

INTERNATIONAL STANDARDIZED PROFILE

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ISP
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Information technology — International Standardized Profile FDI11 — Directory data definitions — Common Directory Use (Normal)

*Technologies de l'information — Profil normalisé international FDI11 —
Définitions de données du répertoire — Utilisation commune du répertoire
(normale)*



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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 or 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 JTC1. In addition to developing International Standards, ISO/IEC JTC1 has created a Special Group on Functional Standardization for the elaboration of International Standardized Profiles.

An International Standardized Profile is an internationally agreed, harmonized document which identifies a standard or group of standards, together with options and parameters, necessary to accomplish a function or set of functions.

Draft International Standardized Profiles are circulated to national bodies for voting. Publication as an International Standardized Profile requires approval by at least 75 % of the national bodies casting a vote.

This International Standardized Profile ISO/IEC ISP 10616 was prepared with the collaboration of

- Asia-Oceania Workshop (AOW);
- European Workshop for Open Systems (EWOS);
- Open Systems Environment Implementors' Workshop (OIW).

Annexes A to D form an integral part of this International Standardized Profile. Annexes E and F are for information only.

Introduction

The concept and structure of International Standardized Profiles for Information Systems are laid down in the Technical Report ISO/IEC TR 10000. The purpose of an International Standardized Profile is to recommend when and how certain information technology standards shall be used. This International Standardized Profile specifies application profile FDI11 as defined in the Technical Report ISO/IEC TR 10000-2.

This International Standardized Profile one of a set of International Standardized Profiles relating to the Directory (see TR 10000-2).

This International Standardized Profile profiles information to be stored within the Directory which is common to a variety of applications. Information which is specific to certain applications may be specified by other Profiles.

To support the implementation of the Directory as defined by CCITT Rec. X.500-series | ISO/IEC 9594, this ISP gives requirements that are applicable to implementations of DSAs. Additionally, these requirements may guide Directory users and administrative authorities in defining their needs for the use of the Directory.

The primary objective of this International Standardized Profile is to define the minimum capabilities that DSAs must have to support a basic common view of Directory information. It does this by specifying minimum set of structure and naming elements for the DIT which a DSA must be capable of holding, and other minimum schema requirements.

This International Standardized Profile does not limit DSAs to these minimum capabilities - a DSA that complies with this International Standardized Profile and has no additional information handling (storage, retrieval and modification) capabilities may not be adequate for many purposes, and implementors are strongly encouraged to provide such additional capabilities.

Likewise, this International Standardized Profile does not limit Naming Authorities in any way, e.g., restrict their selection of object classes or naming attributes to those which are required to be supported by this International Standardized Profile. Rather, it guarantees that selections made within the scope of this International Standardized Profile will be within the capabilities of DSAs compliant with it.

Information technology - International Standardized Profile

FDI 11 - Directory data definitions - Common Directory Use (Normal)

1 Scope

1.1 General

This International Standardized Profile profiles information to be stored within the Directory which is common to a variety of applications. Information which is specific to certain applications may be profiled by other International Standardized Profiles.

The Directory has been designed to support multiple applications, drawn from a wide range of possibilities. The nature of the totality of applications supported will govern which objects are stored in the Directory. Applications may be very specific, such as the provision of distribution lists for electronic mail, or generic, such as the 'inter-personal communications directory' application. The Directory provides the opportunity to exploit commonalities among applications.

To support the implementation of the Directory as defined by CCITT Rec. X.500-series | ISO/IEC 9594, this International Standardized Profile gives requirements that are applicable to implementations of Directory System Agents (DSAs). Additionally, these requirements may guide Directory users and administrative authorities in use of the Directory.

The primary objective of this International Standardized Profile is to define the minimum capabilities that DSAs have to support. It does this by specifying minimum set of structure and naming elements for a conformant DSA and other minimum schema requirements (see 5.1).

This International Standardized Profile does not limit DSAs to these minimum capabilities - a DSA that complies with this International Standardized Profile and has no additional information handling (storage, retrieval and modification) capabilities may not be adequate for many purposes, and implementors are strongly encouraged to provide such additional capabilities.

Likewise, it does not limit Naming Authorities in any way, e.g., restrict their selection of object classes or naming attributes to those which are required to be supported by this International Standardized Profile. Rather, it guarantees that selections made within the scope of this International Standardized Profile will be within the capabilities of DSAs compliant with this International Standardized Profile.

In addition, interworking between DSAs which comply with this International Standardized Profile will be greatly facilitated on this minimum basis of structure and naming rules.

Clause 6 defines the minimum set of structure and naming elements for entries representing objects commonly used

by multiple applications. Other International Standardized Profiles may refer to this clause and make use of the defined minimum structure, and may extend this structure for application specific information. The minimum structure is defined within the scope of annex B of CCITT X.521 | ISO/IEC 9594-7 which is not an integral part of the specification.

Clause 7 deals with object classes which are common to multiple applications. Clauses 8 and 9 deal with attribute types and attribute syntaxes, respectively, used by entries belonging to these object classes. This is done by reference to and within the scope of CCITT Rec. X.520 | ISO/IEC 9594-6 and CCITT Rec. X.521 | ISO/IEC 9594-7.

The Directory Access Protocol (DAP) and the Directory System Protocol (DSP), as defined by CCITT Rec. X.500 series | ISO/IEC 9594, can be used to access information stored in a Directory Information Base (DIB) fragment which is profiled by this International Standardized Profile.

NOTE - This International Standardized Profile is a profile for the 1988 edition of the Directory Specifications and introduces some additional concepts which have subsequently been introduced into the 1993 edition of the Directory Specifications. These concepts include

- types of object classes : abstract, structural or auxiliary;
- structure elements which correspond to structure rules and name forms; and
- the Protocol Information attribute.

These concepts are no longer aligned with the 1993 edition of the Directory Specifications.

1.2 Position within the taxonomy

This International Standardized Profile is identified in ISO/IEC TR 10000-2 as "FDI11 - Directory data definitions - Common Directory Use (Normal)".

1.3 Scenario

A Directory user (e.g., an application-process), by means of its associated Directory User Agent (DUA), obtains Directory information by accessing directly or indirectly one or more DSAs of the Directory (see figure 1).

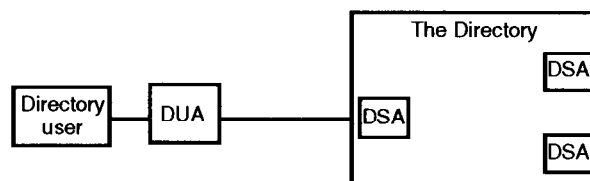


Figure 1 - Access to the Directory

2 Normative references

The following documents contain provisions which, through reference in this text, constitute provisions of this International Standardized Profile. At the time of publication, the editions indicated were valid. All documents are subject to revision, and parties to agreements based on this International Standardized Profile are warned against automatically applying any more recent editions of the documents listed below, since the nature of references made by ISPs to such documents is that they may be specific to a particular edition. Members of IEC and ISO maintain registers of currently valid International Standards and ISPs, and CCITT maintains published editions of its current Recommendations.

This International Standardized Profile profiles the 1988 edition of the Directory Specifications.

Corrigenda to the base standards referenced : See annex C for a complete list of these documents which are used in this International Standardized Profile.

2.1 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.208:1988, *Data Communications - Open Systems Interconnection (OSI)- Specification of Abstract Syntax Notation One (ASN.1)*.
- ISO/IEC 8824:1990, *Information technology - Open Systems Interconnection - Specification of Abstract Syntax Notation One (ASN.1)*.
- CCITT Recommendation X.209:1988, *Data Communications - Open Systems Interconnection (OSI)- Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*.
- ISO/IEC 8825:1990, *Information technology - Open Systems Interconnection - Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1)*.
- CCITT Recommendation X.500:1988, *Data Communication Networks - The Directory - Overview of Concepts, Models and Services*.
- ISO/IEC 9594-1:1990, *Information technology - Open Systems Interconnection - The Directory - Part 1: Overview of concepts, models and services*.
- CCITT Recommendation X.501:1988, *Data Communication Networks - The Directory - Models*.
- ISO/IEC 9594-2:1990, *Information technology - Open Systems Interconnection - The Directory - Part 2: Models*.
- CCITT Recommendation X.509:1988, *Data Communication Networks - The Directory - Authentication Framework*.
- ISO/IEC 9594-8:1990, *Information technology - Open Systems Interconnection - The Directory - Part 8: Authentication framework*.
- CCITT Recommendation X.511:1988, *Data Communication Networks - The Directory - Abstract Service Definition*.
- ISO/IEC 9594-3:1990, *Information technology - Open Systems Interconnection - The Directory - Part 3: Abstract service definition*.
- CCITT Recommendation X.518:1988, *Data Communication Networks - The Directory - Procedures for Distributed Operation*.
- ISO/IEC 9594-4:1990, *Information technology - Open Systems Interconnection - The Directory - Part 4: Procedures for distributed operation*.
- CCITT Recommendation X.519:1988, *Data Communication Networks - The Directory - Protocol Specification*.
- ISO/IEC 9594-5:1990, *Information technology - Open Systems Interconnection - The Directory - Part 5: Protocol specifications*.
- CCITT Recommendation X.520:1988, *Data Communication Networks - The Directory - Selected Attribute Types*.
- ISO/IEC 9594-6:1990, *Information technology - Open Systems Interconnection - The Directory - Part 6: Selected attribute types*.
- CCITT Recommendation X.521:1988, *Data Communication Networks - The Directory - Selected Object Classes*.
- ISO/IEC 9594-7:1990, *Information technology - Open Systems Interconnection - The Directory - Part 7: Selected object classes*.

2.2 Additional references

- CCITT Recommendation T.61:1988, *Character Repertoire and Coded Character Sets for the International Teletex Service*.
 - CCITT Recommendation X.581:1992, *Directory Access Protocol - Protocol Implementation Conformance Statement (PICS) Proforma*.
 - CCITT Recommendation X.582:1992, *Directory System Protocol - Protocol Implementation Conformance Statement (PICS) Proforma*.
- NOTE - Implementors are advised to refer also to the Directory Implementor's Guide of CCITT (see annex E).
- ISO/IEC 2022:1994, *Information technology - Character code structure and extension techniques*.
 - ISO 3166:1988, *Codes for the representation of the names of countries*.
 - ISO/IEC TR 10000-1:1992, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 1: Framework*.
 - ISO/IEC TR 10000-2:1994, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 2: Principles and Taxonomy for OSI Profiles*.

3 Definitions

For the purposes of this International Standardized Profile, the following definitions apply.

3.1 General

3.1.1 auxiliary object class: A kind of object class used to specify mandatory and optional attributes that may be associated as a package with entries having various structural object classes.

3.1.2 structural object class: A kind of object class used in the structural specification of the DIT. Each object entry has a specific associated structural object class which specifies its allowed position in the DIT and its name form.

3.1.3 structure element: An element of a structure rule specification for the DIT.

Other terms are used as defined in CCITT Rec. X.500:1988 series I ISO/IEC 9594:1990.

3.2 Support level

To specify the support level of protocol features for this International Standardized Profile, the following terminology is defined.

3.2.1 mandatory; m : Mandatory requirement for support. A feature (object class, attribute type, attribute syntax) is supported by a DSA implementation if the DSA is able to process the feature in accordance with the base standard or as specified in this International Standardized Profile (see also clauses 7.1, 8.1 and 9).

3.2.2 optionally supported; o : The support of the feature (object class, attribute type, attribute syntax) is left to the implementor of the DSA.

4 Abbreviations

Following abbreviations are used as defined in CCITT Rec. X.500 series I ISO/IEC 9594 or in ISO/IEC TR 10000-1 :

AVA	Attribute Value Assertion
DAP	Directory Access Protocol
DIB	Directory Information Base
DIT	Directory Information Tree
DSA	Directory System Agent
DSP	Directory System Protocol
DUA	Directory User Agent
ISP	International Standardized Profile
PRL	Profile Requirements List
RDN	Relative Distinguished Name

5 Conformance

Conformance to this International Standardized Profile concerns the type of information which DSAs shall support. Call for support of a certain type of information means that a DSA shall be able to store in and retrieve from its DIB fragment information of that type.

This ability of a DSA shall be capable of being tested by setting up suitable test suites. The conformance statements of this International Standardized Profile lay down the range of information for suitable DSA test suites.

In practice, the behaviour of an actual DSA may depend on multiple conditions, like access control, or schema or other restrictions applied for administrative reasons. Therefore test suites, even if applicable in principle, cannot be performed successfully in all situations. A DSA is conformant according to this International Standardized Profile if the DSA, after suitable set-up, is able to successfully carry out test suites within the range of information defined in this International Standardized Profile.

NOTE - Suitable set-up is implied within this International Standardized Profile.

5.1 DSA Conformance

DSA conformance requirements involve

- the support of the minimum set of structure and naming elements as specified in clause 6;
- the support of object classes as specified in clause 7;
- the support of attribute types as specified in clause 8; and
- the provision of checking rules and matching rules as specified in clause 9.

In addition, a PICS shall be provided stating support or non-support of each option on object classes and attribute types identified in A.6.4, and of the regional requirements on T61Strings as identified in A.6.5.4.

NOTE - It is not required of a DSA to be capable of removing or modifying entries immediately subordinate to the root since this may affect multiple DSAs.

5.2. DUA Conformance

DUAs typically need schema information as outlined in this International Standardized Profile for a sensible use of the Directory. However, this International Standardized Profile makes no statements about DUA conformance.

6 Minimum set of structure and naming elements for DIT

The purpose of clause 6 is to define a minimum set of structure and naming elements for a DIT. This provides locations for entries of selected object classes, allowing different applications to retrieve common information in a unified way. Conformant implementations shall be at least capable of holding entries which lie within this minimum DIT structure. Conformant implementations may, in addition, be capable of holding entries which lie outside this structure.

NOTES

1 The requirements of clause 6 are less restrictive than the DIT structures as suggested in ISO/IEC 9594-7, annex B.

2 It is recommended that DSAs should not be limited to these minimum structure rules, but should rather be freely configurable with respect to the schema that can be supported.

3 This International Standardized Profile only requires a conformant implementation to be able to ensure compliance with the structure rules defined in this ISP. It is not required to be able to ensure compliance with the full set of structure rules defined in CCITT Rec. X.521 | ISO/IEC 9594-7, annex B.

6.1 Structure elements

In order to specify the minimum set of structure and naming elements, A.6.5.1 lists a set of structure elements for selected object classes. Entries which comply with one of these elements form the minimum structure capability of the DIT. Compliance of entries to structure elements is defined in the following.

Specification of a structure element involves

- assigning an identifier to it;
- indicating the structural object class to which it applies;
- indicating its superior structure elements; and
- indicating the naming attributes of the structural object class to which it applies.

The structural object class of an entry is the single object class which regulates the naming attribute(s) which the entry must have in relation to the immediate superior of this entry. In addition, the structural object class regulates the presence of attributes in the same way as other object classes.

For the purpose of the definition of the minimum set of structure and naming elements, the structural object class is defined by the 'Structural Object Class' column of A.6.5.1.

An entry complies with a structure element if

- its superior entry complies with at least one of the superior structure elements;
- it is associated with the structural object class; and
- its RDN is formed using the naming attribute(s).

The form of an entry's name is determined by the structure element with which the entry complies: the attribute(s) for the entry's RDN are provided by the naming attribute(s) indicated by this structure rule and the form of the superior's name (which is part of entry's name) is determined by the superior structure element. If there are multiple structure elements for the same object class, multiple forms for naming entries of this object class are assigned by these structure elements.

A.6.5.1 specifies structure elements for the minimum DIT structure. The first row is for descriptive purposes only, there is no root entry and thus no object class and no structure element for the root.

6.2 Object class relationships

For the purposes of this International Standardized Profile, the ruling structural object class of an entry (i.e. the one to which the structure elements described above relate) shall be taken as that of the lowermost registered structural object class for the entry (i.e. the one which has no registered subclasses).

Thus, the ruling structural object class for an entry of object class DSA shall be considered to have dSA as its ruling structural object class, and not applicationEntity (of which dSA is a subclass). Any entry that contains an object class that is a subclass of a standard object class (such as device or organization) is not within the scope of these structure elements (although a DSA may support them).

This International Standardized Profile calls for support of entries which comply with one of the structure elements listed in A.6.5.1 (this implies their association with the structural object class and its superclass(es)). However, this International Standardized Profile makes no requirement or restriction on the possession or otherwise by entries complying with these structure elements, of auxiliary object classes and associated attributes. The possession of such object classes and attributes is allowed by CCITT Rec. X.500 | ISO/IEC 9594 according to the concept of unregistered object classes (see CCITT Rec. X.501 | ISO/IEC 9594-2, note in 9.4.1).

6.3 Auxiliary object classes

This International Standardized Profile identifies one auxiliary object class ISP Application Entity for entries in the DIT (see A.6.5.2). Other ISPs may refer to the structure elements of A.6.5.1 and may identify additional (auxiliary) object classes for these elements, thus extending the minimum DIT.

7 Object Classes

7.1 Standard Object Classes

Standard object classes defined within CCITT Rec. X.521 | ISO/IEC 9594-7 shall be supported as specified in A.6.4.1.1.

Support of these object classes by a DSA conformant with this International Standardized Profile requires the DSA to be able to store, modify and retrieve, via Directory operations, an entry of its fragment of the DIT, if the entry

is associated with supported object classes and the following conditions are fulfilled:

- a) The entry lies within the DIT structure described in clause 6 and in A.6.5.1;
- b) The entry contains all MUST CONTAIN attributes of its object classes;
- c) The entry contains no other than MUST CONTAIN and MAY CONTAIN attributes of its object classes.

Conformant DSAs shall accept entries which explicitly indicate Top in their object class attribute. Indication of object class Top is optional according to CCITT Rec. X.501 | ISO/IEC 9594-2, 9.4.2.

Support of a standard object class implies support of its mandatory attribute types (see A.6.4.2.1) and support of its optional attribute types (see A.6.4.2.1 and A.6.4.2.2) for which support is claimed for the DSA.

A conformant DSA shall reject requests for creation or modification of entries that as a consequence would not fulfill the condition b) and shall reply with an update error indicating an object class violation.

A conformant DSA may accept or reject requests for creation or modification of entries that as a consequence would not fulfill one or more of the conditions a) and c), depending on whether or not the scope of the schema operated by the DSA exceeds the scope of the schema laid down in this International Standardized Profile.

In particular, a conformant DSA may, but is not required to, accept entries which have additional attributes not identified by any of its object classes. Such entries are allowed by the base standard according to the concept of unregistered object classes (see CCITT Rec. X.501 | ISO/IEC 9594-2, note in 9.4.1).

The above condition a) is not applicable for entries of object class alias, as clause 6 gives no rules for such entries. A conformant DSA shall allow the addition of alias objects if the name of the alias entry has a correct form (according to clause 6) with respect to the structural object class of the aliased object. This implies that a conformant DSA shall at least support alias entries in those positions where entries of the structural object class of the aliased entry shall be supported.

7.2 Additional Object Classes

The following additional object classes are defined for optional support by conformant DSA implementations (see also A.6.4.1.2).

Support of an additional object class implies support of its attribute types (see A.6.4.2.2) for which support is claimed for the DSA.

7.2.1 ISP Application Entity

The ISP Application Entity object class is used to define entries representing ISP related application entities. It describes information about underlying lower layer protocols and upper layer profiles which are implemented, AETitle and the supported transfer syntaxes of that application entity.

ispApplicationEntity OBJECT-CLASS -- Auxiliary

```
MAY CONTAIN {
    protocolInformation,
    ulProfileInformation,
    applicationEntityOID,
    transferSyntaxesSupported }
```

```
::= { iso(1) standard(0) fdi11(10616)
    object-class(6) 1 }
```

Note - This object class must be auxiliary since it may be required to be applicable to any subclass of Application Entity, e.g. DSA.

7.2.2 Use of the ISP Application Entity Object Class

As the ISP Application Entity object class is an auxiliary object class, entries shall not be created based on this object class only, but have to be combined with a structural object class.

The ISP Application Entity object class is intended to provide additional attributes to the Application Entity object class or any of its subclasses. The 1988 edition of the Directory Specifications specifies that when an entry is created from more than one object, an unregistered object class has to be defined to combine the characteristics of those object classes.

NOTE - The unregistered object class facility, available in the 1988 edition of the Directory Specifications, is deprecated in the 1993 edition in favour of the use of DIT content rules.

An implementation that claims conformance to the ISP Application Entity object class shall be able to store, modify and retrieve entries associated with the ISP Application Entity object class combined with the Application Entity object class and with the DSA object class.

8 Attribute Types

8.1 Standard Attributes Types

The attribute types listed in A.6.4.2.1 are defined in CCITT Rec. X.520 | ISO/IEC 9594-6. They are used in conjunction with the standard object classes specified in A.6.4.1.1, as either mandatory or optional attributes. They shall be supported as specified in A.6.4.2.1.

A DSA conformant with this International Standardized Profile shall support an attribute type as follows:

- a) The DSA shall perform, on the original inclusion or on a subsequent modification attempt of an attribute, the checking algorithm which is associated with the syntax of the attribute, when required (see 9.1.1 and 9.2);
- b) The DSA shall check that the number of attribute values complies with the MultiValued element of the attribute definition;
- c) The DSA shall check that the attribute value(s) conform with the bounds defined in CCITT X.520 annex C (which is not an integral part of ISO/IEC 9594-6);

d) The DSA shall support the matching algorithm, if any, that is associated with the syntax of the attribute (see 9.3), and shall execute this matching algorithm in a manner that conforms with CCITT Rec. X.500 series 1 ISO/IEC 9594 requirements as clarified in 9.3.

8.2 Additional Attribute Types

The following additionally defined attribute types are defined for optional support by conformant DSA implementations (see also A.6.4.2.2).

8.2.1 Protocol Information

In the 1993 edition of the Directory Specifications, a Protocol Information attribute type has been included, which is used by this International Standardized Profile as part of the ISP Application Entity object class specification. This attribute type definition is copied here for easy reference, and it is re-defined in the style of the 1988 edition.

```

protocolInformation    ATTRIBUTE

    WITH ATTRIBUTE SYNTAX    ProtocolInformation

    MATCHES FOR EQUALITY

    ::= { joint-iso-ccitt(2) ds(5) attributeType(4) 48 }

ProtocolInformation    ::= SEQUENCE {

    nAddress    OCTET STRING,

    profiles    SET OF OBJECT IDENTIFIER }

```

The Protocol Information attribute type is intended to supplement the Presentation Address attribute type by allowing profile information to be associated with some or all network addresses listed in the nAddress component of the Presentation Address attribute. A Protocol Information attribute lists only those network addresses to which profile information is associated, and for each such network address one or more object identifiers referring to lower layer profile specifications.

It is necessary to allocate object identifiers to such profile specifications for this attribute type to be useful. Transport layer ISPs have such object identifiers allocated.

Two values of the Protocol Information attribute type shall match if and only if they have identical nAddress values, i.e., if the two compared octet strings are of the same length and corresponding octets are identical.

8.2.2 Upper Layer Profile Information

The Upper Layer Profile Information attribute type associates with each application entity the object identifiers of the profiles which are implemented for that application entity.

```

ulProfileInformation    ATTRIBUTE

    WITH ATTRIBUTE-SYNTAX    OBJECT IDENTIFIER

    MATCHES FOR EQUALITY

    MULTIPLE VALUE

```

```

::= { iso(1) standard(0) fdi11(10616)
      attributeType(5) 1 }

```

8.2.3 Application Entity OID

The Application Entity OID attribute type specifies the object identifier which is assigned to the application entity.

```

applicationEntityOID    ATTRIBUTE

    WITH ATTRIBUTE-SYNTAX    OBJECT IDENTIFIER

    SINGLE VALUE

    EQUALITY MATCHING RULE
        objectIdentifierMatch

    ::= { iso(1) standard(0) fdi11(10616)
          attributeType(5) 2 }

```

8.2.4 Transfer Syntaxes Supported

The Transfer Syntaxes Supported attribute type specifies the object identifier(s) of transfer syntax(es) and/or the encoding rules that the object (an OSI application entity) supports.

```

transferSyntaxesSupported    ATTRIBUTE

    WITH ATTRIBUTE-SYNTAX    OBJECT IDENTIFIER

    EQUALITY MATCHING RULE
        objectIdentifierMatch

    MULTIPLE VALUE

    ::= { iso(1) standard(0) fdi11(10616)
          attributeType(5) 3 }

```

9 Attribute Syntaxes

Implementations conformant with this International Standardized Profile shall support the attribute syntaxes as listed in A.6.5.2 (they are explicitly defined in CCITT Rec. X.520 | ISO/IEC 9594-6).

Support of an attribute syntax implies

a) the ability to check values of a supported attribute syntax for syntactical correctness in compliance with limitations as defined by CCITT X.520, annex C and additional rules stated in this clause; and

b) the ability to perform matches for equality, for matching substring, and for relative ordering if required by the attribute syntax definition, according to rules defined in CCITT Rec. X.520 | ISO/IEC 9594-6 and additional rules stated in this International Standardized Profile, 9.4.

9.1 Handling of T61Strings

Many attribute syntaxes make use of T61Strings. The following subclauses 9.1.1 to 9.1.3 indicate how these shall be handled for checking and matching.

NOTE - This clause identifies the use of character set registration entry 126, right-hand part of Latin/Greek, within attributes using the T61String attribute syntax. As this character set is not permitted by ISO/IEC 8824 to appear in the datatype T61String, support for character set registration entry 126 is optional.