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Information technology — Metadata Registries (MDR) modules

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The UK participation in its preparation was entrusted to Technical Committee IST/40, Data management and interchange.

A list of organizations represented on this committee can be obtained on request to its secretary.

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ISO/IEC 19773

First edition
2011-09-01

Information technology — Metadata Registries (MDR) modules

Technologies de l'information — Modules de registres de métadonnées (MDR)

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 19773 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 32, *Data management and interchange*.

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Introduction

This International Standard specifies small modules of data that can be used or reused in applications. These modules have been extracted from ISO/IEC 11179-3, ISO/IEC 19763, and OASIS EBXML, and have been refined further. These modules are intended to harmonize with current and future versions of the ISO/IEC 11179 series and the ISO/IEC 19763 series.

During the development of this International Standard, it was originally presented as a multipart standard consisting of an overview part and other parts, one for each module. However, this presentation approach proved to be too cumbersome for users, with some duplication of text and cross-references across multiple documents. The work was consolidated into a single document that facilitated ongoing additions and amendments, as industry and technology demand.

In the present version of this International Standard, subclauses of Clause 3 and Clause 9 itself are marked “reserved for future use”. Future amendments might insert text into these (currently) reserved areas. Meanwhile, the document as a whole is designed with a parallel structure (terminology in Subclause 3.*X* corresponds to the data structure in Clause *X*), so that the user can quickly locate module-specific terminology for a module-specific data structure. Thus, for the UPU postal data module, the terminology is defined in Subclause 3.*16* and its corresponding data structure is described in Clause *16*.

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INTERNATIONAL STANDARD ISO/IEC 19773:2011(E)

Information technology — Metadata Registries (MDR) modules

1 Scope

This International Standard specifies the technical interoperability details of metadata modules, which are used in ISO/IEC 11179.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO/IEC 11404:2007, *Information technology — General-Purpose Datatypes (GPD)*

ISO/IEC 20944-1:—, *Information technology — Metadata Registries Interoperability and Bindings (MDR-IB) — Part 1: Framework, common vocabulary, and common provisions for conformance*

ISO 21090:2011, *Health informatics — Harmonized data types for information interchange*

IETF RFC 2421, *Voice Profile for Internet Mail — Version 2,* September 1998

IETF RFC 3986, *Uniform Resource Identifier (URI): Generic Syntax,* January 2005

IETF RFC 3987, *Internationalized Resource Identifiers (IRIs),* January 2005

IETF RFC 5646, *Tags for Identifying Languages,* September 2009

UPU S42a-6:2009, *International postal address components and templates — Part A: Conceptual hierarchy and template languages*[1)]

3 Terms, definitions, and abbreviations

For the purposes of this document, the following terms, definitions, and abbreviations apply.

3.1 Signifiers, referencing, and their associations

3.1.1
to reference, verb
to create an association with a particular object

[ISO/IEC 20944-1]

EXAMPLE A human pointing at an object.

1) UPU is the Universal Postal Union at http://www.upu.int. UPU S42a-6 is based on EN 14142-1, *Postal services — Address databases — Part 1 — Components of postal addresses*.

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3.1.2
reference, noun
association with a particular object (the referent)

[ISO/IEC 20944-1]

NOTE In one context, a *reference* is the opposite of a *literal*: the literal gives the data at hand, while the reference points to the data, which must be subsequently accessed, retrieved, or written.

EXAMPLE An association created by proximity; a computer memory pointer; a database foreign key.

3.1.3
referent, noun
object that is referenced

[ISO/IEC 20944-1]

3.1.4
to dereference
to access the referenced object (the referent)

[ISO/IEC 20944-1]

3.1.5
signifier
sign, noun
general concept, whose extension is perceivable objects that are associated with objects

NOTE A signifier associated via a designating relationship to an object of the variety “concept” is known as a signifier designating a concept, i.e., a designation.

3.1.6
label
reference to an object by a signifier

3.1.7
designation
representation of a concept by a signifier which denotes it

NOTE Adapted from ISO 1087-1, where the word “sign” is used. In this context, both “sign” and “signifier” mean the same, but the word “signifier” is used to avoid confusion with other senses of the word “sign”.

3.1.8
identifier
label that is intended to be dereferenced

[ISO/IEC 20944-1]

NOTE 1 An identifier is also a reference.

NOTE 2 This definition is consistent with IETF RFC 3986, which describes the Uniform Resource Identifier (URI) syntax and semantics, and IETF RFC 3987, which describes the Internationalized Resource Identifier (IRI) syntax.

3.1.9
literal
lexical token that, from a syntactic point of view, stands for itself

[ISO/IEC 2382-5]

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NOTE In this context, a *literal* is the opposite of a *reference*: the lexical token for a reference does not stand for itself, but standards for something else.

EXAMPLE The names **JANUARY**, **FEBRUARY**, **MARCH**, etc. in the following definition of a datatype are literals:

```
Month_Type is (JANUARY, FEBRUARY, MARCH, APRIL, MAY, JUNE,
        JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER);
Month : Month_Type;
.....
Month := APRIL;
```

The token **JANUARY** stands for itself (meaning the first month of the year) in contrast to a token **JANUARY** representing a variable that is unconstrained and can stand for other values.

3.1.10
namespace
set of labels with a defined scope of usage

[ISO/IEC 20944-1]

3.1.11
namespace label
label that designates a namespace

[ISO/IEC 20944-1]

3.2 Fundamental datatypes

3.2.1
string
sequence of elements of the same nature, such as characters or bits, considered as a whole

[ISO/IEC 2382-4:1999]

NOTE A string may be empty or contain only one element.

3.2.2
character string
string consisting solely of characters

[ISO/IEC 2382-4:1999]

3.2.3
text
data in the form of characters, symbols, words, phrases, paragraphs, sentences, tables, or other character arrangements, intended to convey a meaning, and whose interpretation is essentially based upon the reader's knowledge of some natural language or artificial language

[ISO/IEC 2382-23:1994]

EXAMPLE A business letter printed on paper or displayed on a screen.

3.2.4
datatype
set of distinct values, characterized by properties of those values, and by operations on those values

[ISO/IEC 11404]

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3.2.5
characterizing operations (of a datatype)
collection of operations on, or yielding, values of the datatype that distinguish this datatype from other datatypes with identical value spaces

[ISO/IEC 11404]

3.2.6
value
object whose totality can be used for computation

NOTE In contrast to an object (used in the sense of object-oriented computing), the totality and boundary of a value is known and determinate, whereas the totality or boundary of an (object-oriented) object can be unknown or indeterminate.

3.2.7
value space
set of values for a given datatype

[ISO/IEC 11404]

3.3 Generic implementation-related concepts

3.3.1
execution time
run time
any instant at which the execution of a particular program takes place

[ISO/IEC 2382-7]

3.3.2
context of use
users, tasks, equipment (hardware, software, and materials), and the physical and social environments in which a product, process, or service is used

NOTE Adapted from ISO 9241-11:1998.

3.3.3
smallest permitted maximum
SPM
⟨technical specification⟩ meet-or-exceed provision that specifies a required minimum value for an implementation value describing the maximum value of a sizing parameter

[ISO/IEC 20944-1]

EXAMPLE In the provision "the smallest permitted maximum length of field **X** shall be **17**", the SPM is **17** (which applies to the field length). This provision means: implementers may implement "field **X**" with a maximum length of **17**, **18**, **19**, etc., but not with a length of **16** or less. Thus, `char X[17]` satisfies the implementation requirements, even though the data itself might be smaller, e.g., a 10-character string stored in a 17-character array.

NOTE An SPM sets a lower bound for an implementation-defined maximum value.

3.3.4
implementation-defined, adj
⟨technical specification⟩ unspecified, yet each implementation documents how the choice among the available alternatives is made

[ISO/IEC 20944-1]

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EXAMPLE 1 An implementation-defined feature; an implementation-defined value; an implementation-defined behavior.

EXAMPLE 2 A standard specifies that size of array **X** is implementation-defined with a minimum size of **17**. This provision implies two requirements: (1) the size of the array is greater than or equal to **17**, and (2) the implementation will document the actual size. This example is a meet-or-exceed provision (e.g., a smallest permitted maximum).

NOTE The distinction between "unspecified" and "implementation-defined" is that the latter requires implementation documentation while the former does not require implementation documentation (nor does the former prohibit implementation documentation).

3.4 Terminology applicable to more than one module

3.4.1
metadata module
metadata registries module
unit or grouping of descriptive data which is created, managed, used, or interchanged among autonomous parties as a single discrete set in a specified context

3.5 Reserved for future use

3.6 Reserved for future use

3.7 Reserved for future use

3.8 Reserved for future use

3.9 Reserved for future use

3.10 Module 10-specific terminology: Data structure for reference-or-literal (reflit)

3.10.1
characterstring
ISO/IEC 11404 datatype for representing character strings

NOTE The ISO/IEC 11404 `characterstring` datatype takes the parameter `repertoire` that indicates the logical set of characters. Typically, `characterstring(iso-10646-1)` is be used to portably store text data, i.e., its value will be preserved across all implementations of the datatype.

3.10.2
octet string
string consisting solely of octets

3.10.3
octetstring
ISO/IEC 11404 datatype for representing octet strings

NOTE An `octetstring` datatype can be used to portably store binary data, i.e., its value will be preserved across all implementations of the datatype.

3.10.4
reflit
datatype whose value can be accessed directly as a literal value or accessed indirectly via a reference to a value

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3.11 Module 11-specific terminology: Data structure for multiple internationalized/localized values and data

3.11.1
multidata
set of values that all have the same meaning, but may have different presentations and different datatypes that are dependent upon the context of use

3.11.2
multivalue
set of values of a defined datatype that all have the same meaning, but may have different presentations dependent upon context of use

NOTE A multivalue is a multidata for a defined datatype.

3.12 Module 12-specific terminology: Data structure for multiple internationalized/localized strings and texts

3.12.1
document
named, structured unit of text and possibly images that can be stored, edited, retrieved, and exchanged among systems or users as a separate unit

3.12.2
multistring
set of character strings that all have the same meaning, but may have different presentations dependent upon context of use

NOTE 1 A multistring is similar to a multivalue except that the multistring is specialized for character strings.

NOTE 2 A multistring is similar to a multitext except that the multitext may present textual information in a form other than a string, such as a document or an image.

3.12.3
multitext
set of textual values that all have the same meaning, but may have different presentations and different datatypes that are dependent upon the context of use

3.13 Module 13-specific terminology: Data structure for slot tuple

3.13.1
slot tuple
3-tuple comprised of a identifier, a kind, and a value

3.13.2
slot_tuple
datatype for the slot tuple

3.13.3
kind
⟨data classification⟩ category within a classification system

NOTE 1 Typically, a classification system classifies *extensions*, *intensions*, or both. Within this note, the terms *extension* (totality of objects to which a concept corresponds) and *intension* (set of characteristics which makes up a concept) correspond to their use in the field of terminology (see ISO 1087-1).

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NOTE 2 A *datatype* is a specialization of a *kind* (i.e., "a kind of a kind"). A *datatype* differs from a *kind* in the following ways: (1) a *datatype* implies a *value space*, which is a specialization of an *extension* (totality of values vs. totality of objects), (2) a *datatype* implies *characterization by properties* and *characterizing operations*, which is a specialization of an *intension* (data-like properties and characterizing operations vs. characteristics in general), and (3) a *datatype* implies both a defined *extension* and defined *intension*, whereas a *kind* does not require both an *extension* and an *intension*.

NOTE 3 The term *kind* (a characteristic of an object) should not be confused with *kind of* (an indication of a general concept in a generic-specific relationship, e.g., a dog is a *kind of* mammal).

3.13.4
N-tuple
tuple of length N

EXAMPLE The tuple **<x,y,z>** is a 3-tuple; the tuple **<x,y>** is a 2-tuple (also known as a pair); the tuple **<x>** is a 1-tuple (note that **<x>** ≠ **x** because **<x>** is a list and **x** is a scalar); and the tuple **<>** is a 0-type (also known in mathematics as the "unit type").

3.13.5
tuple
ordered list of elements

EXAMPLE The tuple **<x,y,z>** contains the three values **x**, **y**, and **z**; and **<x,y,z>** is not equal to **<z,y,x>**. In contrast to the set (whose elements are unordered), the set **{x,y,z}** is equal to the set **{z,y,x}**.

3.14 Module 14-specific terminology: Data structure for unstructured table of slot tuples

There are no additional definitions for Module 14.

3.15 Module 15-specific terminology: Data structure for reified relationships and relationships systems

3.15.1
relationship
association among zero or more objects with defined roles for each object

3.15.2
relationship system
set of objects and their relationships

3.16 Module 16-specific terminology: Data structure for UPU postal data

3.16.1 Terminology from UPU S42a-6

3.16.1.1
addressee
party who is the intended ultimate recipient of a postal item

[UPU S42a-6]

NOTE 1 The addressee may be explicitly defined as part of the postal address, or may be implicit. For example, in certain countries, omission of addressee information may be taken as implying that delivery must be to an individual or legal entity having legal access to the delivery point.

NOTE 2 An address may contain multiple addressee specifications. For example, Mr. or Mrs. Smith specifies that the addressee is either one of two individuals, whilst Mr. Jones and Mrs. Smith denotes that the addressee is a group of two individuals. See also addressee role descriptor.

NOTE 3 The above definition differs from that in ENV 13712.

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NOTE 4 The use made by the postal operator of addressee and mailee data might be dependent on the postal service applicable to the postal item. For certain services, such as registered mail, the postal operator's responsibility might include ensuring that the addressee, or a duly authorised representative, acknowledges receipt of the postal item. In other cases, addressee data could be purely informative or used by the postal operator only for consistency checking and/or for the activation of forwarding services. In still other cases, it might be used for sorting or sequencing purposes prior to delivery (e.g. in the case of business mail being pre-sequenced by department or individual company official).

NOTE 5 When the addressee is explicitly defined (see NOTE 1), there is always one addressee in a syntactically correct postal address, whereas the mailee information does not have to be present. In some countries, the addressee may be an abstraction such as "Postal Customer".

3.16.1.2
delivery
postal process in which a postal item leaves the responsibility of the postal operator through being handed over to, or left for collection by, the addressee, the mailee or an authorized representative, or deposited in a private letter box accessible to one or other of these

[UPU S42a-6]

NOTE Except in the case of special services, for which the addressee or mailee is required to acknowledge receipt, delivery does not necessarily guarantee that the postal item actually reaches the addressee or mailee. In particular, where postal items are left for collection or deposited in a private letter box, other persons may have access to them, either legally or otherwise.

3.16.1.3
delivery address
postal address specified by the mailer to which the postal operator is requested to deliver the postal item

[UPU S42a-6]

NOTE 1 The delivery address may in certain circumstances, e.g. unaddressed mail, not actually be represented on the postal item. In this case, the delivery address is determined by the postal operator in accordance with an agreement between the operator and the mailer.

NOTE 2 The postal item may not actually be delivered to the requested delivery address. For example, in the case of forwarding, delivery takes place at the forwarding address.

3.16.1.4
delivery point
physical location recognized by a postal operator as a valid location at which delivery of a postal item may occur

[UPU S42a-6]

3.16.1.5
forwarding address
postal address, specified by the addressee or mailee of a postal item, to which the postal operator is requested to deliver the postal item, in place of delivering it to the delivery address

[UPU S42a-6]

NOTE 1 Not all postal items can be forwarded, as for some postal services the mailer might require the return of the postal item if it cannot be delivered at the delivery address.

NOTE 2 Forwarding addresses can be permanent, e.g. in case of relocation of the addressee, or temporary. They may also involve the holding of mail for collection by the addressee or the mailee (see poste restante).

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3.16.1.6
mail recipient
individual who actually receives a postal item at delivery, or who first accesses the postal item if it is left for collection

[UPU S42a-6]

NOTE The mail recipient should normally be the addressee, the mailee or an authorized representative of one of these two. However, this may not always be the case, e.g. if the postal item is left for collection in a location to which third parties have access; if the addressee/mailee have moved without leaving forwarding instructions, or if the addressee or mailee specification was ambiguous and was, as a result, misinterpreted by the postal operator.

3.16.1.7
mail submitter
party responsible for induction of a postal item into the postal system

[UPU S42a-6]

NOTE The mail submitter may be, but is not necessarily, the same party as the mail originator.

3.16.1.8
mailee
party designated in a postal address as having responsibility for ensuring that postal items, delivered or handed over by the postal operator at the delivery address, reach their addressee

[UPU S42a-6]

NOTE 1 Unlike the addressee, mailee is never implicit: if a postal address does not contain a mailee specification, then there is no mailee.

NOTE 2 Notwithstanding NOTE 1, the mailee may be designated explicitly by use of a role descriptor, or designated implicitly with no role descriptor.

NOTE 3 As is the case for addressee, the mailee specification may be ambiguous.

3.16.1.9
mailer
natural or legal person designated in a postal address as having responsibility for ensuring that postal items, delivered or handed over by the postal operator at the delivery address, reach their addressee

[UPU S42a-6]

NOTE Many processes are involved in the production and mailing of postal items. These include: initiation; content production, which might be separated into parts produced by several different parties (e.g. inserts might be produced separately from covering letters); finishing, including assembly of the content and its packaging (e.g. placing in an envelope, or wrapping) for mailing purposes; addressing; induction into the postal system; payment.

These processes may be performed by one party, or may be split between different parties, each fulfilling a particular role or combination of roles. Where it is necessary to distinguish between such roles, they are referred to by separate terms, in particular mail originator, mail submitter and payer; where such distinction is not necessary, mailer is used as a generic term.

3.16.1.10
party
one or more natural and/or legal persons and/or organisations without legal personality that act(s) as a single entity for the purpose of participation in a transaction associated with a postal item

[UPU S42a-6]

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3.16.1.11
postal address
set of information which, for a postal item, allows the unambiguous determination of an actual or potential delivery point, usually combined with the specification of an addressee and/or a mailee

[UPU S42a-6]

NOTE Postal addresses may be ambiguous, incorrect or non-existing. See also syntactically correct postal address, valid postal address.

3.16.1.12
postal address component
collective term for postal address elements, postal address constructs and postal address segments

[UPU S42a-6]

NOTE Clause 16 defines the postal address components which may occur in an actual postal address. Not all components are necessarily used in a specific instance or class of postal addresses.

3.16.1.13
postal address construct
combination of postal address elements which together form a logical portion of a postal address

[UPU S42a-6]

NOTE 1 Constructs can be defined hierarchically. That is, a construct can comprise a logical grouping of postal address elements, a logical grouping of lower level constructs, or a combination of elements and lower level constructs.

NOTE 2 Not all constructs are necessarily used in a specific instance or class of postal addresses.

3.16.1.14
postal address element
basic entity of a postal address that has a well-defined conceptual meaning and representation and has significance for customer or postal processing purposes

[UPU S42a-6]

NOTE 1 A thoroughfare name which may comprise one or more words is an example of a postal address construct, but that does not imply that the individual words of which it is comprised are also constructs. For example, with Pine Grove Avenue, there are at most two postal address constructs. So Pine Grove might be considered as a postal address element, the thoroughfare name. On the other hand, it is part of a larger thoroughfare construct that includes thoroughfare type and thoroughfare qualifier. And these entities can precede or follow the thoroughfare name. This makes it helpful to have separate placeholders for each possible sequential ordering of components in designing postal address templates, and since the meaning of an element is independent of the position, this shows the need for element sub-types alongside elements.

So is thoroughfare name an element sub-type, an element, or a larger construct made up of elements? S42 approaches this by defining those components needed to represent instances or parts of constructs as element sub-types. After that, the elements are the lowest level constructs remaining. As a result, some elements have one or more levels of sub-types, while others have none. The remaining components above the element level are the higher level constructs and segments.

Alternate representations of information that have a distinct function are given the status of elements, which conforms with the above definition of postal address element. An example would be country name and ISO 3166-1 country code, which are separate elements.

On the segment level, though not the construct level. It is possible to replicate a group of elements and have them recognized in the templates. This provides a way to solve certain problems in designing address database, such as multiple addressees at one address, or multiple addresses for one addressee.

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Leaving aside the cases of representations and replication, S42 handles multiplicity and subdivision of elements by defining element sub-types. It uses two levels of sub-type in the notation, one for instances and one for parts. Instances can be levels, positions, or occurrences, and parts can be physical or logical. This approach keeps the number of postal address elements limited. Elements should have meaning in a general rather than only a specialized postal context, while this is not always the case with element sub-types, particularly those representing parts of elements. Some cases could be decided either way, but this approach results in combining some previously defined elements, including the components of thoroughfare and the components of delivery service identifier, into single elements, while leaving others such as surname prefix and name qualifier to retain their status as elements.

NOTE 2 Not all elements are necessarily used in a specific instance or class of postal addresses.

3.16.1.15
postal address element and element sub-type code
alternate representation for a postal address element or element sub-type which uses a condensed notation that conforms to specified conventions, is suitable for use in templates, and is relatively language independent when compared with the element and element sub-type names

[UPU S42a-6]

3.16.1.16
postal address element sub-type
sub-division of a postal address element representing parts or instances of the root element, used to facilitate template design, address rendition, address database storage and related technical needs

[UPU S42a-6]

3.16.1.17
postal address segment
named group of related postal address constructs and/or postal address elements

[UPU S42a-6]

3.16.1.18
postal address structure
manner in which postal address components are or can be combined to form a postal address

[UPU S42a-6]

NOTE Postal address structures may differ from country to country, from region to region or even from operator to operator within a country.

3.16.1.19
postal address template
statement of how a postal address is to be written; in particular, it shows the order in which postal address elements are to appear, distinguishes between mandatory and optional postal address elements and provides rendition instructions

[UPU S42a-6]

3.16.1.20
poste restant
delivery service indicator specifying that a postal item is to be held at a designated postal establishment or agency for collection by the addressee or his/her authorised representative

[UPU S42a-6]

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3.16.1.21
postal data identifier
alphanumeric prefix to a data structure that defines the content, format and intended interpretation of the data

[UPU S42a-6]

3.16.1.22
rendition instruction
definition of how address elements shall be formatted, or in some cases optionally may be formatted, when printed on a mail piece

[adapted from UPU S42a-6]

NOTE Rendition instructions reflect rules for properly formatting addresses, including punctuation, spacing, fonts, the format of the postcode, locations for identifying marks and codes, abbreviations, and techniques for shortening and reorganizing components to ensure deliverability when there are constraints on available label space.

3.16.1.23
return address
postal address to which the postal operator should deliver a postal item if it is unable to effect normal delivery to the delivery address or, if specified, a forwarding address

[UPU S42a-6]

NOTE 1 The interpretation of “normal delivery” might be dependent on the service characteristics for the postal service appropriate to the individual postal item.

NOTE 2 The return address is usually (but not always) the postal address of the mail originator or the mail submitter. It need not necessarily be explicitly represented on the postal item – for example, it may be derived from a company logo or from a franking mark, or it may only be apparent when the postal item is opened (normally in a special location designated for the processing of non-deliverable postal items). It might also be impossible to determine the return address, in which case the non-delivered postal item concerned should be handled according to national regulations (e.g. be destroyed).

3.16.1.24
syntactically correct postal address
postal address in which the combination of postal address components is fully in accord with relevant standards and with relevant national or regional rules which define restrictions on allowed combinations and internal structures of such components

[UPU S42a-6]

NOTE 1 For example:

```
form_of_address: Mr.
given_name: John
surname: Smith
street_number_or_plot: 4395
thoroughfare_name: Station
thoroughfare_type: Road
town: Porchester
distribution_area_indicator: FAREHAM
postcode: PO16 8BQ
country: UNITED KINGDOM
```

forms a syntactically correct United Kingdom postal address, but if the country were France, it would not be syntactically correct, because France uses only numeric postcodes.

NOTE 2 Syntactic correctness does not imply validity. The above is not a valid postal address because the delivery point identified within it does not exist.

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3.16.1.25
UPU
Universal Postal Union

3.16.1.26
valid postal address
postal address in which the combination of postal address components corresponds to, and provides for unambiguous identification of, a single delivery point and of an addressee and/or mailee

[UPU S42a-6]

NOTE 1 Valid postal addresses are not necessarily syntactically correct. For example:

```
function: The Secretary General
organization_name: CEN
street_number_or_plot: 36
thoroughfare_type: rue de
thoroughfare_name: Stassart
town: Bruxelles
country: BELGIUM
```

is not a syntactically correct postal address, because postcode is missing, but it is valid since there is only one rue de Stassart in Brussels (so it is unambiguous).

NOTE 2 The addressee and/or mailee specification may be implicit, as in the case in which the postal item is intended for the person(s) having legal access to the delivery point.

3.16.2 Postal address segments

3.16.2.1
addressee specification
postal address segment which specifies the addressee

[UPU S42a-6]

NOTE 1 The addressee specification is composed of either individual identification or organization identification, possibly combined with addressee role descriptor.

NOTE 2 Specification of the addressee may be optional or mandatory, depending on the particular postal service for which a postal address is to be used. For example, for normal letter mail, a delivery point specification is sufficient in many countries, and in this case, the addressee is considered as being any party which has legal access to the delivery point. In contrast, registered mail must normally carry an explicit specification of the addressee.

3.16.2.2
delivery point specification
postal address segment which designates the delivery point for a postal item

[UPU S42a-6]

NOTE 1 Delivery point specification is composed of defining authority, country, locality and delivery point location and/or postal delivery service point identifier. A postcode may also be required.

NOTE 2 The association between a delivery point specification and the delivery point may be service or time dependent. For example, a normal letter mail item addressed to an apartment may be delivered to a letter box in the entry hall of the apartment building; a registered mail item carrying an identical postal address must be delivered to the addressee (or his representative), possibly at the door of the apartment itself. Similarly, the link between a business reply or freepost service number and a delivery point may change if the customer concerned moves locations.

NOTE 3 Several delivery point specifications may be associated with a single delivery point.

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NOTE 4 In some countries, certain forms of delivery point specification are limited to particular postal products. For example, a box number may not be appropriate for the addressing of recorded delivery postal items or parcels.

3.16.2.3
mail recipient dispatching information
postal address segment providing information intended for the routing and dispatch of mail by the mail recipient, when this is not the addressee

[UPU S42a-6]

NOTE 1 Mail recipient dispatching information is intended for use by the mailee, if one is specified, or by the mail recipient. It is not used by the postal operator.

NOTE 2 For postal items addressed to an organization and which are delivered by the postal operator to a mailroom or post office box, mail recipient dispatching information may include information such as wing, floor and door which, in the case of more specific services (such as registered mail) form part of the delivery point specification. Supplementary dispatch data may also be required.

3.16.2.4
mailee specification
postal address segment which specifies the mailee

[UPU S42a-6]

NOTE 1 Mailee specification is composed of individual identification or organization identification, possibly combined with mailee role descriptor.

NOTE 2 Specification of a mailee is required only in situations in which the postal operator is requested to deliver the postal item into the care of an individual or organization other than the addressee.

3.16.3 Postal address constructs

3.16.3.1
compound surname
postal address construct which identifies a family or provides indication of parentage

[UPU S42a-6]

NOTE 1 Compound surname is a component of individual identification. It comprises surname prefix and surname.

NOTE 2 The division of compound surname into two elements is intended for use where only part of the construct is significant for sorting purposes. If all words of a compound surname are significant for sorting purposes, surname prefix is not used.

NOTE 3 Patronymic and matronymic names, mother's maiden names, etc. are considered, for the purposes of this standard, as compound surnames. For example, in certain cultures, children's compound surnames are derived by appending "son" or "daughter" to either the father's first given name (patronymic names) or the mother's first given name (matronymic names); in others, a child's mother's maiden name and father's compound surname may be used in combination, though it may be that one of these may be considered as the person's preferred or legal compound surname.

NOTE 4 If an individual has more than one compound surname, these may be used separately or in combination. For example, in certain countries, a married person may be addressed either by their original compound surname, or by that of their spouse, or by a concatenation of the two. Word combinations that may appear only in combination should be regarded as a single compound surname.

NOTE 5 Where an individual has multiple compound surnames, the order may be significant.

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3.16.3.2
country level information
postal address construct encompassing the postal address elements applying to countries or groupings of countries

[UPU S42a-6]

NOTE 1 Country level information is a component of delivery point specification. It comprises country name, country code, multi-country region, and international routing information.

NOTE 2 As a rule, these elements are only included in address presentation for cross border mail, but in that situation, they are necessary to avoid risk of ambiguity.

NOTE 3 The UPU strongly recommends that country level information be rendered in upper case wherever possible, be presented following all other address elements, and not presented on the same line with other address elements, while being expressed in the language of the sending country or in an internationally known language.

3.16.3.3
delivery point location
postal address construct identifying a delivery point, or a group of delivery points from which the postal operator may choose one, by reference to geographical and, where necessary, other spatial data expressed in human intelligible form

[UPU S42a-6]

NOTE 1 Delivery point location is a component of delivery point specification. It comprises thoroughfare, thoroughfare access data, street number or plot, delivery point access data and extension identifier.

NOTE 2 Delivery point location is relative to, and unique only within, country and locality.

NOTE 3 Delivery point access data may not be needed if the location of the delivery point on the plot is self evident. Thus, in a simple case, in which there is only one building, with one delivery point, on a plot, thoroughfare and street number or plot should be sufficient. If, as in the case of there being two residences on the plot, there are multiple delivery points, the combination of thoroughfare, street number or plot and extension identifier may be sufficient.

3.16.3.4
individual identification
postal address construct identifying, for the purpose of establishing the addressee or mailee of a postal item, either a single individual or a group of individuals, from which the postal operator may select one

[UPU S42a-6]

NOTE Individual identification is a component of addressee specification and mailee specification. It comprises form of address, given name, compound surname, name qualifier and qualification in which each element may occur none, one or more times.

3.16.3.5
locality
postal address construct identifying the geographical area in or adjacent to which a delivery point is located

[UPU S42a-6]

NOTE 1 Locality is a component of delivery point specification. It comprises region, proximate town, town, district/sector and delivery service qualifier.

NOTE 2 Region, town and district provide for multiple levels of geographically localizing information. Use need only be made of the number of levels which are actually required to unambiguously identify the geographic area in which the delivery point is situated. Thus:

- region should be used, in accordance with the specifications of the postal operator, if there are multiple towns having the same name within the country;

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– though many towns are divided into commonly accepted areas or districts, the district/sector need not always be specified in a postal address if the address is otherwise unambiguous.

NOTE 3 Mobile delivery points, such as mobile homes and ships, may not be (permanently) situated in a particular country and locality. Nevertheless, they are associated with a country and locality for delivery point specification purposes. Depending on the situation, these might correspond either to the place of registration or to the place in which the delivery point is currently located or is expected to move.

3.16.3.6
organization identification
postal address construct identifying, for the purpose of establishing the addressee or mailee of a postal item, either a single individual or a group of individuals within an organization, from which the postal operator may select one

[UPU S42a-6]

NOTE 1 Organization identification is a component of addressee specification and mailee specification. It comprises function, organizational unit, organization name and legal status.

NOTE 2 Organization identification does not include the name of an individual which, if present, forms part of an individual identification. In a postal address which includes both an individual identification and an organization identification, one identifies the addressee of the postal item and the other identifies a mailee.

NOTE 3 Function and organizational unit are optional, the (group of) individual(s) then identified being the authorized representative(s) of the organization. Legal status may also be optional, if organization name is sufficient to unambiguously identify the intended organization.

3.16.3.7
service point identifier
postal address construct which designates a delivery point, or a group of delivery points from which the postal operator may choose one, by reference to a postal delivery service defined identifier, rather than by reference to its physical location

[UPU S42a-6]

NOTE 1 Service point identifier is a component of delivery point specification. It comprises delivery service type and delivery service indicator.

NOTE 2 Service point identifier is relative to, and unique only within, country and locality.

EXAMPLE post office box numbers, poste restante and business reply services.

3.16.4 Postal address elements

3.16.4.1
addressee role descriptor
postal address element indicating, in an addressee specification segment, that the role of the identified individual or organization is that of addressee

[UPU S42a-6]

NOTE 1 The purpose of addressee role descriptor is to ensure, when a postal address includes multiple addressee specifications or both an addressee specification and a mailee specification, that there is no ambiguity between them.

NOTE 2 Addressee role descriptor is optional. If it is omitted in cases in which the postal address contains both an addressee specification and a mailee specification, the distinction between the two segments has to be inferred from the mailee specification, from the order of the segments or from postal operator and product rules.

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EXAMPLES

Attn.
tav (ter attentie van)
FAO
or (indicates that two addressees are considered as alternatives)
and (indicates that two addressees are considered as forming a group)

3.16.4.2
alternate delivery service identifier
postal address element which designates a delivery point, or a group of delivery points from which an alternate delivery service may choose one, by reference to a defined identifier, rather than by reference to its physical location

[UPU S42a-6]

NOTE Alternate delivery service identifier appears in the delivery point specification segment. It comprises element subtypes for alternate delivery service type and alternate delivery service indicator. An alternate delivery service type is an element sub-type indicating the type of delivery service. An alternate delivery service indicator is an element sub-type designating a specific delivery point, within the category identified by delivery service type, within, or accessed for delivery services via, the locality.

EXAMPLE private mail box.

3.16.4.3
building/construction
postal address element identifying the number or name and type of the building or construction in or adjacent to which a delivery point is located

[UPU S42a-6]

NOTE This element appears in the delivery point specification segment. It comprises the element sub-types preceding building/construction type, succeeding building/construction type, and building/construction indicator.

EXAMPLES

Bâtiment
Block
Houseboat
Mobile Home

3.16.4.4
country code
postal address element designating the ISO 3166-1 code for the country, territory or area of geopolitical interest, in which a delivery point is located or via which the delivery point is accessed

[UPU S42a-6]

NOTE 1 This element appears in the delivery point specification segment.

NOTE 2 The ISO 3166-1 two character alphabetic representation is specified.

NOTE 3 In certain circumstances the country code may appear in an address presentation for cross border mail.

EXAMPLES

FR
NL
NZ

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3.16.4.5
country name
postal address element designating the country, dependency or area of geopolitical interest, in which a delivery point is located or via which the delivery point is accessed

[UPU S42a-6]

NOTE 1 This element appears in the delivery point specification segment.

NOTE 2 In specifying the country name, the language used may be significant.

NOTE 3 Mobile delivery points, such as mobile homes and ships, might not be (permanently) located in or accessed via a particular country. Nevertheless, they are associated with a country and locality for delivery point specification purposes. Depending on the situation, these might correspond either to the place of registration or to the place in which the delivery point is currently located or is expected to move.

3.16.4.6
defining authority
postal address element designating the postal operator or other authority responsible for the definition and maintenance of the delivery point specification concerned

[UPU S42a-6]

NOTE 1 This element appears in the delivery point specification segment.

NOTE 2 Depending on the country, delivery point specifications may be defined and maintained by a central government agency, by regional or municipal authorities or by a postal operator.

NOTE 3 In a competitive postal service environment, a delivery point may be owned or served exclusively by a particular postal operator. In such a case, the defining authority for the delivery point specification will normally be the identity of the postal operator which owns or serves the delivery point concerned. Even where this is not the case, different operators may have different ways of specifying a particular delivery point. For example, in the U.K., Hays has its own system of "DX codes" which differ from the postcodes in use by The Post Office.

3.16.4.7
delivery service qualifier
postal address element designating the name of the distribution office used to for delivery services

[UPU S42a-6]

EXAMPLES
BORDEAUX CEDEX
NANTES CEDEX 1
FUTUROSCOPE CEDEX

3.16.4.8
delivery service identifier
postal address element which designates a delivery point, or a group of delivery points from which the postal operator may choose one, by reference to a defined identifier, rather than by reference to its physical location

[UPU S42a-6]

NOTE A postal delivery service identifier appears in the delivery point specification segment. It comprises element subtypes for delivery service type and delivery service indicator. A delivery service type is an element sub-type indicating the type of delivery service. A delivery service indicator is an element sub-type designating a specific delivery point, within the category identified by delivery service type, within, or accessed for postal delivery services via, the locality.

EXAMPLES post office box numbers, BP (Boîte Postale), PRIVATE BAG, poste restante and business reply services.

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3.16.4.9
delivery service qualifier
postal address element designating the name of the distribution office used for delivery services

[UPU S42a-6]

NOTE This element appears in the delivery point specification segment.

EXAMPLES post office box numbers, BP (Boîte Postale), PRIVATE BAG, poste restante and business reply services.

3.16.4.10
district/sector
postal address element giving the name of the hamlet, estate, or area within or adjacent to town, in which a delivery point is located, or via which it is accessed for postal delivery purposes

[UPU S42a-6]

NOTE 1 This element appears in the delivery point specification segment. It comprises element sub-types for four instances of district/sector and for a type and indicator for each instance.

NOTE 2 A district/sector may be a commonly known name for an area, or it may be an area assigned for a postal or administrative purposes. A district or sector may be one of a number of areas with a similar naming structure that may include a type and indicator structure.

EXAMPLES Arrondissement, Conjunto, Colonia Juarez, Kebele 4, Moo 11.

3.16.4.11
door
postal address element indicating the apartment, room or office in, at or adjacent to which a delivery point which is situated within a building is located

[UPU S42a-6]

NOTE This element appears in the delivery point specification segment and in the mail recipient dispatching information segment. In each segment, it comprises the element sub-types door type and door indicator.

3.16.4.12
extension designation
postal address element designating the specific delivery point where this is not uniquely identified, within country and locality, by other components of delivery point location

[UPU S42a-6]

NOTE 1 For example, where all the delivery points for a block of apartments are located in the entry hall of a building, these may be distinguished by the allocation of a box number or by the use of the apartment number.

NOTE 2 For example, where all the delivery points for a block of apartments are located in the entry hall of a building, these may be distinguished by the allocation of a box number or by the use of the apartment number.

NOTE 3 Extension designation may not be required if there is only one delivery point on the plot, or in the vicinity defined by delivery point access data.

NOTE 4 In a country with multiple forms of secondary designator, these may be differentiated in a database or in address presentation, or they may be combined under a general description such as extension designation or door.

3.16.4.13
floor
postal address element indicating the floor or level on which a delivery point is located in a multi-story construction

[UPU S42a-6]

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3.16.4.14
form of address
postal address element indicating, through a word, group of words, acronyms or abbreviations, an individual or group's civil status or condition

[UPU S42a-6]

NOTE 1 This element appears in the addressee specification segment and in the mailee specification segment.

NOTE 2 Form of address may include gender specific references and honorific distinctions, though preceding qualification is best suited for earned or designated attributes applying to an individual.

EXAMPLES 1
Mr.
Mrs.
Mr. & Mrs.
Miss
Family
Herr
Senora

NOTE 3 A form of address may in some countries be sufficient to identify an abstract addressee.

EXAMPLES 2
Postal Customer
Occupant
Current Resident

3.16.4.15
function
postal address element designating role or responsibility within an organization

[UPU S42a-6]

NOTE 1 This element appears in the addressee specification segment and in the mailee specification segment.

NOTE 2 Function, which relates to a role within an organization, should be distinguished from qualification, which is an intrinsic attribute of a specific individual.

NOTE 3 If there is a function, it implies that there is also an organisation even though an organisation might not be present in the address.

EXAMPLE 1 The function Postmaster may be followed by a town and postcode, omitting reference to the Post.

NOTE 4 An individual addressee may be denoted only by a function, for example because the name of the individual may not be known.

EXAMPLES 2
Managing Director
Chief Executive
Marketing Manager
Programmer
Janitor
Secretariat CEN/TC 331

3.16.4.16
given name
postal address element specifying the name used to distinguish between persons having the same compound surname(s) and who may have access to a particular delivery point

[UPU S42a-6]

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NOTE 1 This element appears in the addressee specification segment and in the mailee specification segment. In each segment, it comprises element sub-types for given name part 1, given name part 2, and given name part 3. These can be used in rendition to shorten or eliminate parts of the given name while retaining other parts in full.

NOTE 2 If more than one given name is specified, the sequence of given names is significant. One may be defined as "first" or "preferred" given name.

NOTE 3 Given names may be abbreviated (e.g. Ch for Charles) or represented only by an initial letter.

NOTE 4 Given name is associated with an individual, as opposed to a family or a matrilineal or patrilineal identifier.

3.16.4.17
international routing information
postal address element indicating how a country, territory or area of geopolitical interest may be reached

[UPU S42a-6]

NOTE This element appears in the delivery point specification segment.

EXAMPLE **VIA CAPE TOWN**

3.16.4.18
legal status
postal address element indicating the legal status of an organization

[UPU S42a-6]

EXAMPLES
GmbH
Inc.
Ltd.
AB
A/S
OY

3.16.4.19
mailee role descriptor
postal address element indicating, in association with an individual or organization identification, that the role of the identified individual or group is that of mailee

[UPU S42a-6]

NOTE 1 This element appears in the mailee specification segment.

NOTE 2 The purpose of mailee role descriptor is to ensure, when a postal address includes multiple mailee specifications or both an addressee specification and a mailee specification, that there is no ambiguity between them.

NOTE 3 Mailee role descriptor is optional. If it is omitted in cases in which the postal address contains both an addressee specification and a mailee specification, the distinction between the two segments has to be inferred from the addressee specification, from the order of the segments or from postal operator and product rules.

EXAMPLES
c/o (care of)
p/a (per adres)
or (indicates that two mailees are considered as alternatives)
and (indicates that two mailees are considered as forming a group)

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