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Information technology — Open Systems Interconnection — Procedures for the operation of OSI Registration Authorities: General procedures

AMENDMENT 1: Incorporation of object identifiers components

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Procédures pour l'opération des autorités d'enregistrement OSI: Procédures générales

AMENDEMENT 1: Incorporation des identificateurs d'objets

Contents

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. 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.

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INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – PROCEDURES FOR THE OPERATION OF OSI REGISTRATION AUTHORITIES: GENERAL PROCEDURES

AMENDMENT 1
Incorporation of object identifiers components

1)   Annex A

Make the following changes to Table A.1:

Change "ccitt(0) recommendation(0)" *to* "itu-t(0) recommendation(0)".

Change "ccitt(0) question(1) n" *to* "itu-t(0) question(1) n".

Change "ccitt(0) administration(2) n" *to* "itu-t(0) administration(2) n".

Change "ccitt(0) network operator(3) n" *to* "itu-t(0) network operator(3) n".

Change "joint-iso-ccitt(2) n" *to* "joint-iso-itu-t(2) n".

Change "joint-iso-ccitt(2) country(16) country-name(n)" *to* "joint-iso-itu-t(2) country(16) country-name(n)".

Change "joint-iso-ccitt(2) registration-procedures(17) specific-procedures(n)" *to* "joint-iso-ccitt(2) registration-procedures(17) specific-procedures(n)".

2)   Subclause A.3

Change "{joint-iso-ccitt(2) n}" *to* "{joint-iso-itu-t(2) n}".

3)   Subclause A.4

Make the following changes:

In line 1, change "CCITT" *to* "ITU-T".

In line 2, change "{joint-iso-ccitt(2) registration-procedures(17)}" *to* "{joint-iso-itu-t(2) registration-procedures(17)}".

In line 10, change "{joint-iso-ccitt(2) registration-procedures(17) document-types(2) binary(3)}" *to* "{joint-iso-itu-t(2) registration-procedures(17) document-types(2) binary(3)}".

4)   Subclause A.5

Make the following changes:

In line 2, change "{joint-iso-ccitt(2) country(16)}" *to* "{joint-iso-ccitt(2) country(16)}".

In line 6, change "CCITT" *to* "ITU-T".

5)   Annex B

In B.3, change "CCITT" *to* "ITU-T".

Add the following text, immediately after B.4:

"B.5   There are some circumstances in which it is appropriate for object identifiers to be transformed into Directory names and used for Directory access. This annex defines three attribute types, an object class and a name form for this purpose.

B.6   The attribute types are:

   a)   An attribute type for the first component of an object identifier:

       oidC1   ATTRIBUTE ::= {
                  WITH SYNTAX INTEGER
                  EQUALITY MATCHING RULE integerMatch
                  ID {id-oidC1}}

   Integer match is defined in ITU-T Rec. X.520 | ISO/IEC 9594-6.

   b)   An attribute type for the second component of an object identifier:

       oidC2   ATTRIBUTE ::= {
                  WITH SYNTAX INTEGER
                  EQUALITY MATCHING RULE integerMatch
                  ID {id-oidC2}}

   Integer match is defined in ITU-T Rec. X.520 | ISO/IEC 9594-6.

   c)   An attribute type for the remaining components of an object identifier:

       oidC   ATTRIBUTE ::= {
                  WITH SYNTAX INTEGER
                  EQUALITY MATCHING RULE integerMatch
                  ID {id-oidC}}

   Integer match is defined in ITU-T Rec. X.520 | ISO/IEC 9594-6

B.7   The object class definition provides an alias object class for a "country level" alias entry:

oidRoot   OBJECT-CLASS ::= {
             SUBCLASS OF alias
             MUST CONTAIN {oidC1 | oidC2 | oidC }
             ID {id-oidRoot}}

B.8   The name form definition provides a Name Form to permit "country level" entry directly subordinate to the root:

oidRootNf   NAME-FORM ::= {
             NAMES oidRoot
             WITH ATTRIBUTES {oidC1 | oidC2 | oidC }
             ID {id-oidRootNf}}

B.9   The use of the attribute types is illustrated in Annex D.

B.10   The following ASN.1 module **OidDirectoryNameDef** includes all of the ASN.1 type and value definitions contained in this annex.

OidDirectoryNameDef {joint-iso-itu-t registration-procedures(17) module(1) oidDirectoryNameDef(1) }
DEFINITIONS ::=
BEGIN

-- EXPORTS All --

IMPORTS
        ATTRIBUTE, MATCHING-RULE, OBJECT-CLASS, NAME-FORM, alias
            FROM InformationFramework {joint-iso-itu-t ds(5) module(1)
                informationFramework(1) 2}

    integerMatch
            From SelectedAttributeTypes {joint-iso-itu-t ds(5) module(1)
                selectedAttributeTypes(5) 2}

-- *Attribute types* --

```
oidC1 ATTRIBUTE ::=   {
        WITH SYNTAX              INTEGER
        EQUALITY MATCHING RULE   integerMatch
        ID                       id-oidC1}

oidC2 ATTRIBUTE ::=   {
        WITH SYNTAX              INTEGER
        EQUALITY MATCHING RULE   integerMatch
        ID                       id-oidC2}

oidC ATTRIBUTE  ::=   {
        WITH SYNTAX              INTEGER
        EQUALITY MATCHING RULE   integerMatch
        ID                       id-oidC}
```

-- *Object class definition* --

```
oidRoot      OBJECT-CLASS   ::=      {
        SUBCLASS OF     { alias }
        MUST CONTAIN    { oidC1 | oidC2 | oidC }
        ID              id-oidRoot }
```

-- *Name form* --

```
oidRootNf NAME-FORM ::= {
        NAMES              oidRoot
        WITH ATTRIBUTES {oidC1 | oidC2 | oidC}
        ID                 id-oidRootNf }
```

-- *Object identifier assignments* --

```
id                          OBJECT IDENTIFIER
                ::= {ioint-iso-itu-t registration-procedures(17) }directory-defs (2) }
id-oidC1                    OBJECT IDENTIFIER    ::=    {id 0 }
id-oidC2                    OBJECT IDENTIFIER    ::=    {id 1 }
id-oidC                     OBJECT IDENTIFIER    ::=    {id 2 }
id-oidRoot                  OBJECT IDENTIFIER    ::=    {id 3 }
id-oidRootNf                OBJECT IDENTIFIER    ::=    {id 4 }


END"
```

6)   Annex C

In C.1, make the following changes:

In line 4, item b, change "{joint-iso-ccitt country country-name}" *to* "{joint-iso-itu-t country country-name}".

In line 16, change "joint-iso-ccitt" *to* "joint-iso-itu-t".

7)   New Annex

Add new Annex D and renumber existing Annex D as Annex E.

Annex D

Object identifier based Directory names

(This annex does not form an integral part of this Recommendation | International Standard)

D.1 Transformation of object identifiers into Directory names

D.1.1 The transformation of an object identifier into a Directory name involves the creation of the Directory name as a sequence of OIDComponents. All three attribute types defined in Annex B are used for the formation of an RDN for the first level of the DIT (identifying a country) from the first three components of an object identifier; subsequent RDNs are formed from single components of the object identifier taken in sequence. Thus an object identifier such as:

{iso(1) member-body(2) france(250) type-org(1) abc(6325) marketing-department(316)}

would be transformed into the following Directory name:

{{OIDC1=1, OIDC2=2, OIDC=250}}, {OIDC=1}, {OIDC=6325}, {OIDC=316}}

D.1.2 It should be noted that it is the responsibility of the user of the Directory to carry out the transformation into a Directory name of an object identifier that is to be used for Directory lookup and for the presentation of the Directory name to a DSA via a DUA. Similarly, it is the responsibility of the user of the Directory to derive an object identifier from an OIDComponent based name retrieved from the Directory. The only requirement on DSAs is that they are configured to support the attribute types for OIDComponent.

D.2 The use of object identifier based Directory names

D.2.1 The object identifier based Directory name can be used as the distinguished name for an object. Alternatively, where an object has a conventional distinguished name as well as an object identifier (e.g. an application-process), it can be assigned both forms of Directory name through the use of Directory alias naming. This is illustrated in Figure D.1.

D.2.2 In principle , each entry below the root of the DIT may have an alias name. Such an alias name establishes an OIDComponent based RDN that can be used in Directory access. Thus, Figure D.1 shows an alias name for a country entry (FR) that is an RDN composed of three OIDComponents.

D.2.3 It is thus possible to create entries for objects that have:

a)   only a conventional distinguished name, e.g. *Albert Durand* in Figure D.1;

b)   only an OIDComponent based name form, e.g. *(application context definition)* in Figure D.1;

c)   dual name forms, e.g. in Figure D.1 *organization ABC* has the distinguished name:

{C=FR, O=ABC}

with the corresponding alias name:

{{OIDC1=1, OIDC2=2, OIDC=250}}, {OIDC=1},{OIDC=6325}}.

NOTE – The construction of distinguished names consisting of RDNs of IOD form followed by conventional RDNs may be considered by some organizations as not retaining the user friendly nature of conventional distinguished names.

D.2.4 It should be noted that it is not necessary to generate aliases for all intermediate nodes in a path traversing the tree (e.g. see OU = XY in Figure D.1). Conversely, it is not necessary for all object entries in the alias environment to be actual alias entries (e.g. see node below OIDC = 1 in Figure D.1).
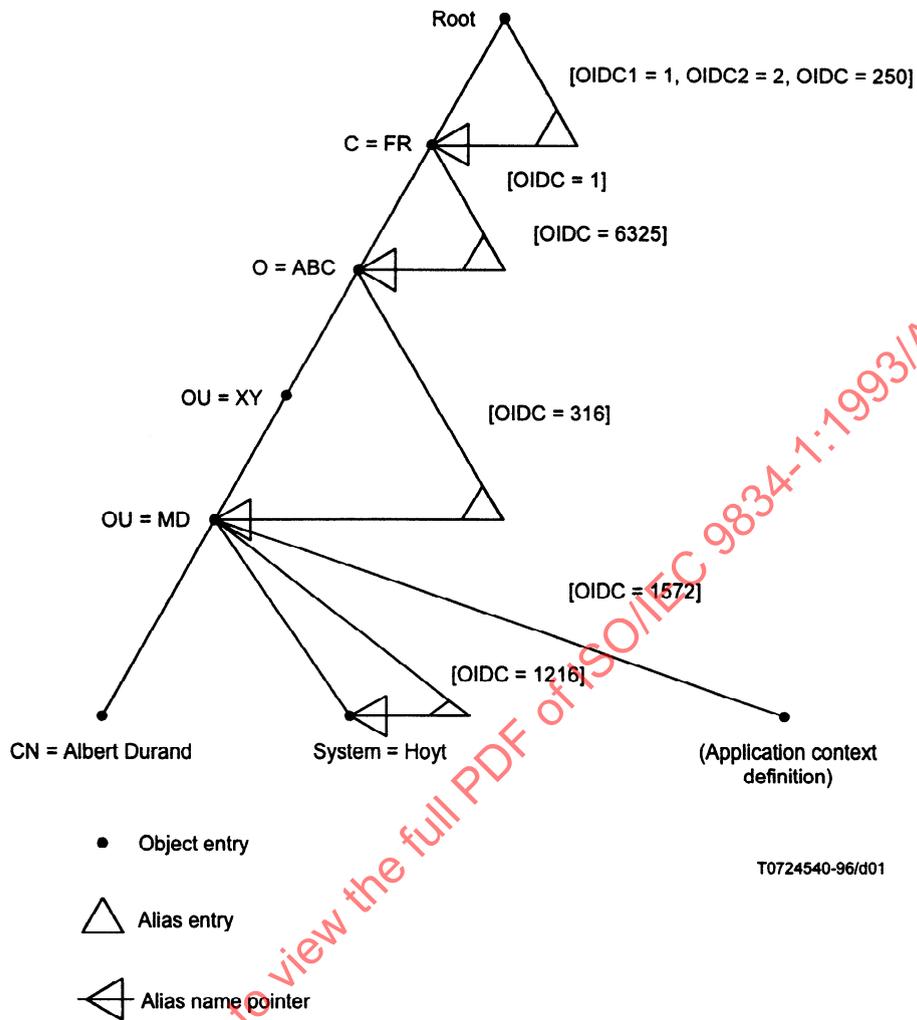
Figure D.1 – The use of Alias Names