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MESSAGE HANDLING SERVICES

OPERATIONS AND DEFINITION OF SERVICE

MESSAGE HANDLING SERVICES: NAMING AND ADDRESSING FOR PUBLIC MESSAGE HANDLING SERVICES



Recommendation F.401



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FOREWORD

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

Recommendation F.401 was revised by Study Group I and was approved under the Resolution No. 2 procedure on the 4th of August 1992.

CCITT NOTE

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

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FOR PUBLIC MESSAGE HANDLING SERVICES***(revised, 1992)***CONTENTS***Introduction*

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The establishment in various countries of message handling services in association with public networks creates the need to produce Recommendations covering the aspects of public message handling services. Naming and addressing is a key area for the application and the provision of public message handling services on a global scale.

1 Scope

This Recommendation specifies naming and addressing aspects for public message handling services which are described in other Recommendations of the F-Series. It also establishes some principles for the allocation of originator/recipient O/R addresses.

2 References

- CCITT Rec. E.164, *Numbering plan for the ISDN era*, 1991.
- CCITT Rec. F.400, *Message handling services: Message handling system and service overview*, 1992.
- CCITT Rec. F.410, *Message handling services: The public message transfer service*, 1992.
- CCITT Rec. F.415, *Message handling services: Intercommunication with public physical delivery services*, 1988.
- CCITT Rec. F.420, *Message handling services: The public interpersonal messaging service*, 1992.
- CCITT Rec. F.421, *Message handling services: Intercommunication between the IPM service and the telex service*, 1988.
- CCITT Rec. F.422, *Message handling services: Intercommunication between the IPM service and the teletex service*, 1988.
- CCITT Rec. F.423, *Message handling services: Intercommunication between the IPM service and telefax services*, 1992.
- CCITT Rec. F.435, *Message handling services: electronic data interchange messaging service*, 1991.
- CCITT Rec. F.440, *Message handling services: The voice messaging service*, 1992.
- CCITT Rec. F.500, *International public directory services*, 1992.
- CCITT Rec. T.61 (1992), *Character repertoire and coded character sets for the international teletex service*, 1988.
- CCITT Rec. X.121, *International numbering plan for public data networks*, 1992.
- Other CCITT Recs. of the X.400-Series (1993), *Message handling systems*, 1993.
- CCITT Rec. X.402, *Message handling systems: Overall architecture*, 1993.
- CCITT Recs. of the X.500-Series, *Directory systems*, 1992.
- CCITT Rec. X.660¹⁾, *Procedures for the operation of OSI registration authorities: General procedures*.
- ISO 3166 (1988) (plus amendments), *Codes for the representation of names of countries*, 1988.

3 Definitions

For the purposes of this Recommendation the definitions given in Recommendation F.400 apply. See also Annex A of Recommendation F.400.

4 Abbreviations

ADMD	Administration management domain
DCC	Data country code
DDA	Domain defined attribute
DL	Distribution list

¹⁾ Presently at the stage of draft.

IA5	International Alphabet No. 5
IPM	Interpersonal messaging
ITA2	International Telegraph Alphabet No. 2
MD	Management domain
MH	Message handling
MHE	Message handling environment
MHS	Message handling system
MT	Message transfer
O/R	Originator/recipient
OU	Organizational unit
PO	Post office
PD	Physical delivery
PRMD	Private management domain
PSAP	Presentation service access point
RPOA	Recognized private operating agency
UPU	Universal Postal Union

Abbreviations and labels used in Annex B are explained in the annex itself.

5 Conventions

In this Recommendation the expression "Administration" is used for shortness to indicate a telecommunication Administration, a recognized private operating agency (RPOA), and, in the case of intercommunication with public physical delivery service, a postal Administration.

6 Naming and addressing in message handling

Naming and addressing in message handling have to ensure that users can define the source and the destination of messages in an unambiguous way. The organizational mapping of message handling systems, and the structure of management domains (see Recommendation F.400), together with a set of naming conventions, are the means to establish a uniform and compatible environment for the exchange of messages between any users of the message handling environment. Only those attributes need appear in an O/R address that are required to reach a recipient.

Names and addresses are allocated by the responsible naming authority. These authorities are asked to notify the Director of the CCITT of the names of their ADMs and of some additional information (name and address of the public service provider, name of the services, etc.) for subsequent publication in the ITU *Operational Bulletin* (see Annex C for the format of the notification and also Recommendation X.660).

In message handling systems (MHS), the principal entity that requires naming is the user (the originator and the recipient of messages). In addition, distribution lists (DLs) have names for their own identification and use in the context of MHS. Users of MHS and DLs are identified by O/R names. (The prefix "O/R" recognizes the fact that the user can be acting as either the originator or the recipient of a message.) An O/R name comprises a directory name, an O/R address or both. Every user or DL has one or more O/R names.

6.1 O/R addresses

An O/R address contains information that enables the MHS to identify a user in order to deliver a message or return a notification. DLs are also identified by an O/R address.

An O/R address is comprised of a set of information called attributes. Recommendation X.402 specifies a set of standard attributes from which O/R addresses can be constructed. Standard attributes, the structure of attribute lists

and their syntax and semantics are defined in Recommendation X.402. In addition to standard attributes, and so as to cater for existing messaging systems, there are domain defined attributes whose syntax and semantics are specified by management domains. They are applicable for an interim period.

Various forms of O/R addresses are defined, each serving its own purpose. These forms and their purpose are as follows:

- *Mnemonic O/R address*: Provides a user friendly means of identifying users in the absence of a directory. It may also be used for identifying a distribution list.
- *Terminal O/R address*: Provides a means of identifying users with terminals belonging to various networks.
- *Numeric O/R address*: Provides a means of identifying users with numeric keypads.
- *Postal O/R address*: Provides a means of identifying originators and recipients of messages and notifications, for physical delivery.

It is up to the management domain concerned to decide which name forms it wants to use. Corresponding parties should be made aware of the applicable name space (i.e. the repertoire of names).

6.1.1 *Mnemonic O/R address*

This form of O/R address provides addresses that mnemonically identifies a user or a DL relative to the administration management domain (ADMD) through which the user is accessed. At least one of the conditional attributes following the domain name(s) has to be present. A PRMD name is present only if the user concerned belongs to that domain. If an organizational unit is present, the organization name has to be present as well.

The mnemonic O/R address consists of:

- Country name
- Administration domain name
- [Private domain name]
- [Organization name]
- [Organizational unit name]
- [Personal name]
- [Common name]
- [[Domain defined attributes]]

Note – Attributes in square brackets are conditional. Double square brackets indicate an attribute not belonging to the standard attribute list and may not be required for global addressing.

6.1.2 *Terminal O/R address*

This form of O/R address provides a means for addressing a terminal with its network address, conditionally with the country name, the domain name(s), a terminal identifier, the terminal type and domain defined attributes. If an organizational unit is present, the organization name has to be present as well.

The terminal O/R address consists of:

- [Country name]
- [Administration domain name]
- [Private domain name]
- Network address
- [Terminal identifier]
- [Terminal type]
- [[Domain defined attributes]]
- {Common name}

- {Organization name}
- {Organizational unit names}
- {personal name}
- {unformatted postal address}

Note 1 – Attributes in square brackets are conditional. Double square brackets indicate an attribute not belonging to the standard attribute list and may not be required for global addressing.

Note 2 – Domain defined attributes should be present only if the country name and the Administration management domain name are present.

Note 3 – Network addresses allocated by a domain need to be unambiguous and thus can only be assigned once. Country name and administration management name attributes have to be present when more than one domain is providing service for the address concerned.

Note 4 – Attributes in braces are intended to be used for rendering of the address information (making it visible) on the receiving terminal but not for addressing or routing purposes.

The network address is composed of digits from the X.121 numbering plan (including escape codes) or the E.164 numbering plan.

The conditional terminal identifier might be, for example, a telex answerback string or a teletex terminal identifier.

The conditional terminal type might be, for example, a telex, a teletex, a G3 facsimile, a G4 facsimile, an IA5, or a videotex terminal.

6.1.3 Numeric O/R address

This form of O/R address provides addresses that can be entered from devices equipped only with numeric keypads. It identifies numerically a user relative to the ADMD through which the user is accessed.

The numeric O/R address consists of:

- Country name
- Administration domain name
- [Private domain name]
- Numeric user identifier
- [[Domain defined attributes]]

Note 1 – Attributes in square brackets are conditional. Double square brackets indicate an attribute not belonging to the standard attribute list and may not be required for global addressing.

Note 2 – Numeric values are assumed for all attributes. Countries may be named with DCCs (see Recommendation X.121). An ADMD name would require the allocation of a numeric alias name.

Note 3 – This form could also be used for a videotex user number.

Note 4 – The numeric user identifier may use a check digit for validation purposes.

6.1.4 Postal O/R address

This form of O/R address provides for the identification of a user by means of his postal address, together with the country name(s), and the domain name(s), and the PD service name through which he is accessed.

See also Recommendation F.415.