 | | | | | | | |
| 1.1 | O R | m m | [] [] | SEC | | | 8.5.10 |
| 1.2 | O R | m m | [] [] | SEC | | | 8.2.1.1.1.37 |
| 1.3 | O R | o m | [] [] | SEC | 16 16 | | 8.2.1.1.1.35 |
| 1.4 | O R | c c | [] [] | SEC 2/2 p33 p66 | | | 8.2.1.1.1.30 |
| 2 | | | | | | | |
| 2.1 | O R | o c | [] [] | SEC p67 | | | 8.5.9 |
| 2.2 | O R | o c | [] [] | SEC p68 | 256 256 | | 8.5.9 |
| 2.3 | O R | o c | [] [] | SEC p69 | 128 128 | | 8.2.9 |
| 2.4 | O R | o c | [] [] | SEC p70 | 64 64 | | 8.2.9 |
| 3 | | | | | | | |
| 3.1 | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.2 | O R | m m | [] [] | | | | 8.2.1.1.1.14 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|-------------------|---------------------------|------------------|-------------------------------|
| 3.3 physical-delivery | O R | m m | [] [] | PHY | | | 8.2.1.1.1.14 |
| 3.4 telex-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.5 teletex-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.6 g3-facsimile-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.7 g4-facsimile-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.8 ia5-terminal-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.9 videotex-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 3.10 telephone-delivery | O R | o o | [] [] | | | | 8.2.1.1.1.14 |
| 4 PhysicalDeliveryModes | | | | | | | |
| 4.1 ordinary-mail | O R | m m | [] [] | PHY | | | 8.2.1.1.1.17 |
| 4.2 special-delivery | O R | m m | [] [] | PHY | | | 8.2.1.1.1.17 |
| 4.3 express-mail | O R | m m | [] [] | PHY | | | 8.2.1.1.1.17 |
| 4.4 counter-collection | O R | m m | [] [] | PHY | | | 8.2.1.1.1.17 |
| 4.5 counter-collection-with-telephone-advice | O R | c c | [] [] | PHY p95 p95 | | | 8.2.1.1.1.17 |
| 4.6 counter-collection-with-telex-advice | O R | c c | [] [] | PHY p95 p95 | | | 8.2.1.1.1.17 |
| 4.7 counter-collection-with-teletex-advice | O R | c c | [] [] | PHY p95 p95 | | | 8.2.1.1.1.17 |
| 4.8 bureau-fax-delivery | O R | c c | [] [] | PHY p97 p97 | | | 8.2.1.1.1.17 |
| 5 PhysicalDeliveryReportRequest | | | | | | | |
| 5.1 return-of-undeliverable-mail-by-PDS | O R | m m | [] [] | PHY | | | 8.2.1.1.1.24 |
| 5.2 return-of-notification-by-PDS | O R | c c | [] [] | PHY p98 p98 | | | 8.2.1.1.1.24 |
| 5.3 return-of-notification-by-MHS | O R | c c | [] [] | PHY p97 p97 | | | 8.2.1.1.1.24 |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|--|---------------------------|------------------|-------------------------------|
| 5.4 return-of-notification-by-MHS-and-PDS | O R | c c | [] [] | PHY p97 and p98 p97 and p98 | | | 8.2.1.1.1.24 |
| 6 MessageToken | | | | | | | |
| 6.1 token-type-identifier | O R | m m | [] [] | SEC | | | 8.5.8 |
| 6.2 asymmetric-token | O R | m m | [] [] | SEC | | | 8.5.8 |
| 6.2.1 signature-algorithm-identifier | O R | m m | [] [] | SEC | | | |
| 6.2.2 name | O R | m m | [] [] | SEC | | | |
| 6.2.3 time | O R | m m | [] [] | SEC | | | |
| 6.2.4 signed-data | O R | m m | [] [] | SEC | | | |
| 6.2.4.1 content-confidentiality-algorithm-identifier | O R | c c | [] [] | SEC p29 p71 | | | |
| 6.2.4.2 content-integrity-check | O R | c c | [] [] | SEC p30 p72 | | | |
| 6.2.4.3 message-security-label | O R | c c | [] [] | SEC p33 p73 | | | |
| 6.2.4.4 proof-of-delivery-request | O R | c c | [] [] | SEC p39 or p35 p74 | | | |
| 6.2.4.5 message-sequence-number | O R | c c | [] [] | SEC p34 p75 | | | |
| 6.2.5 encryption-algorithm-identifier | O R | c c | [] [] | SEC p77 p76 | | | |
| 6.2.6 encrypted-data | O R | o c | [] [] | SEC p29 and p30 and p33 and p34 p77 | | | |
| 6.2.6.1 content-confidentiality-check | O R | c c | [] [] | SEC p29 p78 | | | |
| 6.2.6.2 content-integrity-check | O R | c c | [] [] | SEC p30 p79 | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|-------------------|---------------------------|------------------|-------------------------------|
| 6.2.6.3 message-security-label | O R | c c | [] [] | SEC p33 p80 | | | |
| 6.2.6.4 content-integrity-key | O R | c c | [] [] | SEC p30 p81 | | | |
| 6.2.6.5 message-sequence-number | O R | c c | [] [] | SEC p34 p82 | | | |
| 7 ContentIntegrityCheck | | | | | | | |
| 7.1 algorithm-identifier | O R | m m | [] [] | SEC Rec. X.500 | | | |
| 7.2 Content | O R | m m | [] [] | SEC | | | |
| 8 RedirectionHistory | | | | | | | |
| 8.1 Intended RecipientName | O R | m m | [] [] | 3 | | | 8.3.1.1.1.4 |
| 8.1.1 OrAddressAndOptionalDirectoryName | O R | m m | [] [] | 3 | | | |
| 8.1.2 redirection-time | O R | m m | [] [] | | | | |
| 8.2 Redirection Reason | O R | m m | [] [] | | | | |
| 8.2.1 recipient-assigned-alternate-rec. | O R | c m | [] [] | p2 | | | |
| 8.2.2 originator-req.alternate-recipient | O R | c m | [] [] | p16 | | | |
| 8.2.3 recipient-MD-assigned-alternate-rec. | O R | c m | [] [] | p1 | | | |
| 9 OriginatorAndDLExpansionHistory | | | | | | | |
| 9.1 OrAddressAnd OptionalDirectoryName | O R | m m | [] [] | 3 | | | |
| 9.2 origination-or-expansion-time | O R | m m | [] [] | | | | |
| 10 InternalTraceInformation | | | | | | | |
| 10.1 GlobalDomain Identifier | O R | m m | [] [] | 1/2 | | | |
| 10.2 MTAName | O R | m m | [] [] | | 32 32 | | |
| 10.3 MTASupplied Information | O R | m m | [] [] | | | | |
| 10.3.1 ArrivalTime | O R | m m | [] [] | | | | |
| 10.3.2 RoutingAction | O R | m m | [] [] | | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|-------------------|---------------------------|------------------|-------------------------------|
| 10.3.2.1 relayed | O R | m m | [] [] | | | | |
| 10.3.2.2 rerouted | O R | o m | [] [] | | | | |
| 10.3.3 attempted | O R | o m | [] [] | | | | |
| 10.3.3.1 MTAName | O R | o m | [] [] | | 32 32 | | |
| 10.3.3.2 GlobalDomain Identifier | O R | o m | [] [] | 1/2 | | | |
| 10.3.3.3 Internal AdditionalActions | O R | m m | [] [] | | | | |
| 10.3.3.3.1 Deferred Time | O R | m m | [] [] | | | | |
| 10.3.3.3.2 Converted EncodedInformationTypes | O R | c m | [] [] | p13 1/3 | | | |
| 10.3.3.3.3 Other Actions | O R | c m | [] [] | p26 | | | |
| 10.3.3.3.3.1 redirected | O R | c m | [] [] | p25 | | | |
| 10.3.3.3.3.2 dl-operation | O R | c m | [] [] | p7 | | | |
| 11 ProbeOriginAuthenticationCheck | | | | | | | |
| 11.1 algorithm-identifier | O R | m m | [] [] | SEC Rec. X.500 | | | 8.5.10 |
| 11.2 Content Identifier | O R | o c | [] [] | SEC p83 | | | 8.2.1.1.1.35 |
| 11.3 MessageSecurity Label | O R | c c | [] [] | SEC p33 p84 | | | 8.2.1.1.1.30 |
| 12 ProofOfDelivery | | | | | | | |
| 12.1 algorithm-identifier | O R | m m | [] [] | SEC | | | |
| 12.2 delivery-time | O R | m m | [] [] | SEC | | | |
| 12.3 this-recipient-name | O R | m m | [] [] | SEC | | | |
| 12.4 originally-intended-recipient-name | O R | c c | [] [] | SEC p2 p85 | | | |
| 12.5 content | O R | m m | [] [] | SEC | | | |
| 12.6 content-identifier | O R | o c | [] [] | SEC p86 | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|------------------------------|---------------------------|------------------|-------------------------------|
| 12.7 message-security-label | O R | c c | [] [] | SEC p42 p87 | | | |
| 13 ReportOriginAuthenticationCheck | | | | | | | |
| 13.1 algorithm-identifier | O R | m m | [] [] | SEC | | | |
| 13.2 content-identifier | O R | o c | [] [] | SEC p88 | | | |
| 13.3 message-security-label | O R | c c | [] [] | SEC p33 p89 | | | |
| 13.4 per-recipient | O R | m m | [] [] | SEC | 32767 32767 | | |
| 14 per-recipient | | | | | | | |
| 14.1 per-recipient-report-fields | O R | m m | [] [] | SEC | | | |
| 14.1.1 actual-recipient-name | O R | m m | [] [] | SEC | | | |
| 14.1.2 originally-intended-recipient | O R | c c | [] [] | SEC p2 p90 | | | |
| 14.1.3 delivery | O R | o c | [] [] | SEC p91 | | | |
| 14.1.3.1 per-recipient-delivery-report-fields | O R | m m | [] [] | SEC | | | |
| 14.1.3.1.1 message-delivery-time | O R | m m | [] [] | SEC | | | |
| 14.1.3.1.2 type-of-MTS-user | O R | m m | [] [] | SEC | | | |
| 14.1.3.1.3 recipient-certificate | O R | o c | [] [] | SEC p92 | | | |
| 14.1.3.1.4 proof-of-delivery | O R | c c | [] [] | SEC p39 and p35 p93 | | | |
| 14.1.4 non-delivery | O R | o c | [] [] | SEC p94 | | | |
| 14.1.4.1 per-recipient-non-delivery-report-field | O R | m m | [] [] | SEC | | | |
| 14.1.4.1.1 non-delivery-reason-code | O R | m m | [] [] | SEC | | | |
| 14.1.4.1.2 non-delivery-diagnostic-code | O R | o c | [] [] | SEC p95 | | | |

A.6.7.6.3 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. This subsection deals with remote ORNames only. For local ORNames at least one of the forms shall be supported. All protocol elements used in the description of the local ORNames are optional except those which are explicitly defined as mandatory in Table 10/X.402 (*Blue Book*). The five different forms of ORAddress are presented in the table below.

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|-------------------------------|--------|---|------------|------|---------------------------|------------------|-------------------------------|
| ORAddress forms: | | | | | | | |
| 1 MnemonicORAddress | O R | m | [] [] | | | | 8.5.5 |
| 2 NumericORAddress | O R | m | [] [] | | | | 8.5.5 |
| 3 TerminalORAddress | O R | m | [] [] | | | | 8.5.5 |
| 4 FormattedPostal ORAddress | O R | m | [] [] | PHY | | | 8.5.5 |
| 5 UnformattedPostal ORAddress | O R | m | [] [] | PHY | | | 8.5.5 |

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

The Notes used in the tables below 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 CCITTRec. X.501 | ISO/IEC 9594-2.

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---------------------------------|--------|---|------------|------|---------------------------|------------------|-------------------------------|
| 6 ORName with MnemonicORAddress | | | | | | | |
| 6.1 address | | | | | | | |
| 6.1.1 CountryName | O R | m | [] [] | | | | |
| 6.1.1.1 x121-dcc-code | O R | m | [] [] | | 3 3 | | |
| 6.1.1.2 iso-3166-alpha2-code | O R | m | [] [] | | 2 2 | | |
| 6.1.2 Administration DomainName | O R | m | [] [] | | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|----------------------------------|--------|--------|------------|----------------------|---------------------------|------------------|-------------------------------|
| 6.1.2.1 numeric | O R | m m | [] [] | | 16 16 | | |
| 6.1.2.2 printable | O R | m m | [] [] | (Note 1) | 16 16 | | |
| 6.1.3 PrivateDomain Name | O R | m m | [] [] | (Note 2) | | | |
| 6.1.3.1 numeric | O R | m m | [] [] | | 16 16 | | |
| 6.1.3.2 printable | O R | m m | [] [] | (Note 1) | 16 16 | | |
| 6.1.4 OrganizationName | O R | m m | [] [] | | 64 64 | | |
| 6.1.5 PersonalName | O R | m m | [] [] | | | | |
| 6.1.5.1 surname | O R | m m | [] [] | | 40 40 | | |
| 6.1.5.2 given-name | O R | m m | [] [] | | 16 16 | | |
| 6.1.5.3 initials | O R | m m | [] [] | | 5 5 | | |
| 6.1.5.4 generation-qualifier | O R | m m | [] [] | | 3 3 | | |
| 6.1.6 Organizational UnitNames | O R | m m | [] [] | | 4 4 | | |
| 6.1.7 DomainDefined Attributes | O R | o o | [] [] | | 4 4 | | |
| 6.2 Extensions | O R | m m | [] [] | (Note 3) (Note 4) | 256 256 | | |
| 6.2.1 CommonName | O R | m m | [] [] | | 64 64 | | |
| 6.2.2 TeletexCommon Name | O R | m m | [] [] | | 64 64 | | |
| 6.2.3 Teletex OrganizationalName | O R | m m | [] [] | | 64 64 | | |
| 6.2.4 TeletexPersonal Name | 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 | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|----------|---------------------------|------------------|-------------------------------|
| 6.2.4.4 generation-qualifier | O R | m m | [] [] | | 3 3 | | |
| 6.2.5 Teletex OrganizationalUnitNames | O R | m m | [] [] | | 4 4 | | |
| 6.2.6 TeletexDomain DefinedAttributes | 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 | | |
| 7.1.1.2 iso-3166-alpha2-code | O R | m m | [] [] | | | | |
| 7.1.2 Administration DomainName | O R | m m | [] [] | | | | |
| 7.1.2.1 numeric | O R | m m | [] [] | | 16 16 | | |
| 7.1.2.2 printable | O R | m m | [] [] | | | | |
| 7.1.3 Private-Domain Name | O R | m m | [] [] | (Note 2) | | | |
| 7.1.3.1 numeric | O R | m m | [] [] | | 16 16 | | |
| 7.1.3.2 printable | O R | m m | [] [] | | | | |
| 7.1.4 NumericUser Identifier | O R | m m | [] [] | | 32 32 | | |
| 7.1.5 DomainDefined Attributes | 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 | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|------------------------------------|--------|--------|------------|------------|---------------------------|------------------|-------------------------------|
| 8.1.1.2 iso-3166-alpha2-code | O R | m m | [] [] | | 2 2 | | |
| 8.1.2 Administration DomainName | 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 Terminal Identifier | O R | m m | [] [] | | 24 24 | | |
| 8.1.5 PrivateDomain Name | 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 DomainDefined Attributes | O R | o o | [] [] | | 4 4 | | |
| 8.2 Extensions | O R | m m | [] [] | (Note 4) | 256 256 | | |
| 8.2.1 ExtendedNetwork Address | 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 | [] [] | Rec. X.500 | | | |
| 8.2.2 TerminalType | O R | m m | [] [] | | 16 16 | | |
| 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 | [] [] | | | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|----------|---------------------------|------------------|-------------------------------|
| 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 | o o | [] [] | (Note 5) | | | |
| 9 ORName with FormattedPostalORAddress | | | | | | | |
| 9.1 address | | | | | | | |
| 9.1.1 CountryName | O R | m m | [] [] | | | | |
| 9.1.1.1 x121-dcc-code | O R | m m | [] [] | | 3 3 | | |
| 9.1.1.2 iso-3166-alpha2-code | O R | m m | [] [] | | 2 2 | | |
| 9.1.2 Administration DomainName | O R | m m | [] [] | | | | |
| 9.1.2.1 numeric | O R | m m | [] [] | | 16 16 | | |
| 9.1.2.2 printable | O R | m m | [] [] | (Note 1) | 16 16 | | |
| 9.1.3 PrivateDomain Name | O R | m m | [] [] | (Note 2) | | | |
| 9.1.3.1 numeric | O R | m m | [] [] | | 16 16 | | |
| 9.1.3.2 printable | O R | m m | [] [] | (Note 1) | 16 16 | | |
| 9.2 Extensions | O R | m m | [] [] | (Note 4) | 256 256 | | |
| 9.2.1 PhysicalDelivery CountryName | O R | m m | [] [] | | | | |
| 9.2.1.1 x121-dcc-code | O R | m m | [] [] | | 3 3 | | |
| 9.2.1.2 iso-3166-alpha2-code | O R | m m | [] [] | | 2 2 | | |
| 9.2.2 PhysicalDelivery OfficeName | O R | m m | [] [] | | | | |
| 9.2.2.1 printable-string | O R | m m | [] [] | | 30 30 | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|----------|---------------------------|------------------|-------------------------------|
| 9.2.2.2 teletex-string | O R | m m | [] [] | | 30 30 | | |
| 9.2.3 PhysicalDeliveryOfficeNumber | O R | m m | [] [] | | | | |
| 9.2.3.1 printable-string | O R | m m | [] [] | | 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 | m m | [] [] | | 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 | | |
| 9.2.9 PDSName | O R | m m | [] [] | | 16 16 | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|---|--------|--------|------------|----------|---------------------------|------------------|-------------------------------|
| 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 UniquePostal Name | 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 ExtensionOR AddressComponents | 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 Extension PhysicalDelivery 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 LocalPostal Attributes | 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 | o o | [] [] | (Note 5) | | | |
| 10 ORName with UnformattedPostalORAddress | | | | | | | |
| 10.1 address | O R | m m | [] [] | | | | |
| 10.1.1 CountryName | O R | m m | [] [] | | | | |
| 10.1.1.1 x121-dcc-code | O R | m m | [] [] | | 3 3 | | |

| Parameter | O/R | D | I | Note | Permitted Range of Values | Values supported | Clause reference (Rec. X.411) |
|--|--------|--------|------------|----------|---------------------------|------------------|-------------------------------|
| 10.1.1.2 iso-3166-alpha2-code | O R | m m | [] [] | | 2 2 | | |
| 10.1.2 Administration DomainName | 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 PrivateDomain Name | 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 4) | 256 256 | | |
| 10.2.1 Unformatted PostalAddress | O R | m m | [] [] | | | | |
| 10.2.1.1 printable-address | O R | m m | [] [] | | 6 6 | | |
| 10.2.1.1.1 Printable String | O R | m m | [] [] | | 30 30 | | |
| 10.2.1.2 teletex-string | O R | m m | [] [] | | 180 180 | | |
| 10.2.2 PhysicalDelivery CountryName | O R | m m | [] [] | | | | |
| 10.2.2.1 x121-dcc-code | O R | m m | [] [] | | 3 3 | | |
| 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 | o o | [] [] | | | | |

A.6.8 *Negotiation capabilities*

If one of the alternatives described in Table A.6.3 fails, the MTA should try another one.

A.6.9 *Protocol Error Handling*

“N/A”.

A.6.10 *Other information*

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

| Ref. No. | Other information |
|----------|-------------------|
| | |

A.7 *Multi-layer dependencies*

A.7.1 *Upper Layers*

No modifications are imposed to the requirements by the upper layers (only IPMS has been considered).

A.7.2 *Lower Layers*

The P1 protocol is defined in the following Applications Contexts:

- mts-transfer-protocol-1984;
- mts-transfer-protocol;
- mts-transfer.

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

A.7.2.1 *RTSE (Recommendation X.248)*

| PICS reference | mts-transfer-protocol-1984 | mts-transfer-protocol | mts-transfer |
|----------------|----------------------------|-----------------------|--------------|
| A.6.2.1/1 (Nm) | N/A | N/A | m |
| A.6.2.1/2 (Xm) | m | m | N/A |
| A.6.1/1 (Init) | m | m | m |
| A.6.1/2 (Resp) | m | m | m |

A.7.2.2 ACSE (ISO/IEC DIS 8650-2)

| PICS reference | mts-transfer-protocol-1984 | mts-transfer-protocol | mts-transfer |
|----------------|----------------------------|-----------------------|--------------|
| A.7/1 | N/A | N/A | m |
| A.7/2 | m | m | N/A |
| A.8/1 | m | m | m |
| A.8/2 | m | m | m |

A.7.2.3 Presentation (ISO/IEC DIS 8823-2)

| PICS reference | mts-transfer-protocol-1984 | mts-transfer-protocol | mts-transfer |
|----------------|----------------------------|-----------------------|--------------|
| A.7.1/1 | m | m | m |
| A.7.1/2 | m | m | m |
| A.7.2/1 | m | m | N/A |
| A.7.2/2 | N/A | N/A | m |

ANEXO B

(a la Recomendación X.482)

Lista por orden alfabético de las abreviaturas contenidas en esta Recomendación

| | |
|------|--|
| ADMD | Dominio de gestión de Administración (<i>administration management domain</i>) |
| IPMS | Mensajería interpersonal (<i>interpersonal messaging system</i>) |
| IUT | Implementación sometida a prueba (<i>implementation under test</i>) |
| MD | Dominio de gestión (<i>management domain</i>) |
| MHS | Sistema de tratamiento de mensajes (<i>message handling system</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>origination/reception</i>) |
| P1 | Protocolo 1 (<i>protocol 1</i>) |
| PDAU | Unidad de acceso de entrega física (<i>physical delivery access unit</i>) |
| PDS | Sistema de entrega física (<i>physical delivery system</i>) |
| PDU | Unidad de datos de protocolo (<i>protocol data unit</i>) |
| PICS | Enunciado de conformidad de implementación de protocolo (<i>protocol implementation conformance statement</i>) |
| PRMD | Dominio de gestión privado (<i>private management domain</i>) |
| SUT | Sistema sometido a prueba (<i>system under test</i>) |

