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ANNEX A
(to Recommendation F.400)

Glossary of terms

Note — The explanations given are not necessarily definitions in the strict sense. See also the definitions in Annex B and those provided in the other X.400-Series Recommendations (especially X.402), where many entries are found. The terms have, depending on the source, varying levels of abstraction.

A.1 **access unit (AU)**

F: unit´e d’acc´es (UA)

S: unidad de acceso (AU)

In the context of a message handling system the functional object, a component of MHS, that links another communication system (e.g., a physical delivery system or the telex network) to the MTS and via which its patrons engage in message handling as indirect users.

In the context of message handling services the unit which enables users of one service to intercommunicate with message handling services, such as the IPM Service.

A.2 **actual recipient**

F: destinataire effectif

S: destinatario real

In the context of message handling a potential recipient for which delivery or affirmation takes place.

A.3 **administration**

F: administration

S: administraci´on

In the context of CCITT an Administration (member of ITU) or a recognized private operating agency.

A.4 **administration domain name**

F: nom d’un domaine d’administration

S: nombre de dominio de administraci´on

In the context of message handling, a standard attribute of a name form that identifies an ADMD relative to the country denoted by a country name.

A.5 **administration management domain (ADMD)**

F: domaine de gestion d’administration

S: dominio de gesti´on de administraci´on

A management domain that comprises messaging systems managed by an Administration.

A.6 **alternate recipient**

F: destinataire suppl´eant

S: destinatario alternativo

In the context of message handling a user or distribution list to which the originator can (but need not) request that a message or probe be conveyed if and only if it cannot be conveyed to a particular preferred recipient.

A.7 **attribute**

F: attribut

S: atributo

In the context of message handling, an information item, a component of an attribute list, that describes a user or distribution list and that can also locate it in relation to the physical or organizational structure of MHS (or the network underlying it).

A.8 **attribute list**

F: liste d’attributes

S: lista de atributos

In the context of message handling, a data structure, an ordered set of attributes that constitutes an O/R address.

A.9 **attribute type**

F: type d’attribut

S: tipo de atributo

An identifier that denotes a class of information (e.g., personal names). It is a part of an attribute.

A.10 **attribute value**

F: valeur d’attribut

S: valor de atributo

An instance of the class of information an attribute type denotes (e.g., a particular personal name). It is a part of an attribute.

A.11 **basic service**

F: service de base

S: servicio b´asico

In the context of message handling, the sum of features inherent in a service.

A.12 **body**

F: corps

S: cuerpo

Component of a message. Other components are the heading and the envelope.

A.13 **body part**

F: partie du corps

S: parte del cuerpo

Component of the body of a message.

A.14 **common name**

F: nom courant

S: nombre com´un

In the context of message handling, a standard attribute of an O/R address form that identifies a user or distribution list relative to the entity denoted by another attribute (e.g., an organizational name).

A.15 **content**

F: contenu

S: contenido

In the context of message handling, an information object, part of a message, that the MTS neither examines nor modifies, except for conversion, during its conveyance of the message.

A.16 **content type**

F: type de contenu

S: tipo de contenido

In the context of message handling, an identifier, on a message envelope, that identifies the type (i.e. syntax and semantics) of the message content.

A.17 **conversion**

F: conversion

S: conversi´on

In the context of message handling, a transmittal event in which an MTA transforms parts of a message's content from one encoded information type to another, or alters a probe so it appears that the described messages were so modified.

A.18 **country name**

F: nom de pays

S: nombre de país

In the context of message handling, a standard attribute of a name form that identifies a country. A country name is a unique designation of a country for the purpose of sending and receiving messages.

Note — In the context of physical delivery additional rules apply (see also *physical delivery country name* and Recommendation F.415).

A.19 **delivery**

F: remise

S: entrega

In the context of message handling, a transmittal step in which an MTA conveys a message or report to the MS or UA of a potential recipient of the message or of the originator of the report's subject message or probe.

A.20 **delivery report**

F: rapport de remise

S: informe de entrega

In the context of message handling, a report that acknowledges delivery, non-delivery, export, or affirmation of the subject message or probe, or distribution list expansion.

A.21 **direct submission**

F: dep **|** *t direct*

S: dep´osito directo

In the context of message handling, a transmittal step in which the originator's UA or MS conveys a message or probe to an MTA.

A.22 **direct user**

F: utilisateur direct

S: usuario directo

In the context of message handling, a user that engages in message handling by direct use of the MTS.

A.23 **directory**

F: annuaire

S: gu´ia

A collection of open systems cooperating to provide directory services.

A.24 **directory name**

F: nom d'annuaire

S: nombre de gu´ia

Name of an entry in a directory.

Note — In the context of message handling, the entry in the directory will enable the O/R address to be retrieved for submission of a message.

A.25 **directory system agent (DSA)**

F: agent de syst`eme d'annuaire (ASA)

S: agente de sistema de gu´ia (ASG)

An OSI application process which is part of the directory, and whose role is to provide access to the directory information base to DUAs and/or other DSAs.

A.26 **directory user agent (DUA)**

F: agent d’usager d’annuaire (AUA)

S: agente de usuario de gu´ia (AUG)

An OSI application process which represents a user in accessing the directoy. Each DUA serves a single user so that the directory can control access to directory information on the basis of the DUA names. DUAs can also provide a range of local facilities to assist users to compose requests (queries) and interpret the responses.

A.27 **distribution list (DL)**

F: liste de distribution (LD)

S: lista de distribuci´on (LD)

In the context of message handling, the functional object, a component of the message handling environment, that represents a pre-specified group of users and other distribution lists and that is a potential destination for the information objects an MHS conveys.

Membership can contain O/R names identifying either users or other distribution lists.

A.28 **distribution list expansion**

F: allongement de liste de distribution

S: expansi´on de une lista de distribuci´on

In the context of message handling, a transmittal event in which an MTA resolves a distribution list, among a message’s immediate recipients, to its members.

A.29 **distibution list name**

F: nom de liste de distribution

S: nombre de lista de distribuci´on

O/R name allocated to represent a collection of O/R addresses and directory names.

A.30 **domain**

F: domaine

S: dominio

See *management domain* .

A.31 **domain defined attributes**

F: attributs d´efinis d’un domaine

S: atributos definidos por el dominio

Optional attributes of an O/R address allocated to names in the responsibility of a management domain.

A.32 **element of service**

F: element de service

S: elemento de servicio

Functional unit for the purpose of segmenting and describing message handling features.

A.33 **encoded information type (EIT)**

F: type de codage (TC)

S: tipo de informaci´on codificada (TIC)

In the context of message handling, an identifier, on a message envelope, that identifies one type of encoded information represented in the message content. It identifies the medium and format (e.g., IA5 text, Group 3 facsimile) on an individual portion of the content.

A.34 **envelope**

F: enveloppe

S: sobre

In the context of message handling, an information object, part of a message, whose composition varies from one transmittal step to another and that variously identifies the message originator and potential recipients, documents its past and directs its subsequent conveyance by the MTS, and characterizes its content.

A.35 **explicit conversion**

F: conversion explicite

S: conversi´on expl´icita

In the context of message handling, a conversion in which the originator selects both the initial and final encoded information types.

A.36 **extension of physical delivery address components**

F: d´eveloppement de composants d'adresse de remise physique

S: componentes de ampliaci´on de direcci´on de entrega f´isica

Standard attribute of a postal O/R address as a means to give further information about the point of physical delivery in a postal address, e.g., the name of a hamlet, or room and floor numbers in a large building.

A.37 **extension of postal O/R address components**

F: d´eveloppement de composants d'adresse postale E/D

S: componentes de ampliaci´on de direcci´on postal O/D

Standard attribute of a postal O/R address as a means to give further information to specify the addressee in a postal address, e.g. by organizational unit.

A.38 **formatted postal O/R address**

F: adresse postale E/D format´ee

S: direcci´on postal O/D formatizada

O/R address based on a postal address with formatted attributes.

A.39 **heading**

F: en-t **|** *te*

S: encabezamiento

Component of an IP-message. Other components are the envelope and the body.

A.40 **immediate recipient**

F: destinataire direct

S: destinatario inmediato

In the context of message handling, one of the potential recipients assigned to a particular instance of a message or probe (e.g., an instance created by splitting).

A.41 **implicit conversion**

F: conversion implicite

S: conversi´on impl´icita

In the context of message handling, a conversion in which the MTA selects both the initial and final encoded information types.

A.42 **indirect submission**

F: dep | t indirect

S: dep´osito indirecto

In the context of message handling, a transmittal step in which an originator’s UA conveys a message or probe to an MTA via an MS.

A.43 **indirect user**

F: utilisateur indirect

S: usuario indirecto

In the context of message handling, a user that engages in message handling by indirect use of MHS, i.e. through another communication system (e.g., a physical delivery system or the telex network) to which MHS is linked.

Note — Indirect users communicate via access units with direct users of MHS.

A.44 **intercommunication**

F: intercommunication

S: intercomunicaci´on

In the context of message handling, a relationship between services where one of the services is a message handling service, enabling the user of the message handling service to communicate with users of other services.

Note — Examples are the intercommunication between the IPM service and the telex service, the intercommunication between message handling services and physical delivery services.

A.45 **interpersonal messaging service**

F: service de messagerie de personne à personne

S: servicio de mensajer´ia interpersonal

Messaging service between users belonging to the same management domain or to different management domains by means of message handling, based on the message transfer service.

A.46 **IP-message**

F: message IP

S: mensaje IP

The content of a message in the IPM Service.

A.47 **local postal attributes**

F: attributs postaux locaux

S: atributos postales locales

Standard attributes of a post O/R address as a means to distinguish between places with the same name (e.g., by state name, county name, or geographical attribute) in a postal address.

A.48 **management domain (MD)**

F: domaine de gestion (DG)

S: dominio de gesti´on (DG)

In the context of message handling, a set of messaging systems — at least one of which contains, or realizes, an MTA — at that is managed by a single organization. It is a primary building block used in the organizational construction of MHS.

It refers to an organizational area for the provision of services.

Note — A management domain may or may not necessarily be identical with a geographical area.

A.49 **management domain name**

F: nom d'un domaine de gestion

S: nombre de dominio de gesti´on

Unique designation of a management domain for the purpose of sending and receiving messages.

A.50 **members**

F: membres

S: miembros

In the context of message handling, the set of users and distribution lists implied by a distribution list name.

A.51 **message**

F: message

S: mensaje

An instance of the primary class of information object conveyed by means of message transfer, and comprising an envelope and content.

A.52 **message handling (MH)**

F: messagerie (traitement des mesages) (M)

S: tratamiento de mensaje (TM)

A distributed information processing task that integrates the intrinsically related subtasks of message transfer and message storage.

A.53 **message handling environment**

F: environnement de traitement de messages

S: entorno de tratamiento de mensajes

The environment in which message handling takes place, comprising MHS, users, and distribution lists.

The sum of all components of message handling systems.

Note — Examples of components are:

— message transfer agents,

— user agents,

— message stores,

— access units,

— users.

A.54 **message handling service**

F: service de messagerie

S: servicio de tratamiento de mensajes

Service provided by the means of message handling systems.

Note 1 — Service may be provided through administration management domains or private management domains.

Note 2 — Examples of message handling services are:

— interpersonal messaging service (IPM service)

— message transfer service (MT service).

A.55 **message handling system (MHS)**

F: syst`eme de messagerie (STM)

S: sistema de tratamiento de mensajes

The functional object, a component of the message handling environment, that conveys information objects from one party to another.

A.56 **message storage**

F: m´emorisation des messages

S: almacenamiento de mensajes

The automatic storage for later retrieval of information objects conveyed by means of message transfer. It is one aspect of message handling.

A.57 **message store (MS)**

F: m´emoire des messages (MM)

S: memoria de mensajes (MM); alamacenador de mensajes (AM)

The functional object, a component of MHS, that provides a single direct user with capabilities for message storage.

A.58 **message transfer (MT)**

F: transfert de messages (TM)

S: transferencia de mensajes (TRM)

The non-real-time carriage of information objects between parties using computers as intermediaries. It is one aspect of message handling.

A.59 **message transfer agent (MTA)**

F: agent de transfert de messages (ATM)

S: agente de transferencia de mensajes (ATM)

A functional object, a component of the MTS, that actually conveys information objects to users and distribution lists.

A.60 **message transfer service**

F: service de transfert de messages

S: servicio de transferenicia de mensajes

Service that deals with the submission, transfer and delivery of messages for other messaging services.

A.61 **message transfer system (MTS)**

F: syst`eme de transfert de messages (syst`eme TM)

S: sistema de transferencia de mensajes (STRM)

The functional object consisting of one or more message transfer agents which provides store-and-forward message transfer between user agents, message stores and access units.

A.62 **messaging system**

F: syst`eme de messagerie

S: sistema de mensajeria

A computer system (possibly but not necessarily an open system) that contains, or realizes, one or more functional objects. It is a building block used in the physical construction of MHS.

A.63 **mnemonic O/R address**

F: adresse mn´emonique E/D

S: direcci´on O/D nemot´ecnica

An O/R address tha mnemonicly identifies a user or distribution list relative to the ADMD through which the user is accessed or the distribution list is expanded. It identifies an ADMD, and a user or distribution list relative to that ADMD.

A.64 **naming authority**

F: autorit´e responsable de l’appellation

S: autoridad de denominaci´on

An authority responsible for the allocation of names.

A.65 **network address**

F: adresse r´eseau

S: direcci´on de red

In the context of message handling, a standard attribute of an O/R address form that gives the network address of a terminal. It is comprising the numbering digits for network access points from an international numbering plan.

A.66 **non-delivery**

F: non-remise

S: no entrega

In the context of message handling, a transmittal event in which an MTA determines that the MTS cannot deliver a message to one or more of its immediate recipients, or cannot deliver a report to the originator of its subject message or probe.

A.67 **non-registered access**

F: acc`es non homologu´e

S: acceso no registrado

In the context of message handling services, access to the service through publicly available telecommunications means by users who have neither been explicitly registered by the service provider, nor been allocated an O/R address.

A.68 **numeric O/R address**

F: adresse num´erique E/D

S: direcci´on O/D num´erica

In the context of message handling, an O/R address that numerically identifies a user relative to the ADMD through which the user is accessed. It identifies an ADMD, and a user relative to that ADMD. It is identifying a user of message handling services by means of a numeric keypad.

A.69 **numeric user identifier**

F: identificateur num´erique d'utilisateur

S: identificador de usuario num´erico

Standard attribute of an O/R address as a unique sequence of numeric information for identifying a user.

A.70 **O/R address**

F: adresse E/D

S: direcci´on O/D

In the context of message handling, an attribute list that distinguishes one user or DL from another and identifies the user's point of access to MHS or the distribution list's expansion point.

A.71 **O/R name**

F: nom E/D

S: nombre O/D

In the context of message handling, an information object by means of which a user can be designated as the originator, or a user or distribution list designated as a potential recipient of a message or probe. An O/R name distinguishes one user or distribution list from another and can also identify its point of access to MHS.

A.72 **optional user facilities**

F: services compl´ementaires offerts en option á l'utilisateur

S: faciladad facultativa de usuario

In the context of message handling services the elements of service which are selectable by the user either on a contractual basis (agreed period of time) or on a per-message basis.

Note 1 — Optional user facilities are classified as either essential or additional.

Note 2 — Essential optional user facilities are to be made available to all message handling users.

Note 3 — Additional optional user facilities can be made available for national and international use on the basis of bilateral agreement between the service providers.

A.73 **organization name**

F: nom d'organisation

S: nombre de la organizaci´on

Standard attribute of an O/R address as a unique designation of an organization for the purpose of sending and receiving of messages.

A.74 **oganizational unit name**

F: nom d'une unit´e d'organisation

S: nombre de la unidad organizacional

Standard attribute of an O/R address as a unique designation of an organizational unit of an organization for the purpose of sending and receiving of messages.

A.75 **originator**

F: expediteur

S: originador

In the context of message handling, the user (but not distribution list) that is the ultimate source of a message or probe.

A.76 **personal name**

F: nom personnel

S: nombre personal

In the context of message handling, a standard attribute of an O/R address form that identifies a person relative to the entity denoted by another attribute (e.g., an organization name).

Note — Components are for example:

— surname,

— given name,

— initials,

— generation qualifier.

A.77 **physical delivery (PD)**

F: remise physique (RP)

S: entrega física (EF)

The delivery of a message in physical form, such as a letter, through a physical delivery system.

A.78 **physical delivery access unit (PDAU)**

F: unit´e d’acc`es de remise physique (UARP)

S: unidad de acceso de entrega f´isica (UAEF)

An access unit that subjects messages (but neither probes nor reports) to physical rendition.

A.79 **physical delivery address components**

F: composants d’une adresse de remise physique

S: componentes de direcci´on de entrega f´isica

In a postal address they contain the information necessary for the local physical delivery within the physical delivery area of the physical delivery office, i.e., a street address, a P.O. Box address, a poste restante address or a unique name alternatively.

Note — The information is generally restricted to one line with up to 30 printable graphic characters. Additional information may be supplied by using the attribute type ‘‘extension of physical delivery address components’’.

A.80 **physical delivery country name**

F: nom du pays de remise physique

S: nombre de pa´is de entrega f´isica

In the context of physical delivery, a unique description of the country of the final destination.

A.81 **physical delivery domain**

F: domaine de remise physique

S: dominio de entrega f´isica

The domain of responsibility of an organization providing a physical delivery system and optionally an MTA/PDAU.

A.82 **physical delivery office address components**

F: composants d’une adresse de bureau de remise physique

S: componentes de direcci´on de oficina de entrega f´isica

In a postal address they contain the information to specify the office which is responsible for the local physical delivery.

Note — The information is generally restricted to one line with up to 30 printable graphic characters. In some countries the postal code will follow the physical delivery office address components in a separate line (possibly together with the country name).

A.83 **physical delivery office name**

F: nom du bureau de remise physique

S: nombre de oficina de entrega fisica

Standard attribute of a postal O/R address, in the context of physical delivery, specifying the name of the city, village etc., where the physical delivery office is situated, or where the physical delivery is effected.

A.84 **physical delivery office number**

F: num´ero du bureau de remise physique

S: n´umero de oficina de entrega f´isica

Standard attribute and in a postal O/R address a means to distinguish between more than one physical delivery office within a city etc.

A.85 **physical delivery organization name**

F: nom d'organisation de remise physique

S: nombre de la organización de entrega física

A free form name of the addressed entity in the postal address, taking into account the specified limitations in length.

A.86 **physical delivery personal name**

F: nom personnel de remise physique

S: nombre personal de entrega física

In a postal address a free form name of the addressed individual containing the family name and optionally the given name(s), the initial(s), title(s) and generation qualifier, taking into account the specified limitations in length.

A.87 **physical delivery service**

F: service de remise physique

S: servicio de entrega física

Service provided by a physical delivery system.

A.88 **physical delivery service name**

F: nom du service de remise physique

S: nombre del servicio de entrega física

Standard attribute of a postal O/R address in the form of the name of the service in the country electronically receiving the message on behalf of the physical delivery service.

A.89 **physical delivery system (PDS)**

F: système de remise physique (SRP)

S: sistema de entrega física (SEF)

A system that performs physical delivery. One important kind of physical delivery system is the postal system.

A.90 **physical message**

F: message physique

S: mensaje físico

A physical object comprising a relaying envelope and its content, e.g., a letter.

A.91 **physical rendition**

F: conversion physique

S: reproducción física

The transformation of an MHS message to a physical message, e.g., by printing the message on paper and enclosing it in a paper envelope.

A.92 **postal code**

F: code postal

S: código postal

Standard attribute of a postal O/R address to specify the geographical area, and in the context of MHS, used for routing of messages.

A.93 **postal O/R address**

F: adresse postale E/D

S: direcci´on postal O/D

In the context of message handling, an O/R address that identifies a user by means of its postal address. It identifies the physical delivery system through which the user is to access and gives the user's postal address.

A.94 **postal O/R address components**

F: composants d'une adresse postale E/D

S: componentes de direcci´on postal O/D

They contain in a postal address information to decribe the sender or addressee by means of his name (physical delivery personal name, physical delivery organization name).

Note — In a postal address the information is generally restricted to one line of 30 printable characters. Additional information may be supplied by using the attribute type ''extension of postal O/R address components''.

A.95 **post office box address (P.O. box address)**

F: unit´e d'acc´es de remise physique (UARP)

S: unidad de acceso de entrega f´isica (UAEF)

An access unit that subjects messages (but neither probes nor reports) to physical rendition.

A.96 **post restante address**

F: adresse poste restante

S: direcci´on lista de correos

A standard attribute in a postal address indicating that physical delivery at the counter is requested. It may also carry a code.

A.97 **potential recipient**

F: destinataire potential

S: destinatario potencial

In the context of message handling, any user or distribution list to which a message or probe is conveyed during the course of tansmittal. Equivalently, a preferred member, alternate member, or substitute recipient.

A.98 **preferred recipient**

F: destinataire pref´er´e

S: receptor preferido

In the context of message handling, one of the users and distribution lists that the originator selects as a message's or probe's preferred destination.

A.99 **private domain name**

F: nom d'un domain priv´e

S: nombre de dominio privado

In the context of message handling, a standard attribute of an O/R address form that identifies a PRMD relative to the ADMD denoted by an administration domain name.

Note — They are administered by the ADMD the PRMD is associated with.

A.100 **private management domain (PRMD)**

F: domaine de gestion priv´e (DGPR)

S: dominio de gesti´on privado

In the context of message handling, a management domain that comprises messaging system(s) managed by an organization other than an Administration.

A.101 **probe**

F: essai

S: sonda

In the context of message handling, an instance of a secondary class of information objects conveyed by means of message transfer that describes a class of message and that is used to determine the deliverability of such messages.

A.102 **public message handling service**

F: service public de messagerie

S: servicio p´ublico de tratamiento de mensajes

Message handling service offered by an Administration.

A.103 **public services**

F: services publics

S: servicios p´ublicos

In the context of telecommunication, the services offered by Administrations.

A.104 **receipt**

F: r´eception

S: recepci´on

In the context of message handling, a transmittal step in which either a UA conveys a message or report to its direct user, or the communication system that serves an indirect user conveys such an information object to that user.

A.105 **recipient**

F: destinataire

S: destinatario

See *actual recipient* .

A.106 **recursion**

F: récursivité

S: repetición

In the context of message handling, the situation that a message gets back to the same distribution list of origin and potentially circulates infinitely.

A.107 **redirection**

F: réacheminement

S: redireccionamiento

In the context of message handling, a transmittal event in which an MTA replaces a user among a message’s immediate recipients with a user preselected for that message.

A.108 **registered access**

F: acc`es homologu´e

S: acceso registrado

In the context of message handling services, access to the service performed by subscribers who have been registered by the service provider to use the service, and been allocated an O/R address.

A.109 **report**

F: rapport

S: informe

In the context of message handling, an instance of a secondary class of information object conveyed by means of message transfer. It is generated by the MTS, it reports the outcome or progress of a message's or probe's transmittal to one or more potential recipients.

A.110 **retrieval**

F: extraction

S: recuperaci´on

In the context of message handling, a transmittal step in which a user's message store conveys a message or report to the user's UA. The user is an actual recipient of the message or the originator of the subject message or probe.

A.111 **security capabilities**

F: capacit´e de s´ecurit´e

S: capacidades de seguridad

In the context of message handling, the mechanisms that protect against various security threats.

A.112 **specialized access**

F: acc`es sp´ecialis´e

S: acceso especializado

In the context of message handling, the involvement of specialized access units providing intercommunication between message handling services and other telecommunication services.

A.113 **standard attribute**

F: attribut normalis´e

S: atributo normalizado

An attribute whose type is bound to a certain class of information.

A.114 **street address**

F: adresse de rue

S: direcci´on-calle

A standard attribute in a postal address giving information for the local distribution and physical delivery, i.e. the street name, the street identifier (like street, place, avenue) and the house number.

A.115 **subject**

F: objet

S: asunto

In the context of message handling, the information, part of the header, that summarizes the content of the message as the originator has specified it.

A.116 **subject message**

F: message objet

S: mensaje de asunto

The message that is the subject of a report.

A.117 **subject probe**

F: essai objet

S: sonda de asunto

The probe that is the subject of a report.

A.118 **submission**

F: d́ep | t

S: dep´osito

Direct submission or indirect submission.

A.119 **substitute recipient**

F: destinataire substitut

S: destinatario sustituto

In the context of message handling, the user or distribution list to which a preferred, alternate, or member (but not another substitute) recipient can have elected to redirect messages (but not probes).

A.120 **terminal identifier**

F: identificateur de terminal

S: identificador de terminal

Standard attribute in an O/R address providing information for identifying a terminal amongst others.

Note — Examples are telex answerback and teletex terminal identifier.

A.121 **terminal O/R address**

F: adresse terminale E/D

S: direcci´on O/D de terminal

In the context of message handling, an O/R address that identifies a user by means of the network address of his terminal and that can identify the ADMD through which that terminal is accessed. The terminals identified can belong to different networks.

A.122 **terminal type**

F: type de terminal

S: tipo de terminal

Standard attribute of an O/R address that indicates the type of a terminal.

Note — Examples: telex, teletex, G3 facsimile, G4 facsimile, IA5, videotex terminal.

A.123 **transfer**

F: transfert

S: transferencia

In the context of message handling, a transmittal step in which one MTA conveys a message, probe, or report to another.

A.124 **transfer system**

F: syst`eme de transfert

S: sistema de transferencia

A messaging system that contains one MTA; optionally one or more access units, and neither a UA nor a message store.

A.125 **transmittal**

F: transmission

S: transmisi´on

The conveyance or attempted conveyance of a message from its originator to its potential recipients, or of a probe from its originator to MTAs able to affirm any described message’s deliverability to its potential recipients. It also encompasses the conveyance or attempted conveyance, to the originator of the message or probe, or any report it provokes. It is a sequence of transmittal steps and events.

A.126 **unformatted postal O/R address**

F: adresse postale E/D non format´ee

S: direcci´on postal O/D no formatizada

O/R address based on an unformatted postal address.

A.127 **unique postal name**

F: nom postal unique

S: nombre postal exclusivo

In a postal address a standard attribute describing the point of physical delivery by means of a unique name, e.g. that of a building.

A.128 **user**

F: usager/utilisateur

S: usuario

In the context of message handling, a functional object (e.g., a person), a component of the message handling environment, that engages in (rather than provides) message handling and that is a potential source or destination for the information objects an MHS conveys.

A.129 **user agent (UA)**

F: agent d’usager (AU)

S: agente de usuario (AU)

In the context of message handling, the functional object, a component of MHS, by means of which a single direct user engages in message handling.

Component of MHS the user interacts with.

ANNEX B
(to Recommendation F.400)

Definitions of elements of service

Note — The abbreviations used in the title lines have the following meanings:

TM Message transfer

IPM Interpersonal messaging

PD Physical delivery

MS Message store

PR Per recipient (available on a per-recipient basis)

B.1 *Access management* TM

This element of service enables a UA and MTA to establish access to one another and to manage information associated with access establishment.

The element of service permits the UA and MTA to identify and validate the identity of the other. It provides a capability for the UA to specify its O/R address and to maintain access security. When access security is achieved through passwords, these passwords can be periodically updated.

Note — A more secure form of access management is provided by the element of service secure access management.

B.2 *Additional physical rendition* PD PR

This element of service allows an originating user to request the PDAU to provide the additional renditon facilities (e.g., kind of paper, colour printing, etc.). Bilateral agreement is required to use this element of service.

B.3 *Alternate recipient allowed* MT

This element of service enables an originating UA to specify that the message being submmitted can be delivered to an alternate recipient as described below.

A destination MD will interpret all of the user attributes in order to select a recipient UA. Three cases can be distinguished:

1) all the attributes match precisely those of a subscriber UA. Delivery is attempted to that UA;

2) either insufficient attributes are supplied or those supplied match those of more than one subscriber UA. The message cannot be delivered;

3) at least the minimum set of attributes required by the destination MD is supplied. Nevertheless, taking all of the other attributes into account, the attributes match those of no UA.

In case 3, an MD that supports the alternate recipient assignment element of service can deliver the message to a UA that has been assinged to receive such messages. This UA will be notified of the O/R address of the intended recipient as specified by the originator. Delivery to this UA will be reported in a delivery notification if requested by the originator.

B.4 *Alternate recipient assignment* MT

This element of service enables a UA to be given the capability to have certain messages delivered to it for which there is not an exact match between the recipient attributes specified and the name of the user. Such a UA is specified in terms of one or more attributes for which an exact match is required, and one or more attributes for which any value is acceptable. For example, an orginization can establish a UA to receive all messages for which country name, administration management domain name and organization name (for example, company name) are an exact match but the personal name of the recipient does not correspond to an individual known by an MHS in that organization. This permits the organization to manually handle the messages to these individuals.

In order for a message to be reassigned to an alternate recipient, the originator must have requested the alternate recipient allowed element of service.

B.5 *Authorizing users indication* IPM

This element of service allows the originator to indicate to the recipient the names of the one or more persons who authorized the sending of the message. For example, an individual can authorize a particular action which is subsequently communicated to those concerned by another person such as a secretary. The former person is said to authorize its sending while the latter person is the one who sent the message (originator). This does not imply signature-level authorization.

B.6 *Auto-forwarded indication* IPM

This element of service allows a recipient to determine that a body of an incoming IP-message contains an IP-message that has been auto-forwarded. Thus the recipient can distinguish from that where an incoming IP-message contains a forwarded message (as described in § B-31) in the body. As with a forwarded IP-message, an auto-forwarded IP-message can be accompanied by information (for example, time stamps, indication of conversion) associated with its original delivery.

Note — The indication that auto-forwarding of an IP-message has occurred enables a recipient IPM UA, should it so choose, to prevent further auto-forwarding and thus the possibility of loops. In addition, a recipient IPM UA can choose whether or not to auto-forward based on other criteria (for example, sensitivity classification).

When an IPM UA auto-forwards an IP-message, it designates it as auto-forwarded. If receipt/non-receipt notification has been requested for the IP-message being auto-forwarded, the IPM UA generates a non-receipt notification informing the originator of the auto-forwarding of the IP-message. The notification optionally includes a comment supplied by the originally intended recipient. No further notification applying to the auto-forwarded IP-message is generated by any IPM UA.

B.7 *Basic physical rendition* PD PR

This element of service enables the PDAU to provide the basic renditon facilities for converting the MHS message into a physical message. This is the default action to be taken by the PDAU.

B.8 *Blind copy recipient indication* IPM PR

This element of service allows the originator to provide the O/R name of one or more additional users, or DLs, who are intended recipients of the IP-message being sent. These names are not disclosed to either the primary or copy recipients. Whether or not these additional recipients are disclosed to one another is a local matter.

B.9 *Body part encryption indication* IPM

This element of service allows the originator to indicate to the recipient that a particular body of the IP-message being sent has been encrypted. Encryption can be used to prevent unauthorized inspection or modification of the body part. This element of service can be used by the recipient to determine that some body part(s) of the IP-message must be decrypted. This element of service, however, does not itself encrypt or decrypt any body part.

B.10 *Content confidentiality* MT

This element of service allows the originator of a message to protect the content of the message from disclosure to recipients other than the intended recipient(s). Content confidentiality is on a per-message basis, and can use either an asymmetric or a symmetric encryption technique.

B.11 *Content integrity* MT PR

This element of service allows the originator of the message to provide to the recipient of the message a means by which the recipient can verify that the content of the message has not been modified. Content integrity is on a per-recipient basis, and can use either an asymmetric or a symmetric encryption technique.

B.12 *Content type indication* MT

This element of service enables an originating UA to indicate the content type for each submitted message. A recipient UA can have one or more content types delivered to it. An example of a content type is the contents generated by the IPM class of cooperating UAs.

B.13 *Conversion prohibition* MT

This element of service enables an originating UA to instruct the MTS that implicit encoded information type conversion(s) should not be performed for a particular submitted message.

B.14 *Conversion prohibition in case of loss of information* MT

This element of service enables an originating UA to instruct the MTS that encoded information type conversion(s) should not be performed for a particular submitted message if such conversion(s) would result in loss of information. Loss of information is discussed in detail in X.408.

Should this and the conversion prohibition element of service both be selected, the latter shall take precedence.

Note — This element of service will not protect against possible loss of information in certain cases where the recipient is using an I/O device whose capabilities are unknown to the MTA.

B.15 *Converted indication* MT PR

This element of service enables the MTS to indicate to a recipient UA that the MTS performed encoded information type conversion on a delivered message. The recipient UA is informed of the resulting types.

B.16 *Counter collection* PD PR

This element of service allows an originating user to instruct the PDS to keep the physical message ready for counter collection at the post office specified by the originator, or at the post office which offers counter collection service closest to the given recipient's address.

B.17 *Counter collection with advice* PD PR

This element of service allows an originating user to instruct the PDS to keep the physical message ready for counter collection at the post office specified by the originator, or at the post office which offers counter collection service closest to the given recipient's address, and to inform the recipient via telephone, or telex, or teletex, using the number provided by the originator.

B.18 *Cross-referencing indication* IPM

This element of service allows the originator to associate with the IP-message being sent, the globally unique identifiers of one or more other IP-messages. This enables the recipient's IPM UA, for example, to retrieve from storage a copy of the referenced IP-messages.

B.19 *Deferred delivery* MT

This element of service enables an originating UA to instruct the MTS that a message being submitted shall be delivered no sooner than a specified data and time. Delivery will take place as close to the date and time specified as possible, but not before. The date and time specified for deferred delivery is subject to a limit which is defined by the originator's management domain.

Note — Storage of the message shall be handled in the originating country.

B.20 *Deferred delivery cancellation* MT

This element of service enables an originating UA to instruct the MTS to cancel a previously submitted deferred delivery message. The cancellation attempt may or may not always succeed. Possible reasons for failure are: deferred delivery time has passed, or the message has already been forwarded within the MTS.

B.21 *Delivery notification* MT PR

This element of service enables an originating UA to request that the originating UA be explicitly notified when a submitted message has been successfully delivered to a recipient UA or access unit. The notification is related to the submitted message by means of the message indentifier and includes the date and time of delivery. In the case of a multi-destination message, the originating UA can request this element of service or a per-recipient basis.

When a message is delivered after distribution list expansion, then, depending on the policy of the distribution list, the notification can be sent to either the list owner, the message originator, or both.

Delivery notification carries no implication that any UA or user action, such as examination of the message content, has taken place.

B.22 *Delivery time stamp indication* MT PR

This element of service enables the MTS to indicate to a recipient UA the date and time at which the MTS delivered a message. In the case of physical delivery, this element of service indicates the date and time at which the PDAU has taken responsibility for printing and further delivery of the physical message.

B.23 *Delivery via bureaufax service* PD PR

This element of service allows an originating user to instruct the PDAU and associated PDS to use the bureaufax service for transport and delivery.

B.24 *Designation of recipient by directory name* MT PR

This element of service enables an originating UA to use a directory name in place of an individual recipient's O/R address.

B.25 *Disclosure of other recipients* MT

This element of service enables the originating UA to instruct the MTS then submitting a multi-recipient message, to disclose the O/R names of all other recipients to each recipient UA, upon delivery of the message. The O/R names disclosed are as supplied by the originating UA. If distribution list expansion has been performed, then only the originator specified DL name will be disclosed, and not the names of its members.

B.26 *DL expansion history indication* MT

This element of service provides to a recipient, at delivery, information about the distribution list(s) through which the message has arrived. It is a local matter as to how much of this information is presented to the recipient.

B.27 *DL expansion prohibited* MT

This element of service allows an originating user to specify that if any of the recipients can directly or via reassignment refer to a distribution list, then no expansion shall occur. Instead, a non-delivery notification will be returned to the originating UA, unless prevention of non-delivery notification has been requested.

B.28 *EMS (express mail service)* PD PR

This element of service allows an originating user to instruct the PDS to transport and deliver the physical message produced from the MHS message through accelerated letter circulation and delivery service (such as EMS or the equivalent domestic service) in the destination country.

B.29 *Expiry date indication* IPM

This element of service allows the originator to indicate to the recipient the date and time after which he considers the IP-message to be invalid. The intent of this element of service is to state the originator's assessment of the current applicability of an IP-message. The particular action on behalf of a recipient by his IPM UA, or by the recipient himself, is unspecified. Possible actions might be to file or delete the IP-message after the expiry date has passed.

B.30 *Explicit conversion* MT PR

This element of service enables an originating UA to request the MTS to perform a specified conversion, such as required when interworking between different telematic services. When a message is delivered after conversion has been performed, the recipient UA is informed of the original encoded information types as well as the current encoded information types in the message.

Note 1 — This element of service is intended to support interworking with telematic terminals/services.

Note 2 — When DL names are used in conjunction with this element of service, conversion will apply to all members of the DL.

B.31 *Forwarded IP-message indication* IPM

This element of service allows a forwarded IP-message, or a forwarded IP-message plus its ‘‘delivery information’’ to be sent as the body (or as one of the body parts) of an IP-message. An indication that the body part is forwarded is conveyed along with the body part. In a multi-part body, forwarded body parts can be included along with body parts of other types. ‘‘Delivery information’’ is information which is conveyed from the MTS when an IP-message is delivered (for example, time stamps and indication of conversion). However, inclusion of this delivery information along with a forwarded IP-message in no way guarantees that this delivery information is validated by the MTS.

The receipt notification request indication and the non-receipt notification request elements of service are not affected by the forwarding of a IP-message.

B.32 *Grade of delivery selection* MT

This element of service enables an originating UA to request that transfer through the MTS be *urgent* or *non-urgent* , rather than *normal* and shorter, respectively, than that defined for normal transfer. This indication is also sent to the recipient with the message.

B.33 *Hold for delivery* MT

This element of service enables a recipient UA to request that the MTS hold its messages and returning notifications for delivery until a later time. The UA can indicate to the MTS when it is unavailable to take delivery of messages and notifications, and also, when it is again ready to accept delivery of messages and notifications from the MTS. The MTS can indicate to the UA that messages are waiting due to the criteria the UA established for holding messages. Responsibility for the management of this element of service lies with the recipient MTA.

Criteria for requesting a message to be held for delivery are: encoded information type, content type, maximum content length, and priority. The message will be held until the maximum delivery time for that message expires, unless the recipient releases the hold prior to its expiry.

Note — The hold for delivery element of service is distinct from the message store facility. The hold for delivery element of service provides temporary storage to facilitate delivery and only after a message has been transferred to the recipient’s UA, is delivery notification returned. The message store facility augments the storage of a UA and can be used to store messages for an extended period of time. Unlike the hold for delivery element of service, delivery notifications are returned as soon as the message is placed in (that is, delivered to) the message store.

B.34 *Implicit conversion* MT

This element of service enables a recipient UA to have the MTS perform for a period of time any necessary conversion on messages prior to delivery. Neither the originating nor recipient UA explicitly requests this element of service on a per-message basis. If the encoded information type capabilities of the recipient UA are such that more than one type of conversion can be performed, the most appropriate conversion is performed. When a message is delivered after conversion has been performed, the recipient UA is informed of the original encoded information types as well as the current encoded information types in the message.

B.35 *Importance indication* IPM

This element of service allows the originator to indicate to the recipients his assessment of the importance of the IP-message being sent. Three levels of importance are defined: *low* , *normal* , and *high* .

This element of service is not related to the grade of delivery selection element of service provided by the MTS. The particular action taken by the recipient or his IPM UA based on the importance categorization is unspecified. It is the intent to allow the recipient IPM UA, for example, to present IP-messages in order of their importance or to alert the recipient of the arrival of IP-messages of high importance.

B.36 *Incomplete copy indication* IPM

This element of service allows an originator to indicate that this IP-message is an incomplete copy of an IP-message with the same IP-message identification in that one or more body parts, and/or heading fields of the original IP-message are absent.

B.37 *IP-message identification* IPM

This element of service enables cooperating IMP UAs to convey a globally unique identifier for each IP-message sent or received. The IP-message identifier is composed of an O/R name of the originator and an identifier that is unique with respect to that name. IPM UAs and users use this identifier to refer to a previously sent or received IP-message (for example, in receipt notifications).

B.38 *Language indication* IPM

This element of service enables an originating UA to indicate the language type(s) of a submitted IP-message.

B.39 *Latest delivery designation* MT

This element of service enables an originating UA to specify the latest time by which the message is to be delivered. If the MTS cannot deliver by the time specified, the message is not delivered and is cancelled. On multi-recipient messages, the latest delivery time can expire prior to delivery to all recipients, but this will not negate any deliveries which have already occurred.

B.40 *Message flow confidentiality* MT

This element of service allows the originator of the message to protect information which might be derived from observation of the message flow.

Note — Only a limited form of this is supported.

B.41 *Message identification* MT

This element of service enables the MTS to provide a UA with a unique identifier for each message or probe submitted or delivered by the MTS. UAs and the MTS use this identifier to refer to a previously submitted message in connection with elements of service such as delivery and non-delivery notification.

B.42 *Message origin authentication* MT PR

This element of service allows the originator of a message to provide to the recipient(s) of the message, and any MTA through which the message is transferred, a means by which the origin of the message can be authenticated (i.e. a signature). Message origin authentication can be provided to the recipient(s) of the message, and any MTA through which the message is transferred, on a per-message basis using an asymmetric encryption technique, or can be provided only to the recipient(s) of the message, on a per-recipient basis using either an asymmetric or a symmetric encryption technique.

B.43 *Message security labelling* MT

This element of service allows the originator of a message (or probe) to associate with the message (and any reports on the message or probe) an indication of the sensitivity of the message (a security label). The message security label may be used by the MTS and the recipient(s) of the message to determine the handling of the message in line with the security policy in force.

B.44 *Message sequence integrity* MT PR

This element of service allows the originator of the message to provide to a recipient of the message a means by which the recipient can verify that the sequence of messages from the originator to the recipient has been preserved (without message loss, re-ordering, or replay). Message sequence integrity is on a per-recipient basis, and can use either an asymmetric or a symmetric encryption technique.

B.45 *Multi-destination delivery* MT PR

This element of service enables an originating UA to specify that a message being submitted is to be delivered to more than one recipient UA. Simultaneous delivery to all specified UAs is not implied by this element of service.

B.46 *Multi-part body* IPM

This element of service allows an originator to send to a recipient or recipients an IP-message with a body that is partitioned into several parts. The nature and attributes, or type, of each body part are conveyed along with the body part.

B.47 *Non-delivery notification* MT PR

This element of service enables the MTS to notify an originating UA if a submitted message was not delivered to the specified recipient UA(s). The reason the message was not deliverd is included as part of the notification. For example, the recipient UA can be unknown to the MTS.

In the case of a multi-destination message, a non-delivery notification can refer to any or all of the recipient UAs to which the message could not be delivered.

When a message is not delivered after distribution list expansion, then, depending on the policy of the distribution list, the notification can be sent to either the list owner, the message originator, or both.

B.48 *Non-receipt notification request indication* IPM PR

This element of service allows the originator to ask that he be notified should the IP-message be deemed unreceivable. In the case of a multi-recipient IP-message, the originator can request this element of service on a per-recipient basis.

The originator's UA conveys his request to the recipient's UA. The recipient's UA automatically issues a non-recipient notification when any of the following events occur:

1) the recipient's UA auto-forwards the IP-message to another user;

2) the recipient's UA discards the IP-message prior to receipt;

3) the recipient's subscription is terminated before he receives the IP-message.

Since receipt can occur arbitrarily long after delivery, the recipient's failure to access the IP-message, even for a long period of time (for example, while on an extended business trip), does not constitute non-receipt and thus no notification is issued.

Note — No legal significance can be adduced from this element of service.

B.49 *Non-repudiation of delivery* MT PR

This element of service allows the originator of a message to obtain from the recipient(s) of the message irrevocable proof that the message was delivered to the recipient(s). This will protect against any attempt by the recipient(s) to subsequently deny receiving the message or its content. Non-repudiation of delivery is provided to the originator of a message on a per-recipient basis using asymmetric encryption techniques.

B.50 *Non-repudiation of origin* MT PR

This element of service allows the originator of a message to provide the recipient(s) of the message irrevocable proof of the origin of the message. This will protect against any attempt by the originator to subsequently revoke the message or its content. Non-repudiation of origin is provided to the recipient(s) of a message on a per-message basis using asymmetric encryption techniques.

B.51 *Non-repudiation of submission* MT

This element of service allows the originator of a message to obtain irrevocable proof that a message was submitted to the MTS for delivery to the originally specified recipient(s). This will protect against any attempt by the MTS to subsequently deny that the message was submitted for delivery to the originally specified recipient(s). Non-repudiation of submission is provided to the originator of a message on a per-message basis, and uses an asymmetric encryption technique.

B.52 *Obsoleting indication* IPM

This element of service allows the originator to indicate to the recipient that one or more IP-messages he sent previously are obsolete. The IP-message that carries this indication supersedes the obsolete IP-message.

The action to be taken by the recipient or his IPM UA is a local matter. The intent, however, is to allow the IPM UA or the recipient to, for example, remove or file obsolete messages.

B.53 *Ordinary mail* PD PR

This element of service enables the PDS to transport and deliver the letter produced from the MHS message in the mode available through the ordinary letter mail service in the country of destination. This is the default action for the transport and delivery of a physical message.

B.54 *Original encoded information types indication* MT

This element of service enables an originating UA to specify to the MTS the encoded information types of a message being submitted. When the message is delivered, it also indicates to the recipient UA the encoded information types of the message specified by the originating UA.

B.55 *Orinigator indication* IPM

This element of service allows the identity of the originator to be conveyed to the recipient. The intent of this IPM element of service is to identify the originator in a user-friendly way. In contrast, the MTS provides to the recipient the actual O/R address and directory name, if present, of the originator. DL names should not be used in originator indication.

B.56 *Originator requested alternate recipient* MT PR

This element of service enables an originating UA to specify, for each intended recipient, one alternate recipient to which the MTS can deliver the message, if delivery to the intended recipient is not possible. The alternate recipient can be a distribution list. For the purposes of determining success or failure (and hence delivery and non-delivery notifications), delivery to the originator requested alternate recipient is equivalent to delivery to the intended recipient. If the intended recipient has requested

redirection of incoming messages, and if the originating UA has requested redirection allowed by the originator, the system first tries to redirect the message. If this fails, the system then attempts to deliver the message to the designated alternate recipient.

B.57 *Physical delivery notification by MHS* PD PR

This element of service allows an originating user to request that an explicit notification, informing the originator of either successful or unsuccessful delivery of the physical message, be generated and returned by MHS. The notification provides information on delivery but no physical record is provided by the PDS.

Note 1 — The notification includes the date and time of delivery based on the delivery confirmation given by the delivery person, the addressee or another authorized person. This is subject to national regulations in the destination contry and is also dependent on the type of delivery requested (e.g., in the case of registered mail to addressee in person, the addressee would be the confirming person).

Note 2 — This notification carries no implication that any action on the part of the recipient (such as examination of the message content) has taken place.

Note 3 — When this element of service is requested, and the physical message is undeliverable, it is either returned or destroyed depending on national regulations in the destination country, which means that the default action of the element of service B.91 is overridden.

B.58 *Physical delivery notification by PDS* PD PR

This element of service allows an originating user to request that an explicit notification, informing the originator of either successful or unsuccessful delivery of the physical message, be generated and returned by the PDS. The notification serves as a record of delivery for the originating user to retain for reference.

Note 1 — The notification includes the date and time, and, in the case of successful delivery, the signature of the person confirming the delivery. The confirming person can be the delivery person, the addressee or another authorized person. This is subject to national regulations in the destination country and is also dependent on the type of delivery requested (e.g., in the case of registered mail to addressee in person, the addressee would be the confirming person).

Note 2 — This notification carries no implication that any action on the part of the recipient (such as examination of the message content) has taken place.

Note 3 — When this element of service is requested, and the physical message is undeliverable, is either returned or destroyed depending on national regulations in the destination country, which means that the default action of the element of service B.91 is overridden.

B.59 *Physical forwarding allowed* PD PR

This element of service enables the PDS to forward the physical message to a forwarding address if the recipient has changed his address and indicated this to the PDS. This is the default action taken by the PDS.

B.60 *Physical forwarding prohibited* PD PR

This element of service allows an originating user to instruct the PDS not to forward the physical message to a forwarding address.

B.61 *Prevention of non-delivery notification* MT PR

This element of service enables an originating UA to instruct the MTS not to return a non-delivery notification to the originating UA in the event that the message being submitted is judged undeliverable. In the case of a multi-destination message, the originating UA can request this element of service on a per-recipient basis.

B.62 *Primary and copy recipients indication* IPM

This element of service allows the originator to provide the names of zero or more users, or DLs, who are the intended primary recipients of the IP-message, and the names of zero or more users, or DLs, who are the intended copy recipients of the IP-message. It is intended to enable a recipient to determine the category in which each of the specified recipients (including the recipient himself) was placed. The exact distinction between these two categories of recipients is unspecified. However, the primary recipients, for example, might be expected to act upon the IP-message, while the copy recipients might be sent the IP-message for information only.

Note — As an example of this element of service in a typical memorandum, the primary recipients are normally designated by the directive ‘‘to:’’ while ‘‘cc:’’ identifies the copy recipients.

B.63 *Probe* MT

This element of service enables a UA to establish before submission whether a particular message could be delivered. The MTS provides the submission information and generates delivery and/or non-delivery notifications indicating whether a message with the same submission information could be delivered to the specified recipient UAs.

The probe element of service includes the capability of checking whether the content size, content type, and/or encoded information types would render it undeliverable. The significance of the result of a probe depends upon the recipient UA(s) having registered with the MTS the encoded information types, content type and maximum message size that it can accept. This element of service is subject to the same delivery time targets as for the urgent class. In the case of DLs, a probe indicates nothing about the likelihood of successful delivery to the DL members, but only whether the originator has the right to submit to the DL.

B.64 *Probe origin authentication* MT

This element of service allows the originator of a probe to provide to any MTA through which the probe is transferred a means to authenticate the origin of the probe (i.e. a signature). Probe origin authentication is on a per-probe basis, and uses an asymmetric encryption technique.

B.65 *Proof of delivery* MT PR

This element of service allows the originator of a message to obtain from the recipient(s) of the message the means to authenticate the identity of the recipient(s) and the delivered message and content. Message recipient authentication is provided to the originator of a message on a per-recipient basis using either symmetric or asymmetric encryption techniques.

B.66 *Proof of submission* MT

This element of service allows the originator of a message to obtain from the MTS the means to authenticate that the message was submitted for delivery to the originally intended recipient. Message submission authentication is provided on a per-message basis, and can use symmetric or asymmetric encryption techniques.

B.67 *Receipt notification request indication* IPM PR

This element of service allows the originator to ask that he be notified when the IP-message being sent is received. In the case of a multi-recipient message, the originator can request this element of service on a per-recipient basis. This element of service also implicitly requests non-receipt notification request indication.

The originator's UA conveys his request to the recipient's UA. The recipient can instruct his UA to honour such requests, either automatically (for example, when it first renders the IP-message on the recipient's terminal) or upon his explicit command. The recipient can also instruct his UA, either in blanket fashion or case by case, to ignore such requests.

B.68 *Redirection disallowed by originator* MT

This element of service enables an originating UA to instruct the MTS, if the recipient has requested the redirection of incoming messages element of service, that redirection should not be applied to a particular submitted message.

B.69 *Redirection of incoming messages* MT

This element of service enables a UA to instruct the MTS to redirect incoming messages addressed to it, to another UA or to a DL, for a specified period of time, or until revoked.

Note 1 — This is an MT element of service that does not necessitate delivery to the intended recipient before redirection can take place. It is therefore distinct from the IPM Auto-Forwarded Indication Element of Service.

Note 2 — When security provisions are in force, different incoming messages, on the basis of their security labels, may be redirected to separate alternate recipients or not re-directed at all.

B.70 *Registered mail* PD PR

This element of service allows an originating user to instruct the PDS to handle the physical message as registered mail.

B.71 *Registered mail to addressee in person* PD PR

This element of service allows an originating user to instruct the PDS to handle the physical message as registered mail and to deliver it to the addressee only.

B.72 *Reply request indication* IPM PR

This element of service allows the originator to request that a recipient send an IP-message in reply to the IP-message that carries the request. The originator can also specify the date by which any reply should be sent, and the one or more users and DLs to whom the originator requests (but does not demand) be among the preferred recipients of any reply. The recipient is informed of the date and names but it is up to the recipient to decide whether or not, and if so, to whom to reply.

Note — A blind copy recipient should consider carefully to whom he sends a reply, in order that the meaning of the blind copy recipient indication element of service is preserved.

B.73 *Replying IP-message indication* IPM

This element of service allows the originator of an IP-message to indicate to the recipient(s) that this IP-message is being sent in reply to another IP-message. A reply can, depending on the wishes of the originator of the replied-to message, and the final decision of the originator of the reply, be sent to:

1) the recipients specified in the reply request indication of the replied-to message;

2) the originator of the replied-to message;

3) the originator and other recipients;

4) a distribution list, in which the originator of the replied-to message can be a receiving member;

5) other recipients as chosen by the originator of the reply.

The recipients of the reply receive it as a regular IP-message, together with an indication of which IP-message it is a reply to.

B.74 *Report origin authentication* MT

This element of service allows the originator of a message (or probe) to authenticate the origin of a report on the delivery or non-delivery of the subject message (or probe), (a signature). Report origin authentication is on a per-report basis, and uses an asymmetric encryption technique.

B.75 *Request for forwarding address* PD PR

This element of service allows an originating user to instruct the PDS to provide the forwarding address if the recipient has changed his address and indicated this to the PDS.

This element of service can be used with either physical forwarding allowed or prohibited. The provision of the forwarding address by the PDS to an originating user is subject to national regulations in the destination country. The default action is no provision of the forwarding address.

B.76 *Requested delivery method* MT PR

This element of service allows a user to request, on a per-recipient basis, the preference of method or methods of message delivery (such as through an access unit). Non-delivery results if preference(s) cannot be satisfied.

B.77 *Restricted delivery* MT

This element of service enables a recipient UA to indicate to the MTS that it is not prepared to accept delivery of messages from certain originating UAs or DLs.

Note 1 — This element of service can be requested in either of two ways:

a) specification by the recipient UA of unauthorized originators, all other originators are considered as authorized;

b) specification by the recipient UA of authorized originators, all other originators are considered to be unauthorized.

Note 2 — The MTS abstract service specified in Rec. X.411 does not provide a technical realization of this element of service. Its provision may be the subject of further standardization.

B.78 *Return of content* MT

This element of service enables an originating UA to request that the content of a submitted message be returned with any non-delivery notification. This will not be done, however, if any encoded information type conversion has been performed on the message's content.

B.79 *Secure access management* MT

This element of service enables an MTS user to establish an association with the MTS, or the MTS to establish an association with an MTS user, or an MTA to establish an association with another MTA. It also establishes the strong credentials of the objects to interact, and the context and security-context of the association. Secure access management can use either an asymmetric or a symmetric encryption technique. When access security is achieved through strong credentials, they can be periodically updated.

B.80 *Sensitivity indication* IPM

This element of service allows the originator of an IP-message to specify guidelines for the relative sensitivity of the message upon its receipt. It is the intent that the sensitivity indication should control such items as:

1) whether the recipient should have to prove his identity to receive the IP-message;

2) whether the IP-message should be allowed to be printed on a shared printer;

3) whether an IPM UA should allow the recipient to forward the received IP-message;

4) whether the IP-message should be allowed to be auto-forwarded.

The sensitivity indication can be indicated to the recipient or interpreted directly by the recipient's IPM UA.

If no sensitivity level is indicated, it should be assumed that the IP-message originator has advised no restriction on the recipient's further disposition of the IP-message. The recipient is free to forward, print, or otherwise do as he chooses with the IP-message.

Three specific levels of sensitivity above the default are defined:

— *Personal* : The IP-message is sent to the recipient as an individual, rather than to him in his role. There is no implication that the IP-message is private, however.

— *Private* : The IP-message contains information that should be seen (or heard) only by the recipient, and not by anyone else. The recipient's IPM UA can provide services to enforce this intent on behalf of the IP-message originator.

— *Company-confidential* : The IP-message contains information that should be treated according to company-specific procedures.

B.81 *Special delivery* PD PR

This element of service allows an originating user to instruct the PDS to transport the letter produced form the MHS message through the ordinary letter mail circulation system and to deliver it by special messenger delivery.

B.82 *Stored message alert* MS

This element of service allows a user of an MS to register relevant sets of criteria that can cause an alert to be generated to the user when a message arrives at the MS satisfying the selected criteria. The generation of the alert can occur as follows:

1) if the UA is connected and on-line to the MS, the alert message will be sent to the UA as soon as a message arrives at the MS that safisfies the registered criteria for generating alerts. If the UA is off line then the next time the UA connects to his MS after a message arrives at the MS satisfying the registered criteria, the user will be informed that one or more alert cases have occurred, the details of which can be determined by performing a Stored Message Summary;

2) in addition to, or as an alternative to 1) above, the MS can use other mechanisms to inform the user.

B.83 *Stored message auto-forward* MS

This element of service allows a user of an MS to register requests that the MS auto-forward selected messages that are delivered to it. The user of the MS can select through registration several sets of criteria chosen from the attributes available in the MS, and messages meeting each set of criteria will be auto-forwarded to one or more users or DLs. One text per selection criteria can also be specified to be included with each auto-forwarded message.

B.84 *Stored message deletion* MS

This element of service enables a recipient UA to delete certain of its messages from the MS. Messages cannot be deleted if they have not been previously listed.

B.85 *Stored message fetching* MS

This element of service enables a recipient UA to fetch from the MS a message, or portions of a message. The UA can fetch a message (or message portion) based on the same search criteria that can be used for stored message listing.

B.86 *Stored message listing* MS

This element of service provides a recipient UA with a list of information about certain of its messages stored in the MS. The information comprises selected attributes from a message's envelope and content and others added by the MS. The UA can limit the number of messages that will be listed.

B.87 *Stored message summary* MS

This element of service provides a recipient UA with a count of the number of messages satisfying a specified criteria based on one or more attributes of the message stored in the MS.

B.88 *Subject indication* IPM

This element of service allows the originator to indicate to the recipient(s) the subject of an IP-message being sent. The subject information is to be made available to the recipient.

B.89 *Submission time stamp indication* MT

This element of service enables the MTS to indicate to the originating UA and each recipient UA the date and time at which a message was submitted to the MTS. In the case of physical delivery, this element of service also enables the PDAU to indicate the date and time of submission on the physical message.

B.90 *Typed body* IPM

This element of service permits the nature and attributes of the body of the IP-message to be conveyed along with the body. Because the body can undergo conversion, the body type can change over time.

B.91 *Undeliverable mail with return of physical message* PD PR

This element of service enables the PDS to return the physical message without delay, with reason indicated to the originator, if it cannot be delivered to the addressee. This is the default action to be taken by the PDS.

Note — In the case of ‘‘poste restante’’ the return of the physical message will take place after some period of time.

B.92 *Use of distribution list* MT PR

This element of service enables an originating UA to specify a distribution list in place of all the individual recipients (users or nested LDs) mentioned therein. The MTS will add the members of the list to the recipients of the message and send it to those members. Distribution lists can be members of distribution lists, in which case the list of recipients can be successively expanded at several places in the MTS.

B.93 *User/UA capabilities registration* MT

This element of service enables a UA to indicate to its MTA, through registration, the unrestricted use of any or all of the following capabilities with respect to received messages:

1) the content type(s) of messages it is willing to have delivered to it;

2) the maximum content length of a message it is willing to have delivered to it;

3) the encoded information type(s) of messages it is willing to have delivered to it.

The MTA will not deliver to a UA a message that does not match, or exceeds, the capabilities registered.

ANNEX C

(to Recommendation F.400)

Elements of service modifications with respect to the 1984 version

C.1 *New elements of service in 1988* | (see Table C-1/F.400)

H.T. [T13.400]

TABLE C-1/F.400

Elements of service	MT	IPM	PD	MS	Annex B Ref.
Additional physical rendition			X		B.2
Basic physical rendition			X		B.7
Content confidentiality	X				B.10
Content integrity	X				B.11
{					
Conversion prohibition in case of loss of information					
}	X				B.14
Counter collection			X		B.16
{					
Counter collection with advice					
}			X		B.17
{					
Delivery via bureaufax service					
}			X		B.23
{					
Designation of recipient by directory name					
}	X				B.24
{					
DL expansion history indication					
}	X				B.26
DL expansion prohibited	X				B.27
EMS (express mail service)			X		B.28
Incomplete copy indication		X			B.36
Language indication		X			B.38
Latest delivery designation	X				B.39
Message flow confidentiality	X				B.40
Message origin authentication	X				B.42
Message security labelling	X				B.43
Message sequence integrity	X				B.44
{					
Non-repudiation of delivery					
}	X				B.49
Non-repudiation of origin	X				B.50
{					
Non-repudiation of submission					
}	X				B.51
Ordinary mail			X		B.53
{					
Originator requested alternate recipient					
}	X				B.56
{					
Physical delivery notification by MHS					
}			X		B.57
{					
Physical delivery notification by PDS					
}			X		B.58
Physical forwarding allowed			X		B.59
{					
Physical forwarding prohibited					
}			X		B.60
Probe origin authentication	X				B.64
Proof of delivery	X				B.65
Proof of submission	X				B.66
{					
Redirection d is allowed by originator					
}	X				B.68
{					
Redirection of incoming messages					
}	X				B.69
Registered mail			X		B.70
{					

Registered mail to addressee in person }			X		B.71
Report origin authentication	X				B.74

{
Request for forwarding address
}
			X		B.75

Requested delivery method	X				B.76
Restricted delivery	X				B.77
Secure access management	X				B.79
Special delivery			X		B.81
Stored message alert				X	B.82

{
Stored message auto-forward
}
				X	B.83

Stored message deletion				X	B.84
Stored message fetching				X	B.85
Stored message listing				X	B.86
Stored message summary				X	B.87

{
Undeliverable mail with return of physical message
}
			X		B.91

Use of distribution list	X				B.92

{
User/UA capabilities registration
}
	X				B.93

Table C-1/F.400 [T13.400], p. 1

C.2 *Mapping of the 1984 and 1988 elements of service tables* (see Figure C-1/F.400)

Figure C-1/F.400, p. 2

C.3 *Classification of new elements of service*

The new elements of service that were added to the 1984 X.400-Series to create the 1988 F.400/X.400-Series Recommendations are all classified as additional optional user facilities with the following exceptions:

C.3.1 *MT service*

— DL expansion history indication;

— requested delivery method.

C.3.2 *IPM service*

— DL expansion history indication;

— language indication;

— requested delivery method.

C.3.3 *MH/PD service intercommunication*

Although some of the elements of service used in this intercommunication are classified as *Base* (see F.400, § 19.4), and some are classified as essential optional user facilities (see F.400, § 19.5), the provision of MH/PD service intercommunication is an option itself. When this intercommunication is provided, the base elements of service and optional user facilities shall be supported as classified in this Recommendation.

C.3.4 *Message store*

Although some of the elements of service used with the message store are classified as *Base* (see F.400, § 19.6), and others are classified as essential optional user facilities (see F.400, § 19.7), the provision of a message store is itself an option, and therefore the classifications are applicable only for the provider of a message store.

C.4 *Changes in classification of 1984 elements of service*

All the elements of service in 1984 have retained their 1984 classifications with the following exception:

— Non-receipt notification request.

C.4.1 *Miscellaneous changes*

The element of service registered encoded information types in 1984 is now called user/UA capabilities registration and it has been extended in functionality.

Some of the 1984 element of service definitions have been revised editorially for ease of reading.

ANNEX D

(to Recommendation F.400)

Differences between CCITT Recommendation F.400 and ISO Standard 10021-1

(This Annex is not a part of this Recommendation)

This Annex points out the major differences between this Recommendation and the corresponding ISO International Standard. Because the differences in many cases involve the inclusion or exclusion of a word, a phrase, or a sentence, and these occur in many places throughout the text, this Annex does not specifically point to these instances. Rather it summarizes the intent of these differences.

The following are the major differences:

1) The CCITT text makes references throughout to CCITT services and their relationship to MHS;

2) Figure 5/F.400 showing relationships between management domains and corresponding notes;

3) Roles of ADMD and PRMD in naming;

4) Use of MHS in provision of public services (§ 17);

5) The Note about responsibility for storing deferred delivery messages (Annex B, § B.19) is not included in the ISO text.

MONTAGE: RECOMMANDATION Q.401 sur le reste de cette page