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SERIES X: DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

Directory

Information technology – Open Systems Interconnection – The Directory: Selected object classes

ITU-T Recommendation X.521

(Previously CCITT Recommendation)

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INTERNATIONAL STANDARD 9594-7

ITU-T RECOMMENDATION X.521

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – THE DIRECTORY: SELECTED OBJECT CLASSES

Summary

This Recommendation | International Standard defines a number of selected object classes and name forms which may be found useful across a range of applications of the Directory. An object class definition specifies the attribute types which are relevant to the objects of that class. A name form definition specifies the attributes to be used in forming names for the objects of a given class.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T 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 World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation the term *recognized operating agency (ROA)* includes any individual, company, corporation or governmental organization that operates a public correspondence service. The terms *Administration, ROA* and *public correspondence* are defined in the *Constitution of the ITU (Geneva, 1992)*.

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

CONTENTS

Introduction

This Recommendation | International Standard, together with other Recommendations | International Standards, has been produced to facilitate the interconnection of information processing systems to provide directory services. A set of such systems, together with the directory information which they hold, can be viewed as an integrated whole, called the *Directory*. The information held by the Directory, collectively known as the Directory Information Base (DIB), is typically used to facilitate communication between, with or about objects such as application entities, people, terminals, and distribution lists.

The Directory plays a significant role in Open Systems Interconnection, whose aim is to allow, with a minimum of technical agreement outside of the interconnection standards themselves, the interconnection of information processing systems:

      – from different manufacturers;

      – under different managements;

      – of different levels of complexity; and

      – of different ages.

This Recommendation | International Standard defines a number of attribute sets and object classes which may be found useful across a range of applications of the Directory.

This third edition technically revises and enhances, but does not replace, the second edition of this Recommendation | International Standard. Implementations may still claim conformance to the second edition. However, at some point, the second edition will not be supported (i.e. reported defects will no longer be resolved). It is recommended that implementations conform to this third edition as soon as possible.

This third edition specifies version 1 and version 2 of the Directory protocols.

The first and second editions also specified version 1. Most of the services and protocols specified in this edition are designed to function under version 1. When version 1 has been negotiated differences between the services and between the protocols defined in the three editions are accommodated using the rules of extensibility defined in this edition of ITU-T Rec. X.519 | ISO/IEC 9594-5. However some enhanced services and protocols, e.g. signed errors, will not function unless all Directory entities involved in the operation have negotiated version 2.

Implementors should note that a defect resolution process exists and that corrections may be applied to this part of this International Standard in the form of technical corrigenda. The identical corrections will be applied to this Recommendation in the form of Corrigenda and/or an Implementor's Guide. A list of approved technical corrigenda for this part of this International Standard can be obtained from the subcommittee secretariat. Published technical corrigenda are available from your national standards organization. The ITU-T Corrigenda and Implementor's Guides may be obtained from the ITU Web site.

Annex A, which is an integral part of this Recommendation | International Standard, provides an ASN.1 module containing all of the type and value definitions which appear in this Recommendation | International Standard.

Annex B, which is not an integral part of this Recommendation | International Standard, provides some common naming and structure rules which may or may not be used by administrative authorities.

Annex C, which is not an integral part of this Recommendation | International Standard, lists the amendments and defect reports that have been incorporated to form this edition of this Recommendation | International Standard.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – THE DIRECTORY: SELECTED OBJECT CLASSES

SECTION 1 – GENERAL

1   Scope

This Recommendation | International Standard defines a number of object classes and name forms which may be found useful across a range of applications of the Directory. The definition of an object class involves listing a number of attribute types which are relevant to objects of that class. The definition of a name form involves naming the object class to which it applies and listing the attributes to be used in forming names for objects of that class. These definitions are used by the administrative authority which is responsible for the management of the directory information.

Any administrative authority can define its own object classes or subclasses and name forms for any purpose.

> NOTE 1 – Those definitions may or may not use the notation specified in ITU-T Rec. X.501 | ISO/IEC 9594-2.

> NOTE 2 – It is recommended that an object class defined in this Recommendation | International Standard, or a subclass derived from one, or a name form defined in this Recommendation | International Standard, be used in preference to the generation of a new one, whenever the semantics is appropriate for the application.

Administrative authorities may support some or all the selected object classes and name forms, and may also add additional ones.

All administrative authorities shall support the object classes which the directory uses for its own purpose (the top, alias and DSA object classes).

2   Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent edition of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of currently valid ITU-T Recommendations.

2.1   Identical Recommendations | International Standards

–   ITU-T Recommendation X.200 (1994) | ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model.*

–   ITU-T Recommendation X.500 (1997) | ISO/IEC 9594-1:1998, *Information technology – Open Systems Interconnection – The Directory: Overview of concepts, models and services*.

–   ITU-T Recommendation X.501 (1997) | ISO/IEC 9594-2:1998, *Information technology – Open Systems Interconnection – The Directory: Models*.

–   ITU-T Recommendation X.509 (1997) | ISO/IEC 9594-8:1998, *Information technology – Open Systems Interconnection – The Directory: Authentication framework.*

–   ITU-T Recommendation X.511 (1997) | ISO/IEC 9594-3:1998, *Information technology – Open Systems Interconnection – The Directory: Abstract service definition.*

–   ITU-T Recommendation X.518 (1997) | ISO/IEC 9594-4:1998, *Information technology – Open Systems Interconnection – The Directory: Procedures for distributed operation.*

- ITU-T Recommendation X.519 (1997) | ISO/IEC 9594-5:1998, *Information technology – Open Systems Interconnection – The Directory: Protocol specifications.*

- ITU-T Recommendation X.520 (1997) | ISO/IEC 9594-6:1998, *Information technology – Open Systems Interconnection – The Directory: Selected attribute types.*

- ITU-T Recommendation X.525 (1997) | ISO/IEC 9594-9:1998, *Information technology – Open Systems Interconnection – The Directory: Replication.*

- ITU-T Recommendation X.530 (1997) | ISO/IEC 9594-10:1998, *Information technology – Open Systems Interconnection – The Directory: Use of Systems management for Administration of the Directory.*

- ITU-T Recommendation X.680 (1997) | ISO/IEC 8824-1:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation.*

- ITU-T Recommendation X.681 (1997) | ISO/IEC 8824-2:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Information object specification.*

- ITU-T Recommendation X.682 (1997) | ISO/IEC 8824-3:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Constraint specification.*

- ITU-T Recommendation X.683 (1997) | ISO/IEC 8824-4:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Parametrization of ASN.1 specifications.*

3 Definitions

For the purposes of this Recommendation | International Standard, the following definitions apply.

3.1 OSI Reference Model definitions

The following terms are defined in ITU-T Rec. X.200 | ISO/IEC 7498-1.

a) *application-entity*;

b) *application-process*.

3.2 Directory Model definitions

The following terms are defined in ITU-T Rec. X.501 | ISO/IEC 9594-2:

a) *attribute*;

b) *attribute type*;

c) *Directory Information Tree (DIT)*;

d) *Directory System Agent (DSA)*;

e) *attribute set*;

f) *entry*;

g) *name*;

h) *object class*;

i) *subclass*;

j) *name form*;

k) *structure rule*.

4 Conventions

With minor exceptions, this Directory Specification has been prepared according to the "Presentation of ITU-T | ISO/IEC common text" guidelines in the Guide for ITU-T and ISO/IEC JTC 1 Cooperation.

The term "Directory Specification" (as in "this Directory Specification") shall be taken to mean this Recommendation | International Standard. The term "Directory Specifications" shall be taken to mean the X.500-series Recommendations | parts of ISO/IEC 9594.

This Directory Specification uses the term "1988 edition systems" to refer to systems conforming to the first (1988) edition of the Directory Specifications, i.e. the 1988 edition of the series of CCITT X.500 Recommendations and the ISO/IEC 9594:1990 edition. This Directory Specification uses the term "1993 edition systems" to refer to systems conforming to the second (1993) edition of the Directory Specifications, i.e. the 1993 edition of the series of ITU-T X.500 Recommendations and the ISO/IEC 9594:1995 edition. Systems conforming to this third edition of the Directory Specifications are referred to as "1997 edition systems".

This Directory Specification presents ASN.1 notation in the bold Helvetica typeface. When ASN.1 types and values are referenced in normal text, they are differentiated from normal text by presenting them in the bold Helvetica typeface. The names of procedures, typically referenced when specifying the semantics of processing, are differentiated from normal text by displaying them in bold Times. Access control permissions are presented in italicized Times.

Object classes and name forms are defined in this Directory Specification as values of the **OBJECT-CLASS** and **NAME-FORM** information object classes defined in ITU-T Rec. X.501 | ISO/IEC 9594-2.

SECTION 2 – SELECTED OBJECT CLASSES

5 Definition of useful attribute sets

5.1 Telecommunication attribute set

This set of attributes is used to define those which are commonly used for business communications.

TelecommunicationAttributeSet ATTRIBUTE ::= {
 facsimileTelephoneNumber |
 internationalISDNNumber |
 telephoneNumber |
 teletexTerminalIdentifier |
 telexNumber |
 preferredDeliveryMethod |
 destinationIndicator |
 registeredAddress |
 x121Address }

5.2 Postal attribute set

This set of attributes is used to define those which are directly associated with postal delivery.

PostalAttributeSet ATTRIBUTE ::= {
 physicalDeliveryOfficeName |
 postalAddress |
 postalCode |
 postOfficeBox |
 streetAddress }

5.3 Locale attribute set

This set of attributes is used to define those which are commonly used for search purposes to indicate the locale of an object.

LocaleAttributeSet ATTRIBUTE ::= {
 localityName |
 stateOrProvinceName |
 streetAddress }

5.4   Organizational attribute set

This set of attributes is used to define the attributes that an organization or organizational unit may typically possess.

```
OrganizationalAttributeSet ATTRIBUTE ::= {
        description |
        LocaleAttributeSet |
        PostalAttributeSet |
        TelecommunicationAttributeSet |
        businessCategory |
        seeAlso |
        searchGuide |
        userPassword }
```

6   Definition of selected object classes

6.1   Country

A *Country* object class is used to define country entries in the DIT.

```
country OBJECT-CLASS ::= {
        SUBCLASS OF     { top }
        MUST CONTAIN    { countryName }
        MAY CONTAIN     { description | searchGuide }
        ID              id-oc-country }
```

6.2   Locality

The *Locality* object class is used to define locality in the DIT.

```
locality OBJECT-CLASS ::= {
        SUBCLASS OF     { top }
        MAY CONTAIN     { description |
                         searchGuide |
                         LocaleAttributeSet |
                         seeAlso }
        ID              id-oc-locality }
```

At least one of Locality Name or State or Province Name must be present.

6.3   Organization

The *Organization* object class is used to define organization entries in the DIT.

```
organization OBJECT-CLASS ::= {
        SUBCLASS OF     { top }
        MUST CONTAIN    { organizationName }
        MAY CONTAIN     { OrganizationalAttributeSet }
        ID              id-oc-organization }
```

6.4   Organizational Unit

The *Organizational Unit* object class is used to define entries representing subdivisions of organizations.

```
organizationalUnit OBJECT-CLASS ::= {
        SUBCLASS OF     { top }
        MUST CONTAIN    { organizationalUnitName }
        MAY CONTAIN     { OrganizationalAttributeSet }
        ID              id-oc-organizationalUnit }
```

6.5   Person

The *Person* object class is used to define entries representing people generically.

```
person  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName | surname }
     MAY CONTAIN    { description |
                      telephoneNumber |
                      userPassword |
                      seeAlso }
     ID             id-oc-person }
```

6.6   Organizational Person

The *Organizational Person* object class is used to define entries representing people employed by, or in some other important way associated with, an organization.

```
organizationalPerson  OBJECT-CLASS ::= {
     SUBCLASS OF    { person }
     MAY CONTAIN    { LocaleAttributeSet |
                      PostalAttributeSet |
                      TelecommunicationAttributeSet |
                      organizationalUnitName |
                      title }
                      ID    id-oc-organizationalPerson }
```

6.7   Organizational Role

The *Organizational Role* object class is used to define entries representing an organizational role, i.e. a position or role within an organization. An organizational role is normally considered to be filled by a particular organizational person. Over its lifetime, however, an organizational role may be filled by a number of different organizational people in succession. In general, an organizational role may be filled by a person or a non-human entity.

```
organizationalRole  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName }
     MAY CONTAIN    { description |
                      LocaleAttributeSet |
                      organizationalUnitName |
                      PostalAttributeSet |
                      preferredDeliveryMethod |
                      roleOccupant |
                      seeAlso |
                      TelecommunicationAttributeSet }
     ID             id-oc-organizationalRole }
```

6.8   Group of Names

The *Group Of Names* object class is used to define entries representing an unordered set of names which represent individual objects or other groups of names. The membership of a group is static, i.e. it is explicitly modified by administrative action, rather than dynamically determined each time the group is referred to.

The membership of a group can be reduced to a set of individual object's names by replacing each group with its membership. This process could be carried out recursively until all constituent group names have been eliminated, and only the names of individual objects remain.

```
groupOfNames  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName | member }
     MAY CONTAIN    { description |
                      organizationName |
                      organizationalUnitName |
                      owner |
                      seeAlso |
                      businessCategory }
     ID             id-oc-groupOfNames }
```

6.9 Group of Unique Names

The *Group Of Unique Names* object class is used to define entries representing an unordered set of names whose integrity can be assured and which represent individual objects or other groups of names. The membership of a group is static, i.e. it is explicitly modified by administrative action, rather than dynamically determined each time the group is referred to.

```
groupOfUniqueNames OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName | uniqueMember }
     MAY CONTAIN    { description |
                     organizationName |
                     organizationalUnitName |
                     owner |
                     seeAlso |
                     businessCategory }
     ID             id-oc-groupOfUniqueNames }
```

6.10 Residential Person

The *Residential Person* object class is used to define entries representing a person in the residential environment.

```
residentialPerson OBJECT-CLASS ::= {
     SUBCLASS OF    { person }
     MUST CONTAIN   { localityName }
     MAY CONTAIN    { LocaleAttributeSet |
                     PostalAttributeSet |
                     preferredDeliveryMethod |
                     TelecommunicationAttributeSet |
                     businessCategory }
     ID             id-oc-residentialPerson }
```

6.11 Application Process

The *Application Process* object class is used to define entries representing application processes. An application process is an element within a real open-system which performs the information processing for a particular application (see ITU-T Rec. X.200 | ISO/IEC 7498-1).

```
applicationProcess OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName }
     MAY CONTAIN    { description |
                     localityName |
                     organizationalUnitName |
                     seeAlso }
     ID             id-oc-applicationProcess }
```

6.12 Application Entity

The *Application Entity* object class is used to define entries representing application entities. An application entity consists of those aspects of an application-process pertinent to OSI.

```
applicationEntity OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName | presentationAddress }
     MAY CONTAIN    { description |
                     localityName |
                     organizationName |
                     organizationalUnitName |
                     seeAlso |
                     supportedApplicationContext }
     ID             id-oc-applicationEntity }
```

NOTE – If an application-entity is represented as a Directory object that is distinct from an application-process, the **commonName** attribute is used to carry the value of the Application Entity Qualifier.

6.13   DSA

The *DSA* object class is used to define entries representing DSAs. A DSA is as defined in ITU-T Rec. X.501 | ISO/IEC 9594-2.

```
dSA  OBJECT-CLASS ::= {
     SUBCLASS OF    { applicationEntity }
     MAY CONTAIN    { knowledgeInformation }
     ID             id-oc-dSA }
```

6.14   Device

The *Device* object class is used to define entries representing devices. A device is a physical unit which can communicate, such as a modem, disk drive, etc.

```
device  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { commonName }
     MAY CONTAIN    { description |
                      localityName |
                      organizationName |
                      organizationalUnitName |
                      owner |
                      seeAlso |
                      serialNumber }
     ID             id-oc-device }
```

NOTE – At least one of **localityName**, **serialNumber**, **owner**, should be included. The choice is dependent on device type.

6.15   Strong Authentication User

The *Strong Authentication User* object class is used in defining entries for objects which participate in strong authentication, as defined in ITU-T Rec. X.509 | ISO/IEC 9594-8.

```
strongAuthenticationUser  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           auxiliary
     MUST CONTAIN   { userCertificate }
     ID             id-oc-strongAuthenticationUser }
```

6.16   User Security Information

The *User Security Information* object class is used in defining entries for objects which need to indicate security information associated with them as defined in ITU-T Rec. X.509 | ISO/IEC 9594-8.

```
userSecurityInformation  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           auxiliary
     MAY CONTAIN    { supportedAlgorithms }
     ID             id-oc-userSecurityInformation }
```

6.17   Certification Authority

The *Certification Authority* object class is used in defining entries for objects which act as certification authorities, as defined in ITU-T Rec. X.509 | ISO/IEC 9594-8.

```
certificationAuthority  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           auxiliary
     MUST CONTAIN   { cACertificate |
                      certificateRevocationList |
                      authorityRevocationList }
     MAY CONTAIN    { crossCertificatePair }
     ID             id-oc-certificationAuthority }
```

6.18   Certification Authority-V2

The *Certification Authority-V2* object class is used in defining entries for objects which act as certification authorities and can support the delta revocation list as defined in ITU-T Rec. X.509 | ISO/IEC 9594-8.

```
certificationAuthority-V2  OBJECT-CLASS  ::= {
    SUBCLASS OF    { certificationAuthority }
    KIND           auxiliary
    MAY CONTAIN    { deltaRevocationList }
    ID             id-oc-certificationAuthority-V2 }
```

6.19   CRL Distribution Point

The *CRL Distribution Point* object class is used in defining entries for object which act as CRL Distribution Points as defined in ITU-T Rec. X.509 | ISO/IEC 9594-8.

```
cRLDistributionPoint  OBJECT-CLASS  ::= {
    SUBCLASS OF    { top }
    KIND           structural
    MUST CONTAIN   { commonName }
    MAY CONTAIN    { certificateRevocationList |
                     authorityRevocationList |
                     deltaRevocationList }
    ID             id-oc-cRLDistributionPoint }
```

6.20   DMD

The *DMD* object class is used to define DMD entries in the DIT.

```
dMD  OBJECT-CLASS  ::= {
    SUBCLASS OF    { top }
    MUST CONTAIN   { dmdName }
    MAY CONTAIN    { OrganizationalAttributeSet }
    ID             id-oc-dmd }
```

SECTION 3 – SELECTED NAME FORMS

7   Definition of selected name forms

7.1   Country name form

The *Country* name form specifies how entries of object class **country** may be named.

```
countryNameForm  NAME-FORM  ::= {
    NAMES               country
    WITH ATTRIBUTES     { countryName }
    ID                  id-nf-countryNameForm }
```

7.2   Locality name form

The *Locality* name form specifies how entries of object class **locality** may be named.

```
locNameForm  NAME-FORM  ::= {
    NAMES               locality
    WITH ATTRIBUTES     { localityName }
    ID                  id-nf-locNameForm }
```

7.3 State or Province name form

The *State or Province* name form specifies how entries of object class **locality** may be named.

```
sOPNameForm  NAME-FORM ::= {
     NAMES                 locality
     WITH ATTRIBUTES       { stateOrProvinceName }
     ID                    id-nf-sOPNameForm }
```

7.4 Organization name form

The *Organization* name form specifies how entries of object class **organization** may be named.

```
orgNameForm  NAME-FORM ::= {
     NAMES                 organization
     WITH ATTRIBUTES       { organizationName }
     ID                    id-nf-orgNameForm }
```

7.5 Organizational Unit name form

The *Organizational Unit* name form specifies how entries of object class **organizationalUnit** may be named.

```
orgUnitNameForm  NAME-FORM ::= {
     NAMES                 organizationalUnit
     WITH ATTRIBUTES       { organizationalUnitName }
     ID                    id-nf-orgUnitNameForm }
```

7.6 Person name form

The *Person* name form specifies how entries of object class **person** may be named.

```
personNameForm  NAME-FORM ::= {
     NAMES                 person
     WITH ATTRIBUTES       { commonName }
     ID                    id-nf-personNameForm }
```

7.7 Organizational Person name form

The *Organizational Person* name form specifies how entries of object class **organizationalPerson** may be named.

```
orgPersonNameForm  NAME-FORM ::= {
     NAMES                 organizationalPerson
     WITH ATTRIBUTES       { commonName }
     AND OPTIONALLY        { organizationalUnitName }
     ID                    id-nf-orgPersonNameForm }
```

7.8 Organizational Role name form

The *Organizational Role* name form specifies how entries of object class **organizationalRole** may be named.

```
orgRoleNameForm  NAME-FORM ::= {
     NAMES                 organizationalRole
     WITH ATTRIBUTES       { commonName }
     ID                    id-nf-orgRoleNameForm }
```

7.9 Group of Names name form

The *Group of Names* name form specifies how entries of object class **groupOfNames** may be named.

```
gONNameForm  NAME-FORM ::= {
     NAMES                 groupOfNames
     WITH ATTRIBUTES       { commonName }
     ID                    id-nf-gONNameForm }
```

7.10   Residential Person name form

The *Residential Person* name form specifies how entries of object class **residentialPerson** may be named.

```
resPersonNameForm  NAME-FORM ::= {
    NAMES               residentialPerson
    WITH ATTRIBUTES     { commonName }
    AND OPTIONALLY      { streetAddress }
    ID                  id-nf-resPersonNameForm }
```

7.11   Application Process name form

The *Application Process* name form specifies how entries of object class **applicationProcess** may be named.

```
applProcessNameForm  NAME-FORM ::= {
    NAMES               applicationProcess
    WITH ATTRIBUTES     { commonName }
    ID                  id-nf-applProcessNameForm }
```

7.12   Application Entity name form

The *Application Entity* name form specifies how entries of object class **applicationEntity** may be named.

```
applEntityNameForm  NAME-FORM ::= {
    NAMES               applicationEntity
    WITH ATTRIBUTES     { commonName }
    ID                  id-nf-applEntityNameForm }
```

7.13   DSA name form

The *DSA* name form specifies how entries of object class **dSA** may be named.

```
dSANameForm  NAME-FORM ::= {
    NAMES               dSA
    WITH ATTRIBUTES     { commonName }
    ID                  id-nf-dSANameForm }
```

7.14   Device name form

The *Device* name form specifies how entries of object class **device** may be named.

```
deviceNameForm  NAME-FORM ::= {
    NAMES               device
    WITH ATTRIBUTES     { commonName }
    ID                  id-nf-deviceNameForm }
```

7.15   CRL Distribution Point Name Form

The *CRL Distribution Point* name form specifies how entries of object class **cRLDistributionPoint** may be named.

```
cRLDistPtNameForm  NAME-FORM ::= {
    NAMES               cRLDistributionPoint
    WITH ATTRIBUTES     { commonName }
    ID                  id-nf-cRLDistPtNameForm }
```

7.16   DMD name form

The *DMD* name form specifies how entries of object class **dMD** may be named.

```
dMDNameForm  NAME-FORM ::= {
    NAMES               dMD
    WITH ATTRIBUTES     { dmdName }
    ID                  id-nf-dMDNameForm }
```

Annex A

Selected object classes and name forms in ASN.1

(This annex forms an integral part of this Recommendation | International Standard)

This annex includes all of the ASN.1 type and value definitions contained in this Directory Specification in the form of the ASN.1 module **SelectedObjectClasses**.

SelectedObjectClasses {joint-iso-itu-t ds(5) module(1) selectedObjectClasses(6) 3}
DEFINITIONS ::=
BEGIN
-- EXPORTS All --

-- The types and values defined in this module are exported for use in the other ASN.1 modules contained
-- within the Directory Specifications, and for the use of other applications which will use them to access
-- Directory services. Other applications may use them for their own purposes, but this will not constrain
-- extensions and modifications needed to maintain or improve the Directory service.

IMPORTS
    objectClass, informationFramework, authenticationFramework, selectedAttributeTypes,
    id-oc, id-nf
        FROM UsefulDefinitions {joint-iso-itu-t ds(5) module(1) usefulDefinitions(0) 3 }

    OBJECT-CLASS, ATTRIBUTE, NAME-FORM, top, alias
        FROM InformationFramework informationFramework

    businessCategory, commonName, countryName, description, destinationIndicator,
    facsimileTelephoneNumber, internationalISDNNumber, knowledgeInformation, localityName,
    member, organizationName, organizationalUnitName, owner, physicalDeliveryOfficeName,
    postOfficeBox, postalAddress, postalCode, preferredDeliveryMethod, presentationAddress,
    registeredAddress, roleOccupant, searchGuide, seeAlso, serialNumber, stateOrProvinceName,
    streetAddress, supportedApplicationContext, surname, telephoneNumber, teletexTerminalIdentifier,
    telexNumber, title, uniqueMember, x121Address, dmdName
        FROM SelectedAttributeTypes selectedAttributeTypes

    authorityRevocationList, cACertificate, certificateRevocationList, crossCertificatePair,
    userCertificate, userPassword, supportedAlgorithm, deltaRevocationList
        FROM AuthenticationFramework authenticationFramework ;

-- Attribute sets --

TelecommunicationAttributeSet ATTRIBUTE ::= {
    facsimileTelephoneNumber |
    internationalISDNNumber |
    telephoneNumber |
    teletexTerminalIdentifier |
    telexNumber |
    preferredDeliveryMethod |
    destinationIndicator |
    registeredAddress |
    x121Address }

PostalAttributeSet ATTRIBUTE ::= {
    physicalDeliveryOfficeName |
    postalAddress |
    postalCode |
    postOfficeBox |
    streetAddress }

LocaleAttributeSet ATTRIBUTE ::= {
    localityName |
    stateOrProvinceName |
    streetAddress }

```
OrganizationalAttributeSet  ATTRIBUTE ::= {
      description |
      LocaleAttributeSet |
      PostalAttributeSet |
      TelecommunicationAttributeSet |
      businessCategory |
      seeAlso |
      searchGuide |
      userPassword }


-- Object classes --

country  OBJECT-CLASS ::= {
      SUBCLASS OF    { top }
      MUST CONTAIN   { countryName }
      MAY CONTAIN    { description | searchGuide }
      ID             id-oc-country }

locality  OBJECT-CLASS ::= {
      SUBCLASS OF    { top }
      MAY CONTAIN    { description |
                       searchGuide |
                       LocaleAttributeSet |
                       seeAlso }
      ID             id-oc-locality }

organization  OBJECT-CLASS ::= {
      SUBCLASS OF    { top }
      MUST CONTAIN   { organizationName }
      MAY CONTAIN    { OrganizationalAttributeSet }
      ID             id-oc-organization }

organizationalUnit  OBJECT-CLASS ::= {
      SUBCLASS OF    { top }
      MUST CONTAIN   { organizationalUnitName }
      MAY CONTAIN    { OrganizationalAttributeSet }
      ID             id-oc-organizationalUnit }

person  OBJECT-CLASS ::= {
      SUBCLASS OF    { top }
      MUST CONTAIN   { commonName | surname }
      MAY CONTAIN    { description |
                       telephoneNumber |
                       userPassword |
                       seeAlso }
      ID             id-oc-person }

organizationalPerson  OBJECT-CLASS ::= {
      SUBCLASS OF    { person }
      MAY CONTAIN    { LocaleAttributeSet |
                       PostalAttributeSet |
                       TelecommunicationAttributeSet |
                       organizationalUnitName |
                       title }
                       ID     id-oc-organizationalPerson }

organizationalRole  OBJECT-CLASS ::= {
      SUBCLASS OF    { top }
      MUST CONTAIN   { commonName }
      MAY CONTAIN    { description |
                       LocaleAttributeSet |
                       organizationalUnitName |
                       PostalAttributeSet |
                       preferredDeliveryMethod |
                       roleOccupant |
                       seeAlso |
                       TelecommunicationAttributeSet }
      ID             id-oc-organizationalRole }
```

```
groupOfNames  OBJECT-CLASS  ::= {
      SUBCLASS OF     { top }
      MUST CONTAIN    { commonName | member }
      MAY CONTAIN     { description |
                      organizationName |
                      organizationalUnitName |
                      owner |
                      seeAlso |
                      businessCategory }
      ID              id-oc-groupOfNames }

groupOfUniqueNames  OBJECT-CLASS  ::= {
      SUBCLASS OF     { top }
      MUST CONTAIN    { commonName | uniqueMember }
      MAY CONTAIN     { description |
                      organizationName |
                      organizationalUnitName |
                      owner |
                      seeAlso |
                      businessCategory }
      ID              id-oc-groupOfUniqueNames }

residentialPerson  OBJECT-CLASS  ::= {
      SUBCLASS OF     { person }
      MUST CONTAIN    { localityName }
      MAY CONTAIN     { LocaleAttributeSet |
                      PostalAttributeSet |
                      preferredDeliveryMethod |
                      TelecommunicationAttributeSet |
                      businessCategory }
      ID              id-oc-residentialPerson }

applicationProcess  OBJECT-CLASS  ::= {
      SUBCLASS OF     { top }
      MUST CONTAIN    { commonName }
      MAY CONTAIN     { description |
                      localityName |
                      organizationalUnitName |
                      seeAlso }
      ID              id-oc-applicationProcess }

applicationEntity  OBJECT-CLASS  ::= {
      SUBCLASS OF     { top }
      MUST CONTAIN    { commonName | presentationAddress }
      MAY CONTAIN     { description |
                      localityName |
                      organizationName |
                      organizationalUnitName |
                      seeAlso |
                      supportedApplicationContext }
      ID              id-oc-applicationEntity }

dSA  OBJECT-CLASS  ::= {
      SUBCLASS OF     { applicationEntity }
      MAY CONTAIN     { knowledgeInformation }
      ID              id-oc-dSA }

device  OBJECT-CLASS  ::= {
      SUBCLASS OF     { top }
      MUST CONTAIN    { commonName }
      MAY CONTAIN     { description |
                      localityName |
                      organizationName |
                      organizationalUnitName |
                      owner |
                      seeAlso |
                      serialNumber }
      ID              id-oc-device }
```

```
strongAuthenticationUser OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           auxiliary
     MUST CONTAIN   { userCertificate }
     ID             id-oc-strongAuthenticationUser }

userSecurityInformation  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           auxiliary
     MAY CONTAIN    { supportedAlgorithms }
     ID             id-oc-userSecurityInformation }

certificationAuthority  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           auxiliary
     MUST CONTAIN   { cACertificate |
                      certificateRevocationList |
                      authorityRevocationList }
     MAY CONTAIN    { crossCertificatePair }
     ID             id-oc-certificationAuthority }

certificationAuthority-V2  OBJECT-CLASS ::= {
     SUBCLASS OF    { certificationAuthority }
     KIND           auxiliary
     MAY CONTAIN    { deltaRevocationList }
     ID             id-oc-certificationAuthority-V2 }

cRLDistributionPoint  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     KIND           structural
     MUST CONTAIN   { commonName }
     MAY CONTAIN    { certificateRevocationList |
                      authorityRevocationList |
                      deltaRevocationList }
     ID             id-oc-cRLDistributionPoint }

dMD  OBJECT-CLASS ::= {
     SUBCLASS OF    { top }
     MUST CONTAIN   { dmdName }
     MAY CONTAIN    { OrganizationalAttributeSet }
     ID             id-oc-dmd }
```

-- *Name forms* --

```
countryNameForm  NAME-FORM ::= {
     NAMES              country
     WITH ATTRIBUTES    { countryName }
     ID                 id-nf-countryNameForm }

locNameForm  NAME-FORM ::= {
     NAMES              locality
     WITH ATTRIBUTES    { localityName }
     ID                 id-nf-locNameForm }

sOPNameForm  NAME-FORM ::= {
     NAMES              locality
     WITH ATTRIBUTES    { stateOrProvinceName }
     ID                 id-nf-sOPNameForm }

orgNameForm  NAME-FORM ::= {
     NAMES              organization
     WITH ATTRIBUTES    { organizationName }
     ID                 id-nf-orgNameForm }

orgUnitNameForm  NAME-FORM ::= {
     NAMES              organizationalUnit
     WITH ATTRIBUTES    { organizationalUnitName }
     ID                 id-nf-orgUnitNameForm }
```

```
personNameForm  NAME-FORM ::= {
     NAMES               person
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-personNameForm }


orgPersonNameForm  NAME-FORM ::= {
     NAMES               organizationalPerson
     WITH ATTRIBUTES     { commonName }
     AND OPTIONALLY      { organizationalUnitName }
     ID                  id-nf-orgPersonNameForm }


orgRoleNameForm  NAME-FORM ::= {
     NAMES               organizationalRole
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-orgRoleNameForm }


gONNameForm  NAME-FORM ::= {
     NAMES               groupOfNames
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-gONNameForm }


resPersonNameForm  NAME-FORM ::= {
     NAMES               residentialPerson
     WITH ATTRIBUTES     { commonName }
     AND OPTIONALLY      { streetAddress }
     ID                  id-nf-resPersonNameForm }


applProcessNameForm  NAME-FORM ::= {
     NAMES               applicationProcess
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-applProcessNameForm }


applEntityNameForm  NAME-FORM ::= {
     NAMES               applicationEntity
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-applEntityNameForm }


dSANameForm  NAME-FORM ::= {
     NAMES               dSA
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-dSANameForm }


deviceNameForm  NAME-FORM ::= {
     NAMES               device
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-deviceNameForm }


cRLDistPtNameForm  NAME-FORM ::= {
     NAMES               cRLDistributionPoint
     WITH ATTRIBUTES     { commonName }
     ID                  id-nf-cRLDistPtNameForm }


dMDNameForm NAME-FORM ::= {
     NAMES               dMD
     WITH ATTRIBUTES     { dmdName }
     ID                  id-nf-dMDNameForm }
```

-- Object identifier assignments --

-- object identifiers assigned in other modules are shown in comments

-- Object classes --

-- id-oc-top	*OBJECT IDENTIFIER*	*::=*	*{id-oc 0}*
-- id-oc-alias	*OBJECT IDENTIFIER*	*::=*	*{id-oc 0}*
id-oc-country	**OBJECT IDENTIFIER**	**::=**	**{id-oc 2}**
id-oc-locality	**OBJECT IDENTIFIER**	**::=**	**{id-oc 3}**
id-oc-organization	**OBJECT IDENTIFIER**	**::=**	**{id-oc 4}**
id-oc-organizationalUnit	**OBJECT IDENTIFIER**	**::=**	**{id-oc 5}**
id-oc-person	**OBJECT IDENTIFIER**	**::=**	**{id-oc 6}**
id-oc-organizationalPerson	**OBJECT IDENTIFIER**	**::=**	**{id-oc 7}**
id-oc-organizationalRole	**OBJECT IDENTIFIER**	**::=**	**{id-oc 8}**
id-oc-groupOfNames	**OBJECT IDENTIFIER**	**::=**	**{id-oc 9}**
id-oc-residentialPerson	**OBJECT IDENTIFIER**	**::=**	**{id-oc 10}**
id-oc-applicationProcess	**OBJECT IDENTIFIER**	**::=**	**{id-oc 11}**
id-oc-applicationEntity	**OBJECT IDENTIFIER**	**::=**	**{id-oc 12}**
id-oc-dSA	**OBJECT IDENTIFIER**	**::=**	**{id-oc 13}**
id-oc-device	**OBJECT IDENTIFIER**	**::=**	**{id-oc 14}**
id-oc-strongAuthenticationUser	**OBJECT IDENTIFIER**	**::=**	**{id-oc 15}**
id-oc-certificationAuthority	**OBJECT IDENTIFIER**	**::=**	**{id-oc 16}**
id-oc-certificationAuthority-V2	**OBJECT IDENTIFIER**	**::=**	**{id-oc 16 2}**
id-oc-groupOfUniqueNames	**OBJECT IDENTIFIER**	**::=**	**{id-oc 17}**
id-oc-userSecurityInformation	**OBJECT IDENTIFIER**	**::=**	**{id-oc 18}**
id-oc-cRLDistributionPoint	**OBJECT IDENTIFIER**	**::=**	**{id-oc 19}**
id-oc-dmd	**OBJECT IDENTIFIER**	**::=**	**{id-oc 20}**

-- Name forms --

id-nf-countryNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 0}**
id-nf-locNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 1}**
id-nf-sOPNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 2}**
id-nf-orgNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 3}**
id-nf-orgUnitNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 4}**
id-nf-personNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 5}**
id-nf-orgPersonNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 6}**
id-nf-orgRoleNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 7}**
id-nf-gONNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 8}**
id-nf-resPersonNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 9}**
id-nf-applProcessNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 10}**
id-nf-applEntityNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 11}**
id-nf-dSANameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 12}**
id-nf-deviceNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 13}**
id-nf-cRLDistPtNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 14}**
id-nf-dMDNameForm	**OBJECT IDENTIFIER**	**::=**	**{id-nf 15}**

END

Annex B

Suggested name forms and DIT structures

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

This annex suggests a DIT structure shown in Figure B.1 and related DIT structure rules using the name forms defined in clause 3. The rules cover an unconstrained DIT structure.

The integer identifiers assigned in this annex and used in Figure B.1 are arbitrary and have no global (or standardized) significance. A particular structure rule identifier only has significance within the scope of the subschema in which it applied. Each DMD is responsible for creating its own DIT structure and structure rules that may differ from this example.
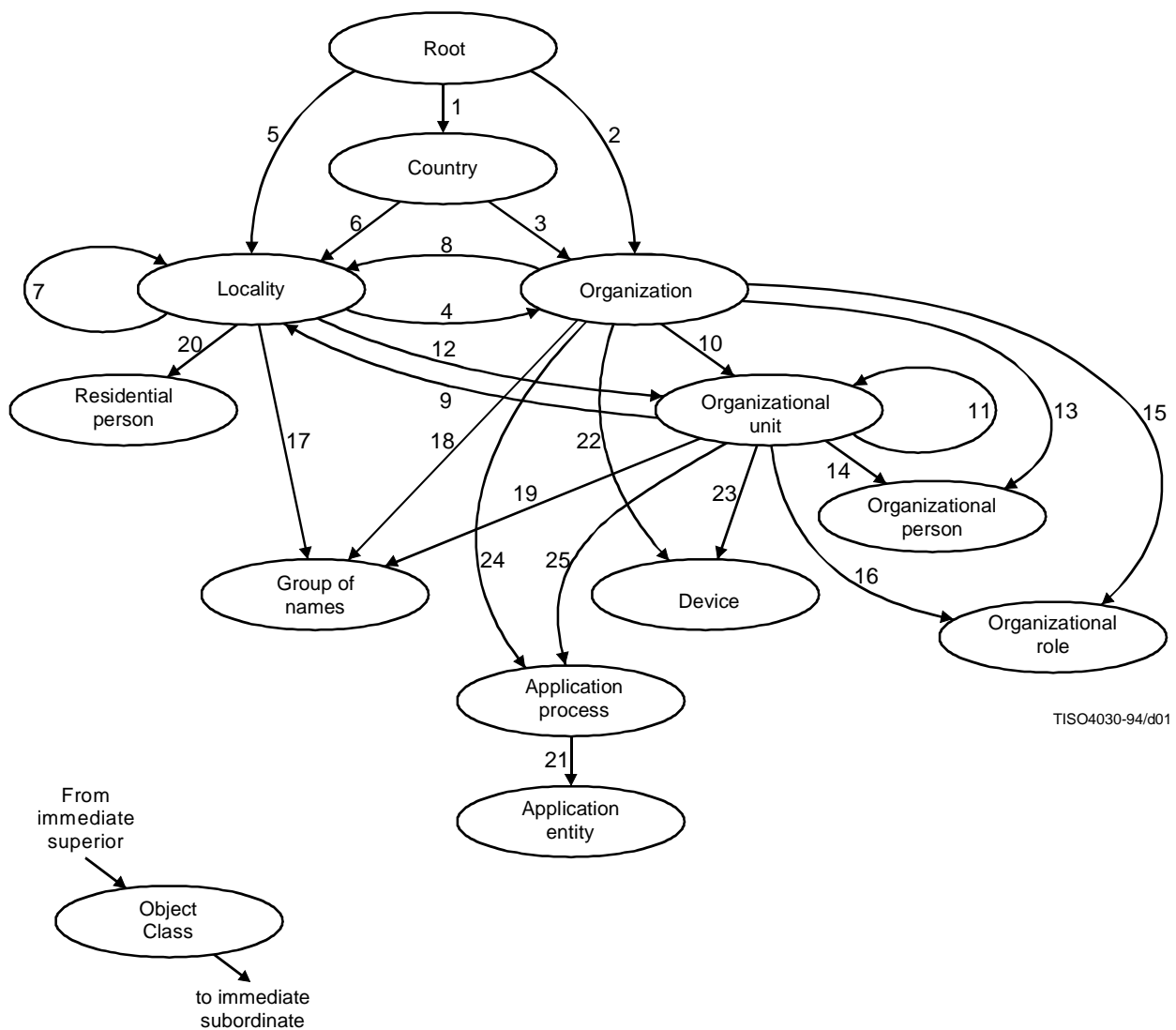
Figure B.1 – Suggested DIT structure

B.1   Country

Attribute countryName **is used for naming.**

The root is the immediate superior to entries of object class **country**.

```
sr1 STRUCTURE-RULE ::= {
    NAME FORM          countryNameForm
    ID                 1 }
```

B.2   Organization

Attribute organizationName **is used for naming.**

The root, **country** or **locality** can be the immediate superior of entries of object class **organization**.

> NOTE – When the organization is directly under the root, this denotes an international organization. The naming values of the **organizationName** attribute for international organizations must all be distinct.

```
sr2 STRUCTURE-RULE ::= {
    NAME FORM          orgNameForm
    ID                 2 }

sr3 STRUCTURE-RULE ::= {
    NAME FORM          orgNameForm
    SUPERIOR RULES     { sr1 }
    ID                 3 }

sr4 STRUCTURE-RULE ::= {
    NAME FORM          orgNameForm
    SUPERIOR RULES     { sr5 | sr6 | sr7 | sr8 | sr9 }
    ID                 4 }
```

B.3   Locality

Attribute **localityName** or **stateOrProvinceName** is used for naming.

> NOTE – For naming locality using **stateOrProvinceName**, see B.12.

The root, **country**, **locality**, **organization** or **organizationalUnit** can be the immediate superior of entries of object class **locality**.

```
sr5 STRUCTURE-RULE ::= {
    NAME FORM          locNameForm
    ID                 5 }

sr6 STRUCTURE-RULE ::= {
    NAME FORM          locNameForm
    SUPERIOR RULES     { sr1 }
    ID                 6 }

sr7 STRUCTURE-RULE ::= {
    NAME FORM          locNameForm
    SUPERIOR RULES     { sr5 | sr6 | sr7 | sr8 | sr9 }
    ID                 7 }

sr8 STRUCTURE-RULE ::= {
    NAME FORM          locNameForm
    SUPERIOR RULES     { sr2 | sr3 | sr4 }
    ID                 8 }

sr9 STRUCTURE-RULE ::= {
    NAME FORM          locNameForm
    SUPERIOR RULES     { sr10 | sr11 | sr12 }
    ID                 9 }
```

B.4   Organizational Unit

Attribute **organizationalUnitName** is used for naming.

organization, **organizationalUnit** or **locality** can be the immediate superior of entries of object class **organizationalUnit**.

```
sr10 STRUCTURE-RULE ::= {
     NAME FORM            orgUnitNameForm
     SUPERIOR RULES       { sr2 | sr3 | sr4 }
     ID                   10 }

sr11 STRUCTURE-RULE ::= {
     NAME FORM            orgUnitNameForm
     SUPERIOR RULES       { sr10 | sr11 | sr12 }
     ID                   11 }

sr12 STRUCTURE-RULE ::= {
     NAME FORM            orgUnitNameForm
     SUPERIOR RULES       { sr5 | sr6 | sr7 | sr8 | sr9 }
     ID                   12 }
```

B.5   Organizational Person

Attribute **commonName** and optionally **organizational-UnitName** is used for naming.

organization or **organizationalUnit** can be the immediate superior of entries of object class **organizationalPerson**.

```
sr13 STRUCTURE-RULE ::= {
     NAME FORM            orgPersonNameForm
     SUPERIOR RULES       { sr2 | sr3 | sr4 }
     ID                   13 }

sr14 STRUCTURE-RULE ::= {
     NAME FORM            orgPersonNameForm
     SUPERIOR RULES       { sr10 | sr11 | sr12 }
     ID                   14 }
```

B.6   Organizational Role

Attribute **commonName** is used for naming.

organization or **organizationalUnit** can be the immediate superior of entries of object class **organizationalRole**.

```
sr15 STRUCTURE-RULE ::= {
     NAME FORM            orgRoleNameForm
     SUPERIOR RULES       { sr2 | sr3 | sr4 }
     ID                   15 }

sr16 STRUCTURE-RULE ::= {
     NAME FORM            orgRoleNameForm
     SUPERIOR RULES       { sr10 | sr11 | sr12 }
     ID                   16 }
```

B.7   Group of Names

Attribute **commonName** is used for naming.

locality, **organization** or **organizationalUnit** can be the immediate superior of entries of object class **groupOfNames**.

```
sr17 STRUCTURE-RULE ::= {
     NAME FORM            gonNameForm
     SUPERIOR RULES       { sr5 | sr6 | sr7 | sr8 | sr9 }
     ID                   17 }

sr18 STRUCTURE-RULE ::= {
     NAME FORM            gonNameForm
     SUPERIOR RULES       { sr2 | sr3 | sr4 }
     ID                   18 }

sr19 STRUCTURE-RULE ::= {
     NAME FORM            gonNameForm
     SUPERIOR RULES       { sr10 | sr11 | sr12 }
     ID                   19 }
```

B.8 Residential Person

Attribute **commonName** and optionally **streetAddress** is used for naming.

locality is the immediate superior of entries of object class **residentialPerson**.

```
sr20 STRUCTURE-RULE ::= {
    NAME FORM           resPersonNameForm
    SUPERIOR RULES      { sr5 | sr6 | sr7 | sr8 | sr9 }
    ID                  20 }
```

B.9 Application Entity

Attribute **commonName** is used for naming.

applicationProcess is the immediate superior of entries of object class **applicationEntity**.

```
sr21 STRUCTURE-RULE ::= {
    NAME FORM           applEntityNameForm
    SUPERIOR RULES      { sr24 | sr25 }
    ID                  21 }
```

B.10 Device

Attribute **commonName** is used for naming.

organization or **organizationalUnit** can be the immediate superior of entries of object class **device**.

```
sr22 STRUCTURE-RULE  ::= {
    NAME FORM           deviceNameForm
    SUPERIOR RULES      { sr2 | sr3 | sr4 }
    ID                  22 }
```

```
sr23 STRUCTURE-RULE      ::= {
    NAME FORM       deviceNameForm
    SUPERIOR RULES      { sr10 | sr11 | sr12 }
    ID      23 }
```

B.11 Application Process

Attribute **commonName** is used for naming.

organization or **organizationalUnit** can be the immediate superior of entries of object class **applicationProcess**.

```
sr24 STRUCTURE-RULE ::= {
    NAME FORM           applProcessNameForm
    SUPERIOR RULES      { sr2 | sr3 | sr4 }
    ID                  24 }
```

```
sr25 STRUCTURE-RULE ::= {
    NAME FORM       applProcessNameForm
    SUPERIOR RULES      { sr10 | sr11 | sr12 }
    ID      25 }
```

B.12 Alternative Structure Rule for Locality

If the **stateOrProvinceName** attribute is used for naming locality and locality constrained to existing only as an immediate subordinate of country, then one additional structure rule is required to define this.

```
sr26 STRUCTURE-RULE ::= {
    NAME FORM           sOPNameForm
    SUPERIOR RULES      { sr1 }
    ID                  26 }
```

In addition the structure rules **sr4**, **sr7**, **sr12**, **sr17**, and **sr20** must be modified to include **sr26** within their respective list of superior structure rule as follows.

```
sr4 STRUCTURE-RULE ::= {
    NAME FORM           orgNameForm
    SUPERIOR RULES      { sr5 | sr6 | sr7 | sr8 | sr9 | sr26 }
    ID                  4 }

sr7 STRUCTURE-RULE ::= {
    NAME FORM       locNameForm
    SUPERIOR RULES      { sr5 | sr6 | sr7 | sr8 | sr9 | sr26 }
    ID      7 }

sr12 STRUCTURE-RULE ::= {
    NAME FORM           orgUnitNameForm
    SUPERIOR RULES      { sr5 | sr6 | sr7 | sr8 | sr9 | sr26 }
    ID                  12 }

sr17 STRUCTURE-RULE ::= {
    NAME FORM           gonNameForm
    SUPERIOR RULES      { sr5 | sr6 | sr7 | sr8 | sr9 | sr26 }
    ID                  17 }

sr20 STRUCTURE-RULE ::= {
    NAME FORM           resPersonNameForm
    SUPERIOR RULES      { sr5 | sr6 | sr7 | sr8 | sr9 | sr26 }
    ID                  20 }
```

Annex C

Amendments and corrigenda

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

This edition of this Directory Specification includes the following amendments:

–   Amendment 1 for Certificate Extensions;

–   Amendment 3 for Contexts.

This edition of this Directory Specification includes the following technical corrigenda correcting the defects reported in the following defect reports (some parts of some of the following Technical Corrigenda may have been subsumed by the amendments that formed this edition of this Directory Specification):

There were no defect reports against the previous edition of this Directory Specification

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