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Information technology — Text Communication —  
Message-Oriented Text Interchange Systems  
(MOTIS) —

iTeh **STANDARD PREVIEW**  
Overall Architecture  
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AMENDMENT 1: Representation of O/R addresses  
for human exchange

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*Technologies de l'information — Communication de texte — Systèmes d'échange  
de texte en mode message —*

*Partie 2 : Architecture générale*

*AMENDEMENT 1: Représentation d'adresses émission/réception pour échanges  
entre personnes*

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Reference number  
ISO/IEC 10021-2:1990/Amd.1:1994(E)

## Foreword

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Amendment 1 to International Standard ISO/IEC 10021-2:1990 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

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# Information technology — Text communication — Message-Oriented Text Interchange Systems (MOTIS) —

## Part 2:

### Overall Architecture

#### AMENDMENT 1: Representation of O/R addresses for human exchange

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#### Subclause 18.5

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*At the end of the fourth paragraph add a new sentence:*

The representation of O/R addresses for human usage is described in Annex F.

*Renumber existing annexes F and G to G and H, and insert new annex F.*

*Revise all references to annexes F and G to become G and H respectively.*

## Annex F

(informative)

### Representation of O/R Addresses for Human Usage

#### F.1 Purpose

An O/R address (specified in clause 18) consists of a set of values of attributes taken from the list shown in Table F.1. In order to represent visually an address to a human user, and to enable the user to enter the address into a user interface, each attribute value needs to be associated with the correct attribute type. Many of the names of attribute types shown in Table F.1 are too long for convenient usage on paper or a screen. There is a need for a format which allows attributes to be represented concisely, e.g., on a business card.

This annex specifies how addresses can be expressed concisely using labels to represent the attribute types. There are three categories of attributes: those standard mnemonic attributes which are most likely to be found in O/R addresses represented for human usage (e.g., on business cards), those used in physical delivery addresses, and other specialised attributes (including domain defined attributes). In order to provide a format which is as concise as possible, many of the labels are single characters. This also makes them less language dependent.

Clause F.3 specifies the format for the representation of addresses, and clause F.4 specifies the characteristics necessary for user interfaces which are intended to be used in conjunction with this format.

#### F.2 Scope

A labelled format for the communication of O/R addresses to human users is specified. The format consists of a set of pairs of labels and attribute-values. The characteristics of a user interface which are necessary to accept addresses given in this format are also specified.

In addition a self-explanatory format is specified which is suitable for use where there is more space, e.g., in printed material and in the user interface.

#### F.3 Format

##### F.3.1 General

The objective of the labelled format is to enable O/R addresses to be represented in a format which is concise and which can be accurately transcribed by human users. This can be facilitated by careful consideration of which attributes and values are used to form an O/R address.

If the attributes of an O/R address include characters from an extended character set, human users who do not normally use the same extended character set may have difficulty representing the O/R address or entering it into their messaging system. In this situation, an alias of the O/R address should be provided which is composed entirely of Printable String characters.

#### NOTES

1 - The policy for structuring O/R addresses needs to be carefully considered. Individual O/R addresses should be allocated within an appropriate division of the address space to reduce to an acceptable level the probability that two users might expect to have the same O/R address. Use of given name or initials is usually sufficient to distinguish between users. It may be inappropriate to reflect too much granularity in organizational-unit-names particularly if the organizational structure is subject to frequent change, or users move between organizational-units.

2 - There may be a conflict between the benefits of using long values for attributes which are self explanatory (such as the full name of an organization) and the benefits of shorter values (e.g., to fit concisely on a business card). One solution to this problem is to provide an alternative short attribute value (such as the initials of the organization) as an alias for the long value.

3 - If a human user might be uncertain about the existence of a space in an attribute value (particularly when it is typeset), aliases could be provided with and without the space (e.g., "SNOMAIL400" as an alias for "SNOMAIL 400" and "MacDonald" as an alias for "MacDonald").

4 - If an alias is provided for an O/R address, it is desirable that this is implemented in such a way that a consistent (preferred) form of O/R address is generated for all messages originated by the user.

Where national usage permits a single space value for the administration-domain-name in an address, this is represented in the address either by omitting the administration-domain-name attribute, or by showing the administration-domain-name attribute with no value or the value of a space.

### F.3.2 Labelled format

#### F.3.2.1 Syntax

O/R addresses in labelled format consist of delimited pairs of labels and values in the syntax <label> "=" <value>. The labels for each attribute are specified in Tables F.1, F.2 and F.3. (The physical delivery attributes in Table F.2 are included for completeness.) The label and its value are either separated by the character "=", or by the space between two columns in a table. Labels may be represented in upper or lower case, but the use of uppercase is recommended as it is likely to be more visually distinctive.

If label/value pairs appear in sequence on a line, they are separated by delimiters. Delimiters may optionally be followed by one or more spaces. The delimiter character may be either ";" or "/", but only one of these can be used in one O/R address. When the delimiter is "/" the first label is prefixed by "/". The use of a delimiter at the end of a line is optional. If the value of any attribute contains the delimiter character, this should be represented by a pair of delimiter characters.

If an identifier is required to preface a labelled address, it is recommended that "X.400" is used.

If an address is entirely composed of attributes contained in Table F.1, it is recommended that the sequence of attributes in the address is that given in Table F.1. If this sequence is incompatible with normal cultural conventions, an alternative sequence may be adopted for representations of addresses which are primarily intended for use within that culture.

**Table F.1**  
**Standard Attributes of the Mnemonic Address Form**

Attribute Type	Definition in subclause	Abbreviation (where necessary)	Label
Given Name	18.3.12	Given name	G
Initials	18.3.12	Initials	I
Surname	18.3.12	Surname	S
Generation Qualifier	18.3.12	Generation	Q
Common Name	18.3.2	Common Name	CN
Organization	18.3.9	Organization	O
Organizational Unit 1	18.3.10	Org.Unit.1	OU1
Organizational Unit 2	18.3.10	Org.Unit.2	OU2
Organizational Unit 3	18.3.10	Org.Unit.3	OU3
Organizational Unit 4	18.3.10	Org.Unit.4	OU4
Private Domain Name	18.3.21	PRMD	P
Administration Domain Name	18.3.1	ADMD	A
Country	18.3.3	Country	C

**Table F.2**  
**Physical Delivery Attributes**

Attribute Type	Definition in subclause	Abbreviation (where necessary)	Label
Physical Delivery Personal Name	18.3.17	PD-person	PD-PN
Extension Postal O/R Address Components	18.3.4	PD-ext.address	PD-EA
Extension Physical Delivery Address Components	18.3.5	PD-ext.delivery	PD-ED
Physical Delivery Office Number	18.3.15	PD-office number	PD-OFN
Physical Delivery Office Name	18.3.14	PD-office	PD-OF
Physical Delivery Organization Name	18.3.16	PD-organization	PD-O
Street Address	18.3.22	PD-street	PD-S
Unformatted Postal Address	18.3.25	PD-address	PD-A1
			PD-A2
(there are individual labels for each line of the address)			PD-A3
			PD-A4
			PD-A5
			PD-A6
Unique Postal Name	18.3.26	PD-unique	PD-U
Local Postal Attributes	18.3.6	PD-local	PD-L
Postal Restante Address	18.3.20	PD-restante	PD-R
Post Office Box Address	18.3.18	PD-box	PD-B
Postal Code	18.3.19	PD-code	PD-PC
Physical Delivery Service Name	18.3.11	PD-service	PD-SN
Physical Delivery Country Name	18.3.13	PD-country	PD-C

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**Table F.3**  
**Other Attributes**

ISO/IEC 10021-2:1990/Amd 1:1994

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6aa5124ad410/iso-iec-10021-2-1990-amd-1-1994

Attribute Type	Definition in subclause	Abbreviation (where necessary)	Label
X.121 Network Address	18.3.7	X.121	X.121
E.163/E.164 Network Address	18.3.7	ISDN	ISDN
PSAP Network Address	18.3.7	PSAP	PSAP
Numeric User Identifier	18.3.8	N-ID	N-ID
Terminal Identifier	18.3.23	T-ID	T-ID
Terminal Type	18.3.24	T-TY	T-TY
Domain Defined Attribute	18.1	DDA:<type>	DDA:<type>

where the notation <type> identifies the type of domain defined attribute.

**EXAMPLE**

X.400: G=john; S=smith; O=a bank ltd; P=abl; A=snomail; C=aq

The address above may also be laid out as a table:

G	John
S	Smith
O	A Bank Ltd
P	ABL
A	Snomail
C	AQ

### F.3.2.2 Terminal-type

There are currently six terminal-types defined in 18.3.24, and if international consistency is required the following specific abbreviations should be used to represent the values for these types: tlx, ttx, g3fax, g4fax, ia5 and vtx.

### F.3.2.3 Domain-defined Attribute

The label for a domain-defined attribute consists of "DDA:" followed by the domain-defined attribute type. If an address includes more than one domain-defined attribute of the same type, it is assumed that the domain-defined attributes are intended to be processed in the sequence in which they are represented.

#### EXAMPLE

DDA:RFC-822=fred(a)widget.co.uk; O=gateway; P=abc; C=gb

If the type of a domain-defined attribute includes the character "=", it is represented by "\=". If the type of a domain-defined attribute includes the character "\", it is represented by "\\ ". No special representation is required if the type of a domain-defined attribute includes the delimiter character ";" or "/".

### F.3.3 Self-explanatory format

The self-explanatory format may be used when space is available. It consists of a list of the attribute types, either in full or abbreviated. The attribute types or abbreviations may be in any language, but each attribute type or abbreviation is followed by the label specified in Table F.1, F.2, or F.3. If English language abbreviations are used, they should be those given in Tables F.1, F.2 and F.3.

If an address is entirely composed of attributes contained in Table F.1, it is recommended that the sequence of attributes in the address is that given in Table F.1. If this sequence is incompatible with normal cultural conventions, an alternative sequence may be adopted for representations of addresses which are primarily intended for use within that culture.

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EXAMPLE 1 - Using attribute types in the Norwegian language

Fornavn (G)	Per
Etternavn (S)	Hansen
Organisasjon (O)	Teledir
Organisasjonsenhet (OU1)	Forskning
Privat domene (P)	Tele
Administrasjonsdomene (A)	Telemax
Land (C)	NO

EXAMPLE 2 - Using attribute types and abbreviations in the English language

Given name (G)	John
Surname (S)	Smith
Organisation (O)	A Bank Ltd
Org. Unit (OU1)	IT Dept
Org. Unit (OU2)	MSG Group
PRMD (P)	ABL
ADMD (A)	Snomail
Country (C)	AQ

### F.4 User Interface

This clause specifies the characteristics of a user interface which are necessary to enable a user to input O/R addresses represented in either of the formats specified in clause F.3.

It is necessary for the user interface to be able to accept any valid combination of attributes from Tables F.1, F.2 and F.3 which are entered.

If the user interface lists the attributes given in Table F.1, it is recommended to use either the sequence in Table F.1 or, if this sequence is incompatible with normal cultural conventions, the alternative sequence adopted within a particular culture.

If the user supplies a value for the private-domain-name attribute but omits the administration-domain-name attribute, or omits the value for the administration-domain-name attribute, the administration-domain-name value to be used is a single space.

Where an O/R address is input as a single string (e.g., in a command line interface), it is necessary to accept any valid labelled format address allowing the user to enter either delimiter. The interface should not require the attributes to be specified in any particular order. The interface should accept labels in upper or lower case.

NOTE - For some existing command line interfaces it may be necessary to enclose the whole labelled format address in quotes.

If any other type of interface is provided (e.g., a prompting or form-fill interface), it is necessary to provide a means which enables the user to associate easily the identity of each attribute with the labels specified in Tables F.1, F.2 and F.3.

#### NOTES

1 - One way to associate the identity of each attribute with the labels is to follow the attribute type (or abbreviation) for each attribute with the label in brackets, for example:

Given name (G)  
Initials (I)  
Surname (S)  
Generation Qualifier (Q)  
Common Name (CN)  
Organisation (O)  
Organisational Unit 1 (OU1)  
Organisational Unit 2 (OU2)  
Organisational Unit 3 (OU3)  
Organisational Unit 4 (OU4)  
Private Management Domain Name (P)  
Administration Management Domain Name (A)  
Country (C)

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2 - Many users may have difficulty copying an address presented as a table (either in labelled or self-explanatory format) into a command line interface which uses delimiters.

3 - For form-fill style interfaces, user performance will be optimised when the interface most closely resembles the format of the supplied address with the same sequence of attributes using the same attribute types or labels.

#### EXAMPLES OF APPLICATION

1 - The Norwegian user of a command line interface receives a business card containing the following O/R address:

G=john; S=smith; O=a bank ltd; P=abl; A=snomail; C=aq

The command line interface enables the user to type in the address exactly as presented on the card.

2 - The Norwegian user of a form fill interface receives the same business card. The form on the screen includes the following field names:

Fornavn (G)  
Etternavn (S)  
Organisasjon (O)  
Privat domene (P)  
Administrasjonsdomene (A)  
Land (C)



The user is able to fill in the form by associating the single letter labels on the business card with the same labels in brackets after the Norwegian names of the attributes on the screen. (For form fill input the delimiters are not used.)

3 - The English speaking user of a command line interface receives a document quoting the following O/R address:

Fornavn (G)	Per
Etternavn (S)	Hansen
Organisasjon (O)	Teledir
Organisasjonsenhet (OU1)	Forskning
Privat domene (P)	Tele
Administrasjonsdomene (A)	Telex
Land (C)	NO

The user knows how to transform the address from self-explanatory to labelled format. The user can choose to enter the address with either delimiter, e.g.:

`g=per;s=hansen;o=teledir;ou1=forskning;p=tele;a=telex;c=no`

or:

`/g=per/s=hansen/o=teledir/ou1=forskning/p=tele/a=telex/c=no`

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