INTERNATIONAL STANDARDIZED PROFILE

ISO/IEC ISP 12073

First edition
2000-02-15

Information technology — International Standardized Profile FDI6 — Directory use by EDI

Technologies de l'information — Profil normalisé international FDI6 — Utilisation EDI de l'Annuaire

Reference number
ISO/IEC ISP 12073:2000(E)

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Printed in Switzerland

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Foreword

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

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. In addition to developing International Standards, ISO/IEC JTC 1 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 a 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.

International Standardized Profile ISO/IEC ISP 12073 was prepared with the collaboration of

— Asia-Oceania Workshop (AOW);

— European Workshop for Open Systems (EWOS);

— Open Systems Environment Implementors' Workshop (OIW).

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

Annexes A, B and C form a normative part of this International Standardized Profile. Annexes D to G are for information only.

Introduction

The concept and structure of International Standardized Profiles for Information Systems are laid down in IS 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 FDI6 which is defined in TR 10000-2.

ISO/IEC ISP 12073 is one of a set of International Standardized Profiles relating to the Directory (see TR 10000-2). It specifies the schema and usage for EDI information to be stored in the Directory in accordance with ISO/IEC 9594:1988.

ISO/IEC ISP 10616 is a profile of information to be stored in the Directory which is common to a variety of applications. This International Standardized Profile augments that profile with EDI-specific information. In particular, this International Standardized Profile specifies a profile for the use of the Directory by EDI, using existing object class and attribute type definitions from the Directory Specifications themselves, and additional definitions. These existing and additional definitions are also intended to support the use of the Directory by users of EDI applications.

To support the implementation of the Directory as defined in ITU-T Rec. X.500-series | ISO/IEC 9594, this International Standardized Profile specifies 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 capabilities that DSAs must have to support an EDI view of Directory information. It does this by specifying structure and naming elements for the DIT which a DSA must be capable of holding, and other minimum schema requirements.

The conformance requirements stated in ISO/IEC ISP 10616 are also valid for the EDI specific information profiled by this International Standardized Profile.

Information technology — International Standardized Profile FDI6 — Directory use by EDI

1 Scope

1.1 General

Whereas ISO/IEC ISP 10616 defines the basic schema support requirements for DSAs, this International Standardized Profile has two functions. It (A) defines in Directory schema terms, the information that would be required to support EDI users in their use of the Directory to register, publish and acquire EDI identifiers and characteristics and (B) defines schema support requirements on DSAs that are to support this use of the Directory. The DSA conformance requirements defined by ISO/IEC ISP 10616 apply as a prerequisite to the requirements defined in this International Standardized Profile.

This specifies the structure of directory information for use by EDI applications, using existing object class and attribute type definitions from the Directory specifications themselves, and additional definitions, and specifies conformance requirements on DSAs. These existing and additional definitions are also intended to support the use of the Directory by users of EDI applications.

There are two aspects of EDI use of the Directory which are profiled by this International Standardized Profile:

- The schema requirements for a subtree of the DIT (The EDI Identifier Subtree) which may be established to maintain and publish EDI registrations and associated information;
- The schema requirements for DSAs supporting EDI Users, relevant to EDI User interactions between each other.

The conformance requirements for DSAs supporting the former are different from the requirements for DSAs supporting the latter.

The information profiled in this will enable EDI Users to:

- Access EDI User and application information using a distinguished name derived in a straightforward manner from an EDI identifier;
- Verify whether an EDI identifier has been registered;
- Obtain communications-related and other EDI information which may be required to initiate EDI interchanges with other EDI Users;
- Find all the EDI identifiers and other organizational entries associated with a particular EDI User.

1.2 Position within the taxonomy

This is identified in ISO/IEC TR 10000-2 as "Information technology - International Standardized Profile FDI6 - Directory Data Definitions - EDI Use of the Directory".

1.3 Scenario

An EDI registration organization, or an EDI administrator, or an EDI application (possibly supporting a human user) makes use of DUAs to store and retrieve EDI Directory information (Figure 1). Some EDI information is stored in a special part of the DIT devoted to EDI information only, for registration and publication purposes ("EDI Subtree" in the figure). Other information is stored in other parts of the DIT, in association with organizational information within the Directory. DSAs supporting such information must fulfil certain additional requirements.

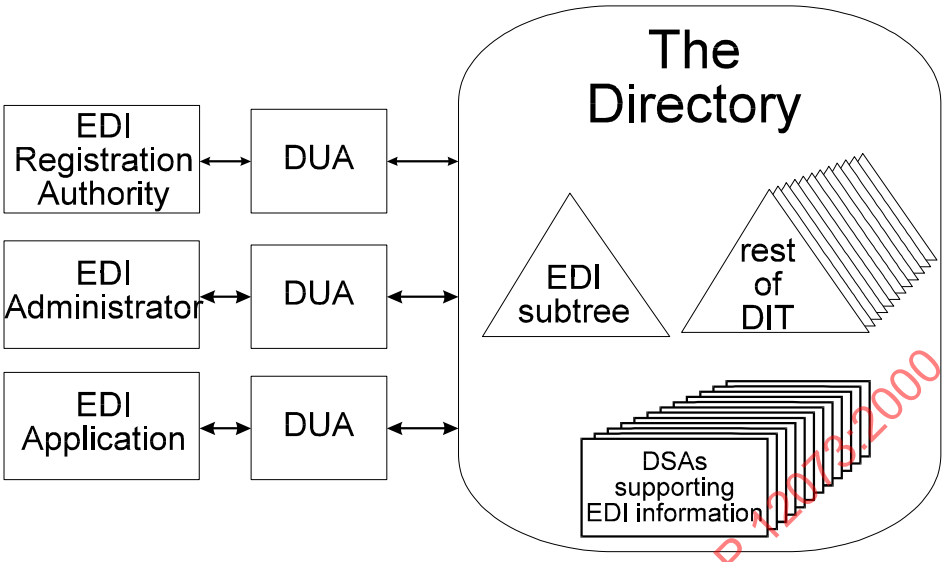

Figure 1 — Scenario for FDI6

This International Standardized Profile defines information within the Directory in such a way that an EDI application or EDI User can access EDI-related Directory information in the EDI Identifier Subtree or the Country/Organisational Tree, as defined in ISO/IEC ISP 10616.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard Profile. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard Profile are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO and IEC maintain registers of currently valid International Standards. ITU-T maintains a list of currently valid ITU-T Recommendations.

2.1 Paired ITU-T Recommendations | International Standards equivalent in technical content

ITU-T 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).*

ITU-T 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.*

ITU-T 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.*

ITU-T 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.*

ITU-T 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.*

ITU-T 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 normative references

ISO/IEC ISP 10616:1995, *Information technology - International Standardized Profile FDI11 - Directory data definitions - Common Directory Use (Normal).*

ISO/IEC ISP 11189:1997, *Information technology - International Standardized Profile FDI2 - Directory Data Definitions - MHS Use of the Directory.*

ISO/IEC TR 10000-1:1995, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 1: General principles and documentation framework.*

ISO/IEC TR 10000-2:1995, *Information technology - Framework and taxonomy of International Standardized Profiles - Part 2: Principles and Taxonomy for OSI profiles.*

ITU-T Recommendation X.581:1992, *Directory Access Protocol - Protocol Implementation Conformance Statement (PICS) Proforma.*

3 Terms and definitions

For the purposes of this International Standardized Profile, the terms and definitions given in the referenced standards apply. In addition, the following terms are defined.

3.1 General

Many of the definitions used in this International Standardized Profile may be found in the referenced standards.

The following derive from ISO/IEC ISP 10616:

Table 1 — Definitions and references

Term	Reference in ISO/IEC ISP 10616
Auxiliary object class	3.1.1
Structural object class	3.1.2
Structure Element	3.1.3

The following terms are defined for the purposes of this International Standardized Profile:

3.1.1
EDI User

The directory representation of a EDI Trading Partner identified by a registered EDI identifier. The term EDI User will be used throughout this document. An EDI User is normally an organization or organizational unit.

3.1.2
EDI Identifier

A unique identifier allocated to each EDI Registered Organisation used in the context of an EDI Sender/Recipient identifier within certain EDI Syntaxes (e.g. EDIFACT).

3.1.3
EDI Identifier Subtree

A subtree of the DIT, placed immediately beneath the root of the DIT, which contains entries for registration schemes and for EDI Registered Organisations.

3.1.4
EDI Identifier Root

The Directory entry which is the root of the EDI Identifier Subtree, and which is therefore a first-level entry.

3.1.5
EDI Registered Organisation
An organization which is identified by an EDI identifier registered in the context of one of those registration schemes whose directory entry is directly subordinate to the EDI identifier subtree root.

3.1.6
Subschema Group
A specification of one or more Directory schema components (object classes, attribute types, attribute syntaxes, matching rules, structure elements) or other identifiable features specified in base standards which together support a significant optional area of Directory schema.

3.1.7
EDI Trading Partner
A party (e.g. an EDI User) which participates in EDI trading.

3.1.8
EDI Trading Agreement
A set of mutually agreed rules which specify how trade is carried out electronically between EDI Trading Partners, attaching business semantics to EDI interchanges, messages and segments.

3.1.9
EDI Trading Profile
A set of information related to communications and EDI Trading Agreements concerning one particular EDI interchange capability of an EDI Trading Partner, as required by other EDI Trading Partners to be able to prepare and send an EDI interchange. An EDI Trading Profile does not include business related information. An EDI User may support one or more such EDI Trading Profiles.

3.1.10
EDI Trading Sub-profiles
A component of an EDI Trading Profile consisting of a set of attributes which describe one aspect of a particular EDI recipient's capabilities (i.e. Communications & Protocols; Security; Messages & Syntax; EDI Trading Agreement).

3.2 Support Level

3.2.1
Mandatory; m : mandatory requirement for support
A feature (object class, attribute type, attribute syntax, structure element) 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 ISO/IEC ISP 12073 (see also clauses 7, 8 and 9).

3.2.2
Optional; o: optional requirement for support
The support of the feature (object class, attribute type, attribute syntax, structure element), is left to the implementor of the DSA.

3.2.3
Conditional; c: Conditional requirement for support
The requirement to support the item depends on a specified condition. The condition and the resulting support requirements are stated separately.

4 Abbreviations

The following abbreviations are used as defined in [ISO/IEC 9594 | ITU-T X.500], in ISO/IEC TR 10000-1 or in other referenced documents:

APDU	Application Protocol Data Unit
ASN.1	Abstract Syntax Notation One
AVA	Attribute Value Assertion
DAP	Directory Access Protocol
DIB	Directory Information Base
DIT	Directory Information Tree
DMD	Directory Management Domain
DN	Distinguished Name
DSA	Directory System Agent
DSP	Directory System Protocol
DUA	Directory User Agent
EDI	Electronic Data Interchange
EDIRA	EDI Registration Authority (Project)
ERSC	EDI Registration Steering Committee
ISP	International Standardized Profile
MOU	Memorandum of Understanding
OID	Object Identifier
PRL	Profile Requirements List
RDN	Relative Distinguished Name

5 Conformance

5.1 DSA Conformance

5.1.1 Basic DSA Conformance to ISO/IEC ISP 10616

Conformance to ISO/IEC ISP 12073 implies conformance to ISO/IEC ISP 10616 as a precondition.

5.1.2 DSA conformance to Directory subschema group

ISO/IEC ISP 12073 specifies the following two Directory subschema groups:

- The EDI User subschema group: this specifies a Directory entry structure for holding the EDI relevant information for an EDI User in the Directory.
- The EDI Identifier Subtree subschema group: this specifies the top level of a DIT (subordinate to the Root) used to locate EDI User's entries, where the Directory Names identifying EDI User's entries are derived directly from those EDI identifier which do not contain the name of a Country.

A DSA conformant to this International Standardized Profile shall conform to the EDI User subschema group and may additionally claim conformance to the EDI Identifier subschema group.

5.1.3 DSA Conformance to EDI User subschema group

A DSA claiming conformance to the EDI User subschema group shall, after suitable set up, be capable of storing, modifying and retrieving entries which fulfil all of the following conditions:

- The entry lies within the scope of the minimum set of structure and naming elements of the DIT specified in 6.1 of ISO/IEC ISP 10616.
- The entry's object classes are part of the set of mandatory object classes specified in 7.1 and 7.2 and the subset of optional object classes (see 7.1 and 7.2) for which support is claimed for the DSA.

- The entry's attributes are part of the set of mandatory attribute types (as specified in 8.1 and 8.2) and the subset of optional attribute types (see 8.1 and 8.3) for which support is claimed for the DSA.

Storage and modification of entry information implies checking and matching of attribute values for which equality matching is defined for that attribute type; thus a conformant DSA shall be able to perform the checking and matching algorithms in accordance with clause 9 and ISO/IEC ISP 10616.

The requirements on DSAs formulated in ISO/IEC ISP 10616 with respect to supported object classes, supported attribute types and supported attribute syntaxes are also applicable to the additional supported object classes, supported attribute types and supported attribute syntaxes defined in ISO/IEC ISP 12073.

5.1.4 DSA Conformance to EDI Identifier Subtree subschema group

A DSA claiming conformance to EDI Identifier subtree requirements shall, after suitable set up, be capable of storing, modifying and retrieving entries which fulfil all of the following conditions:

- The entry lies within the scope of the minimum set of structure and naming elements of the DIT specified in 6.3.
- The entry's object classes are part of the set of mandatory object classes specified in 7.1 and 7.2) and the subset of optional object classes (see 7.1 and 7.2) for which support is claimed for the DSA.
- The entry's attributes are part of the set of mandatory attribute types (as specified in 8.1 and 8.2) and the subset of optional attribute types (see 8.1 and 8.2) for which support is claimed for the DSA.

Storage and modification of entry information implies checking and matching of attribute values for which equality matching is defined for that attribute type; thus a conformant DSA shall be able to perform the checking and matching algorithms in accordance with clause 9 and ISO/IEC ISP 10616.

The requirements on DSAs formulated in ISO/IEC ISP 10616 with respect to supported object classes, supported attribute types and supported attribute syntaxes are also applicable to the additional supported object classes, supported attribute types and supported attribute syntaxes defined in ISO/IEC ISP 12073.

5.2 DUA and EDI Application Conformance

EDI administrators, human users, and applications, in accessing EDI information within the DIT, need to use DUAs to access attributes, object classes, etc., as defined in this International Standardized Profile. Such DUAs, to be useful, must support certain aspects of these elements (e.g. access, capture and rendition when appropriate). However, ISO/IEC ISP 12073 makes no statements about DUA nor EDI application conformance, while not precluding the use of the International Standardized Profile as a basis for stating conformance requirements (for example, as might be appropriate within a procurement specification).

A number of potential scenarios of an EDI application's use of the directory information profiled in this International Standardized Profile are outlined in annex F.

6 DIT structure

6.1 Introduction

The purpose of this clause is to relate information specified in ISO/IEC ISP 12073 to the minimum set of structure and naming elements defined in ISO/IEC ISP 10616 and ISO/IEC ISP 12073.

The DIT structure is related to specific data models which must be supported by DSAs claiming conformance to the relevant subschema groups.

Formal requirements on DSAs are defined in annex A. For a formal definition of support of DIT structures, see ISO/IEC ISP 10616).

NOTE Adding structure elements by means of A.6.5.1 and A.6.5.1.2 may lead to entries being inaccessible by DUAs that support only the minimum DIT structure of ISO/IEC ISP 10616.

6.2 EDI User Information structure

The following summarises the data model implemented by this International Standardized Profile relevant to DSAs supporting the EDI User Information subschema group. A fuller definition is given in Annex E.

Information relevant to an EDI User shall be placed in entries of the structural object classes **organization** or **organizationalUnit**[1]. Such an entry shall be distinguished by having the auxiliary object class value **eDIUser** in addition to its structural object class.

EDI User entries may be associated with multiple EDI Trading Profiles. Each EDI Trading Profile shall be modelled by an entry placed immediately subordinate to the relevant EDI User entry. This entry shall contain all of the information specific to the trading profile associated with it. Such an entry shall be distinguished by having the **eDITradingProfile** as its structural object class.

EDI Trading subprofiles may be associated with an EDI Trading Profile entry. Such subprofiles, if present, shall be marked by the entry having one or more of the following auxiliary object class values in addition to its structural object class:

- **eDICommunicationsSubprofile**
- **eDISecuritySubprofile**
- **eDISyntaxAndMessagesSubprofile**
- **eDITradingAgreementsSubprofile**

NOTE For efficiency reasons, the EDI Trading Profile entries associated with a particular EDI User should always be placed in the same DSA as the EDI User's own entry. However, there are no conformance requirements associated with this recommendation.

Structure elements that must be supported by DSAs claiming conformance to the EDI User Information subschema group are specified in annex A.

6.3 The EDI Identifier Subtree structure

The following summarises the data model implemented by this International Standardized Profile relevant to DSAs supporting the EDI Identifier Subtree subschema group. A fuller definition is given in annex D.

The EDI Identifier Subtree shall have as its root an entry placed immediately beneath the root of the DIT and which is of object class **eDIIdentifierRoot**.

This entry shall have an RDN of the attribute type **organizationName**, and its value shall be the PrintableString of the integer value of an ISO 6523 International Code Designator allocated by the ICD registration authority to the organization operating the EDI Identifier Root entry**.**

Each EDI registration scheme, which administers EDI Identifiers according to its prescribed scheme and rules is modelled by an entry of structural object class **eDIRegistrationScheme** (a subclass of organization), which shall be placed immediately subordinate to the **eDIIdentifierRoot** entry. Each entry of Object Class **eDIRegistrationScheme** shall be identified by means of an **organizationName**, the value of which shall be the PrintableString encoding of the integer value of an ISO 6523 International Code Designator allocated by the ICD registration authority to the particular eDIRegistrationScheme.

Each set of EDI User information shall be placed in an **eDIUser** entry. In accordance with 6.2, each such EDI User entry shall either be of object class **organization** or **organizationalUnit**. Alternatively an EDI User may be represented by an alias, placed within the EDI Identifier Subtree, if an **eDIUser** entry is located in another part of the DIT.

Each **eDIUser** entry within the EDI Identifier Subtree shall either be subordinate to the corresponding entry of object class **eDIRegistrationScheme**, or may alternatively be subordinate to another **eDIUser** entry (i.e. of object class **organization** or **organizationalUnit** and of **eDIUser** auxiliary object class).

---

1) EDI User information may, of course, be used in other contexts and to supplement other Structure Elements outside the context of this International Standardized Profile.

7 Object classes

7.1 Object Classes to be supported

The following Object Classes shall be supported by all DSAs claiming conformance to this International Standardized Profile in addition to those specified and mandated in ISO/IEC ISP 10616:

- **eDIUser**
- **eDITradingProfile**
- **eDICommunicationsSubprofile**
- **eDISecuritySubprofile**
- **eDISyntaxAndMessagesSubprofile**
- **eDITradingAgreementSubprofile**

The following Object Classes, mandated in ISO/IEC ISP FDI2, shall be supported by DSAs claiming conformance to this International Standardized Profile.

- **mHSUser**

In addition, the following Object Classes shall be supported by DSAs claiming conformance to the EDI Identifier Subtree subschema group.

- **eDIRegistrationScheme**
- **eDIIdentifierRoot**

7.2 Object Identifiers

The object identifier used as the parent vertex for the definition of object identifiers within this International Standardized Profile shall be:

fdi-6-oc ::= OBJECT IDENTIFIER {iso(1) standard(0) fdi6(12073) objectClass(6)}

7.3 EDI Communications Sub-profile Object Class

This auxiliary object class may be used to complement an EDI Trading Profile entry with those communications profile and addressing attributes which must necessarily be known prior to establishing communications with the EDI User.

```
eDICommunicationsSubprofile OBJECT CLASS
    SUBCLASS OF top
    MAY CONTAIN {
        eDIVan,
        localeAttributeSet,
        postalAttributeSet,
        oSIApplicationReferences,
        oSIApplicationType}
    ::= {fdi-6-oc1}
```

NOTE MHSUser attributes may be added to an ediUser's entry by means of the mHSUser object class, thus it is not explicitly listed above.

7.4 EDI Identifier Root Object Class

This structural object class is used to define the root entry of the EDI identifier subtree. It may contain information about the organization[2)] operating the registration scheme. Its subordinates will be the entries of individual EDI Identifier Registration schemes.

2) Such an international organization is currently being formed, related to the CEC TEDIS EDIRA Project.

```
eDIIdentifierRoot OBJECT CLASS
    SUBCLASS OF organization
    ::= {fdi-6-oc2}
```

There is a unique entry of this object class, which is named by an **organizationName** attribute. The value of the entry's RDN, is the **PrintableString** encoding of an International Code Designator registered by the ICD Registration Authority.

7.5 EDI Registration Scheme Object Class

This structural object class may be used to represent a particular EDI identifier registration scheme. It contains attributes describing the registration scheme such as references to the scheme's rules and the identity of the organization which operates the scheme in terms of the organization's name and address.

```
eDIRegistrationScheme OBJECT CLASS
    SUBCLASS OF organization
    MAY CONTAIN {
        description,
        eDISchemeRulesReference,
        eDISeeAlso}
    ::= {fdi-6-oc3}
```

Each entry of this object class is named by its organization name attribute, the value of which is a PrintableString encoding of the registration scheme's registered ISO 6523-ICD value.

7.6 EDI Security Sub-profile Object Class

This auxiliary object class may be used to add security attributes to an EDI Trading Profile.

```
eDISecuritySubprofile OBJECT CLASS
    SUBCLASS OF top
    MUST CONTAIN
    MAY CONTAIN {
        eDISecuredObject,     -- Interchange, Message, Data Element
        eDISecurityAgreement -- A Document identified by an Object Identifier.
        }
    ::= {fdi-6-oc4}
```

7.7 EDI Syntax and Messages Sub-profile Object Class

This auxiliary object class may be used to complement an EDI Trading Profile entry with attributes describing an EDI interchange syntax (EDIFACT etc.) and the EDI Messages supported.

```
eDISyntaxAndMessagesSubprofile OBJECT CLASS
    SUBCLASS OF top
    MAY CONTAIN {
        eDISyntax,          -- EDIFACT X12 TDI
        eDIMode,            -- Batch/Interactive
        eDIServiceMessages,
        eDIServiceSegments,
        eDIMessageCapability}
    ::= {fdi-6-oc5}
```

7.8 EDI Trading Agreement Sub-profile Object Class

This auxiliary object class may be used to complement a EDI Trading Profile entry with attributes describing the EDI Trading Agreement supported.

```
eDITradingAgreementSubprofile OBJECT CLASS
    SUBCLASS OF top
    MUST CONTAIN {
        eDITradingAgreementIdentifier}
    ::= {fdi-6-oc6}
```

7.9 EDI Trading Profile Object Class

This structural object class may be used to specify a directory entry to hold one of an EDI User's EDI Trading Profiles[3]. If attributes in an EDI Trading Profile entry have multiple values, including any derived from its sub profiles, then all values are considered to be valid when used in conjunction with any (possibly multiple) values of any other attribute declare in the Trading Profile.

```
eDITradingProfile OBJECT CLASS
    SUBCLASS OF top
    MUST CONTAIN {commonName}
    MAY CONTAIN {
        edIProfileReference,
        eDIMessageTypes,
        eDIInterchangeRoles
        eDIApplicationPriority,
        eDIBusinessFunctionQualifier}
    ::= {fdi-6oc7}
```

7.10 EDI User Object Class

This auxiliary object class is used to identify an entry as being an EDI User's entry. It qualifies a structure element which it augments as the root of a one level subtree which contain the user's EDI Trading Profile entries.

```
eDIUser OBJECT CLASS
    SUBCLASS OF top
    MAY CONTAIN {
        eDISeeAlso,              -- to reference other related Directory Entries
        eDIOtherRegistrations    -- to identify other related EDI registrations
        }
    ::= {fdi-6-oc8}
```

An entry of Object Class **eDIUser** may be supplemented by the mHSUser Auxiliary Object Class.

7.11 Additional Object Classes from other standards

The following Object class defined in FDI2 is required:

- **mHSUser**

There are no further requirements other than those specified in ISO/IEC ISP 10616.

8 Attribute types

8.1 Attributes to be supported

The following attribute types shall be supported in addition to those specified and mandated in ISO/IEC ISP 10616:

- **eDIApplicationPriority**
- **eDIAssociatedTradingProfile**
- **eDIBusinessFunctionQualifier**
- **eDIInterchangeRoles**
- **eDIMessageCapability**
- **eDIMessageTypes**
- **eDIMode**
- **eDIOtherRegistrations**
- **eDIProfile-reference**

---

3) The fact that a main entry and subordinate entries are created does not necessarily represent inefficiency so long as they are not maintained on different DSAs. There appears to be no other way of structuring a multiple record entry without creating over complex attributes

- **eDIReceptionPreferences**
- **eDISchemeRulesReference**
- **eDISecuredObject**
- **eDISeeAlso**
- **eDIServiceMessages**
- **eDIServiceSegments**
- **eDISyntax**
- **eDISecurityAgreement**
- **eDITradingAgreementIdentifier**
- **eDIVan**
- **oSIApplicationEntity**
- **oSIApplicationType**

8.2 Object Identifiers

The object identifier used as the parent vertex for the definition of attributes within this International Standardized Profile shall be:

fdi-6-at ::= OBJECT IDENTIFIER {iso(1) standard(0) fdi6(12073**) attributeType(5)}**

8.3 EDI Application Priority

This attribute is used to indicate the priority at which interchanges will be handled on reception relative to other Trading Profiles. The priority applies to all communications addresses (OSI, MHS and others) which are implied by using the Trading Profile.

eDIApplicationPriority ATTRIBUTE
WITH ATTRIBUTE-SYNTAX INTEGER {
low (0),
normal (1),
high (2)}
SINGLE VALUE
::= {fdi-6-at1}

8.4 EDI Associated Trading Profile References

The definition of a Trading Profile is only capable of representing a single EDI interchange syntax. This attribute is provided as a cross reference to other Trading Profiles using other EDI interchange syntax capabilities which may be used in conjunction with the trading profile containing the reference.

eDIAssociatedTradingProfile ATTRIBUTE
WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
MATCHES FOR EQUALITY
::= {fdi-6-at2}

8.5 EDI Business Function Qualifier

This attribute indicates what types of business can be conducted using the trading profile (e.g. invoicing, ordering etc.).

eDIBusinessFunctionQualifier ATTRIBUTE
WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
MATCHES FOR EQUALITY
::= {fdi-6-at3}

8.6 EDI Interchange Roles

This contains a summary of all EDI interchange roles which the EDI User system can assume within the Trading Profile. It is primarily used in directory search operations to aid selection of suitable Trading Profiles.

```
eDIInterchangeRoles ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        sender (0),
        receiver (1)}
        MATCHES FOR EQUALITY
        ::= {fdi-6-at4}
```

8.7 EDI message capability

Each value of this multivalued complex attribute describes and parameterizes one of the types of messages which can be used in the context of the Trading Profile. No matching rule is specified for this attribute, it cannot therefore be used in Directory search operations. This is considered to be a read only attribute.

```
eDIMessageCapability ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX MessageCapability
        ::= {fdi-6-at5}

MessageCapability ::= SEQUENCE {
        messageType          MessageType,
        version              Version,
        release              Release,
        directorySet         DirectorySet,
        implementationGuide      ImplementationGuideline,
        codingSceme          CodingSceme,
        interchangeRole      InterchangeRoles}

MessageType ::= PrintableString

Version ::= PrintableString

Release ::= PrintableString

DirectorySet ::= PrintableString

ImplementationGuideline ::= PrintableString

CodingSceme ::= PrintableString

InterchangeRoles ::= BIT STRING {
        sender (0),
        receiver (1)}
```

8.8 EDI Message Types

This contains a summary of all EDI message types which can be used within the Trading Profile. It is primarily used in Directory search operations to select suitable Trading Profiles.

```
eDIMessageTypes ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX PrintableString
        MATCHES FOR EQUALITY
        ::= {fdi-6-at6}
```

Two values match in accordance with the rules specified for caseIgnoreStringSyntax.

8.9 EDI Mode

To indicate whether EDI interchanges can be made in batch or interactive mode or both;

Two values match for equality if they correspond to the same bit string. Trailing zeroes are taken as having the value '0'.

```
eDIMode ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        batch (0),
        interactive (1)}
        SINGLE VALUE
        MATCHES FOR EQUALITY
        ::= {fdi-6-at7}
```

8.10 EDI Other Registrations

Some EDI organizations may be registered with different identifiers in different registration schemes. This attribute contains the identities of other EDI registrations which also identify the EDI User.

```
eDIOtherRegistrations ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
        MATCHES FOR EQUALITY
        ::= {fdi-6-at8}
```

8.11 EDI Profile reference

To contain a reference to an externally documented EDI Trading Profile (i.e. which is not explicitly described in the directory entry);

```
eDIProfileReference ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
        SINGLE VALUE
        MATCHES FOR EQUALITY
    ::= {fdi-6-at9}
```

8.12 Reception Preferences

This attribute indicates the preferences of communications method (e.g. Postal, MHS, FTAM...) for receipt for the Trading Profile. Occurrence of a method earlier in the sequence indicates a higher preference for that method.

```
eDIReceptionPreferences
    WITH  ATTRIBUTE-SYNTAX SEQUENCE OF INTEGER {
        any-method      (0),
        mhs-IPMS        (1), --     MHS - IPMS
        mhs-edims       (2), --     MHS - EDIMS
        ftam            (3), --     File Transfer
        tpmq            (4), --     Transaction Processing Message Queue
        tp              (5)  --     Transaction Processing
        }
    ::= {fdi-6-at10}
```

8.13 EDI Scheme Rules Reference

This attribute holds a reference to a document containing the rules of a particular EDI registration scheme. The rules may indicate which type of EDI organization is eligible for registration and the terms and conditions of being registered.

```
eDISchemeRulesReference ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX PrintableString
    SINGLE VALUE
    ::= {fdi-6-at11}
```

8.14 EDI Secured object

This indicates whether the security contained in an interchange applies to interchanges, messages, or data elements;

```
eDISecuredObject ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        interchange(0),
        message(1),
        data-element (2)}
        SINGLE VALUE
     ::= {fdi-6-at12}
```

8.15 EDI Security Agreement

This attribute carries the object identifier of a registered document which specifies the types and details of the specific security functions which shall be applied to interchanges within the trading profile.

```
eDISecurityAgreement ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX objectIdentifier
    SINGLE VALUE
    ::= fdi-6-at13}
```

8.16 EDI See Also

Contains references to other directory entries which contain further information relevant to the EDI User (e.g. an organizational entry).

```
eDISeeAlso ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
    ::= {fdi-6-at14}
```

8.17 EDI Service Messages

To indicate which service messages are supported in the EDI Trading Profile;

```
eDIServiceMessages ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        contrl-send-capable (0),
        contrl-expected-on-reception (1)}
        SINGLE VALUE
        ::= {fdi-6-at15}
```

8.18 EDI Service Segments

To indicate the service segments supported by the Trading Profile.

```
eDIServiceSegments ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX SEQUENCE {
            repertoire,
            character-coding,
            BIT STRING {
            sends-ascending-sequence-count (0),
            requires-ascending-sequence-count (1)}}
            SINGLE VALUE
        ::= {fdi-6-at16}

character-set ::= objectIdentifier

repertoire ::= objectIdentifier
```

8.19 EDI Syntax

EDI Interchange (EDIFACT, X12, TDI...) syntax supported by the Trading Profile;

```
ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX INTEGER {
        edifact (0),
        untdi (1),
        ansix12 (2),
        odette (3),
        HL7 (4)}
        MATCHES FOR EQUALITY
        SINGLE VALUE
        ::= {fdi-6-at17}
```

8.20 EDI Trading Agreement Identifier

Identifies an EDI Trading Agreement associated with the EDI Trading Profile.

```
eDITradingAgreementIdentifier ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
        SINGLE VALUE
        MATCHES FOR EQUALITY
        ::= {fdi-6-at18}
```

8.21 EDI Van

This attribute provides the commercial name of a Value Added Network Service through which the EDI User can be reached using the parameters specified in the trading profile.

```
eDIVan ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
        SINGLE VALUE
        MATCHES FOR EQUALITY
    ::= {fdi-6-at19}
```

8.22 OSI application references

This indicates one or more OSI application entities of the same OSI application type which will accept the interchanges specified in the trading profile.

```
oSIApplicationReferences ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
    ::= {fdi-6-at20}
```

8.23 OSI application type

This indicates the type of OSI application to be used in conjunction with the Trading Profile.

```
oSIApplicationType ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX INTEGER {
        ftam (0),
        mhs-ipms (1),
        mhs-edims (2),
        tpmq (3),
        tp (4)}
        SINGLE VALUE
        MATCHES FOR EQUALITY
    ::= {fdi-6-at21}
```

8.24 Additional attribute types

There are no additional requirements other than those specified in ISO/IEC ISP 10616.

9 Attribute syntaxes

There are no requirements other than those specified in ISO/IEC ISP 10616. Support for **integerSyntax** shall be considered adequate to support the **INTEGER** values defined above.

DSAs supporting this International Standardized Profile are required to support certain attributes having complex ASN.1 syntax. Support of these attributes requires no additional checking or matching facilities, since no matching rules are defined (see ISO/IEC 9594-2 | ITU-T X.501, 9.6.2).

Annex A
(normative)

Profile Requirements List

In the event of a discrepancy becoming apparent in the body of ISO/IEC ISP 12073 and the tables in this annex, this annex shall take precedence.

A.0 Introduction

This annex specifies the constraints and characteristics if ISO/IEC ISP 12073 on what shall or may appear in an implementor's PICS for an implementation conformant to ISO/IEC ISP 12073.

The table below indicates the conformance requirements of ISO/IEC ISP 12073 for the subschema groups defined in ISO/IEC ISP 12073. The following predicate is defined:

p_reg_subtree

to indicate a conformance requirement to the EDI Identifier Subtree Subschema group in the following tables.

Subschema group	Predicate	Conformance
EDI User subschema group	-	m
EDIIdentifiersubtree subschema group	p_reg_subtree	o

The tables in the rest of this annex are based on the Directory Access Protocol PICS Proforma of Recommendation ITU-T X.581 and on ISO/IEC ISP 10616, annex A. It uses only a selection of the tables of ITU-T X.581 which are necessary for the specification of the International Standardized Profile status. The numbering of the PICS Proforma is retained in order to aid an implementor in filling in the respective PICS Proforma.

The terminology of conformance requirements is used as defined in 3.2.

A.1 General

A.1.1 Identification of PICS

A.1.1.1 Directory Access Protocol (DAP)

(void)

A.1.2 Identification of the implementation and/or system

Ref. No.	Question	Response
1	Implementation Name	(void)
2	Version Number	(void)
3	Machine Name	(void)
4	Machine Version Number	(void)
5	Operating System Name	(void)
6	Operating System Version No.	(void)
7	Special Configuration (1)	(void)
8	Does the DSA support the EDI User Subschema group?	yes
9	Does the DSA support the EDI Identifier Subtree Subschema group?	yes/no

A.2 to A.5

No requirements stated in ISO/IEC ISP 12073.

A.6 Capabilities and options

A.6.1 to A.6.3

No additional requirements are stated in ISO/IEC ISP 12073.

A.6.4.1 Directory Schema

A.6.4.1.1 Standard object classes

No requirements are stated in ISO/IEC ISP 12073 in addition to those stated in ISO/IEC ISP 10616.

A.6.4.1.2 Other object classes (see clause 7)

The table below indicates the conformance requirements of ISO/IEC ISP 12073 for other object classes in addition to those stated in ISO/IEC ISP 10616, A.6.4.1.2.

Ref. no.	Object Class	Base Standard	Profile	Note
1	**eDICommunicationsSubprofile**	-	m	
2	**eDIIdentifierRoot**	-	c	If p_reg_subtree then m else o
3	**eDIRegistrationScheme**	-	c	If p_reg_subtree then m else o
4	**eDISecuritySubprofile**	-	m	
5	**eDISyntaxAndMessagesSubprofile**	-	m	
6	**eDITradingAgreementSubprofile**	-	m	
7	**eDITradingProfile**	-	m	
8	**eDIUser**	-	m	

A.6.4.2 Attribute Types

A.6.4.2.1 Standard attribute types

No additional requirements are stated in ISO/IEC ISP 12073 beyond those stated in ISO/IEC ISP 10616, A.6.4.2.1.

A.6.4.2.2 Other attribute types

The table below indicates the conformance requirements of ISO/IEC ISP 12073 on other attribute types in addition to those stated in ISO/IEC ISP 10616, A.6.4.2.2.

Ref. no.	Attribute type	Base Standard	Profile	Note
1	**eDIAssociatedTradingProfiles**		o	
2	**eDIInterchangeRoles**		m	
3	**eDIMessageCapability**	-	m	
4	**eDIMessageTypes**		m	
5	**eDIMode**	-	m	
6	**eDIOtherRegistrations**	-	m	
7	**eDIProfileReference**	-	m	
8	**eDISchemeRules**	-	c	If p_reg_subtree then m else o
9	**eDISecuredObject**	-	m	
10	**eDISeeAlso**	-	m	
11	**eDIServiceMessages**	-	m	
12	**eDIServiceSegments**	-	m	
13	**eDISyntax**	-	m	
14	**eDITradingAgreementIdentifier**	-	m	
15	**eDIVan**	-	m	
16	**eDISecurityAgreement**	-	m	
17	**oSIApplicationEntity**	-	o	
18	**oSIApplicationType**	-	o	

A.6.5 Additional information

A.6.5.1 Minimum set of structure and naming elements (see clause 6)

The table below defines the structure elements for the set of structure and naming elements for the DIT which must be supported for conformance to the EDI Identifier Subtree subschema group of ISO/IEC ISP 12073.

Note. In the table below, Structure elements defined in ISO/IEC ISP 10616 are identified as fdi11–0, fdi11–1, fdi11–2, etc.

Support within the context of the EDI Identifier Subtree:

Ref. no.	Structure Element	Structural Object Class	Superior Structure Element(s)	Naming Attribute	Support (m, o or c)	Note
1	fdi11–0	Root			-	Structure element 0 as defined in ISP/IEC ISP 10616
2	fdi6–1	eDI Identifier Root	fdi11–0	organization Name(Note 1)	o	If p_reg_subtree then m else o
3	fdi6–2	eDI Registration Scheme	fdi6–1	organization Name(Note 2)	c	If p_reg_subtree then m else o
4	fdi6–3	organization (Note 3)	fdi6–2	organization Name (Note 4) (Note 5)	c	If p_reg_subtree then m else o
5	fdi6–4	organizational Unit (Note 3)	fdi6–3, fdi6–4 (Note 4)	organizational UnitName (Note 5)	c	If p_reg_subtree then m else o
6	fdi6-5	eDI Trading Profile	fdi6–3, fdi6-4	commonName	c	If p_reg_subtree then m else o

Support outside the context of the EDI Identifier Subtree

7	fdi6-6	eDI Trading Profile	fdi11–4, fdi11–5, fdi11–6, fdi11–7 (Note 6)	commonName	c	If NOT p_reg_subtree then m else o (Note 7)

NOTE 1 Having a PrintableString encoded value registered by the ISO 6523 ICD registration authority.

NOTE 2 Having a PrintableString encoded value registered by the ISO 6523 ICD number for the registration scheme.

NOTE 3 In this context, this object must also have the auxiliary object class value **ediUser.**

NOTE 4 The registration scheme operator will determine the depth of recursion of organizational units for a particular registration scheme.

NOTE 5 Having a value derived from the free part of EDI Identifier.

NOTE 6 In this context, the superior object entry must also have the auxiliary object class value **ediUser.**

NOTE 7 DSAs are only required to support this structure element if they support the presence of ediUser entries in the part of the DIT not subordinate to root of the EDI Registration Subtree.

A.6.5.2 Additional object classes for structure elements of the minimum set of structure and naming elements.

Structure Element	Structural Object Class	Superclasses of Structural Object Class	Subclasses of Structural Object Class	Auxiliary Object Classes	Support
fdi6–2	eDI Registration Scheme	organization		mHSUser strongAuthenticationUser	o
fdi6–1	eDIIdentifier Root	organization		mHSUser strongAuthenticationUser	o
fdi6–6, 7, 8	eDITrading Profile			eDICommunicationSubprofile eDISecuritySubprofile eDISyntaxAndMessagesSubprofile eDITradingAgreementSubprofile mHSUser strongAuthenticationUser	m
fdi6–4	organization Note 1			eDIUser eDICommunicationSubprofile eDISecuritySubprofile eDISyntaxAndMessagesSubprofile eDITradingAgreementSubprofile mHSUser strongAuthenticationUser	m
fdi6–5	organizational Unit Note 1			eDIUser eDICommunicationSubprofile eDISecuritySubprofile eDISyntaxAndMessagesSubprofile eDITradingAgreementSubprofile mHSUser strongAuthenticationUser	m

NOTE The addition of the Auxiliary trading profile object classes (eDICommunicationSubprofileeDISecurity Subprofile, eDISyntaxAndMessagesSubprofile, and eDITradingAgreementSubprofile) to organization and organizational unit allow specification of a single default trading profile capability for cases where an EDI use has only a single profile. Attribute values of any sub-profiles contained in subordinate entries are considered to override this default.

Annex B
(normative)

FDI6 Object Identifier

fdi-6 ::= OBJECT IDENTIFIER {iso(1) standard(0) fdi6(12073)}

Annex C
(normative)

FDI6 Directory Definitions in ASN.1

```
FDI6DirectoryDefinitions {iso(1) standard(0) fdi6(12073) modules(1) fdi6Definitions(1)}

DEFINITIONS ::=

BEGIN

-- Exports everything

IMPORTS
    top, organization, organizationalUnit
    FROM SelectedObjectClasses {joint-iso-ccitt(2) ds(5) modules(1) selectedObjectClasses(6)}

    commonName, organizationName, organizationalUnitName, description,
    caseIgnoreStringSyntax, distinguishedNameSyntax
    FROM SelectedAttributeTypes {joint-iso-ccitt(2) ds(5) modules(1) selectedAttributes(5)};

-- object identifiers

fdi-6-oc ::= OBJECT IDENTIFIER {iso(1) standard(0) fdi6(12073) objectClass(6)}

fdi-6-at ::= OBJECT IDENTIFIER {iso(1) standard(0) fdi6(12073) attributeType(5)}

--Object Classes

    eDICommunicationsSubprofile OBJECT CLASS
        SUBCLASS OF top
        MAY CONTAIN {
            eDIVan,
            localeAttributeSet,
            postalAttributeSet,
            oSIApplicationReferences,
            oSIApplicationType}
            ::= {fdi-6-oc1}

    eDIIdentifierRoot OBJECT CLASS
        SUBCLASS OF organization
        ::= {fdi-6-oc2}

    eDIRegistrationScheme OBJECT CLASS
        SUBCLASS OF organization
        MAY CONTAIN {
            description,
            eDISchemeRulesReference,
            eDISeeAlso}
            ::= {fdi-6-oc3}

    eDISecuritySubprofile OBJECT CLASS
        SUBCLASS OF top
        MUST CONTAIN
        MAY CONTAIN {
            eDISecuredObject,     -- Interchange, Message, Data Element
```

```
            eDISecurityAgreement}
            ::= {fdi-6-oc4}

    eDISyntaxAndMessagesSubprofile OBJECT CLASS
        SUBCLASS OF top
        MAY CONTAIN {
            eDISyntax,          -- EDIFACT X12 TDI,
            eDIMode,            -- Batch/Interactive,
            eDIServiceMessages,
            eDIServiceSegments,
            eDIMessageCapability}
        ::= {fdi-6-oc5}


    eDITradingAgreementSubprofile OBJECT CLASS
        SUBCLASS OF top
        MUST CONTAIN {
            eDITradingAgreementIdentifier}
        ::= {fdi-6-oc6}


    eDITradingProfile OBJECT CLASS
        SUBCLASS OF top
        MUST CONTAIN {commonName}
        MAY CONTAIN {
            edIProfileReference,
            eDIMessageTypes,
            eDIInterchangeRoles
            eDIApplicationPriority,
            eDIBusinessFunctionQualifier}
        ::= {fdi-6-oc7}


    eDIUser OBJECT CLASS
        SUBCLASS OF top
        MAY CONTAIN {
            eDISeeAlso              -- to reference other related Directory Entries,
            eDIOtherRegistrations   -- to identify other related EDI registrations
            }
        ::= {fdi-6-oc8}

-- ATTRIBUTES

    eDIApplicationPriority ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX INTEGER {
            low         (0),
            normal      (1),
            high        (2)}
        SINGLE VALUE
        ::= {fdi-6-at1}


    eDIAssociatedTradingProfile ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
            MATCHES FOR EQUALITY
            ::= {fdi-6-at2}
```

```
eDIBusinessFunctionQualifier ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
        MATCHES FOR EQUALITY
    ::= {fdi-6-at3}

eDIInterchangeRoles ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        sender (0),
        receiver (1)}
        MATCHES FOR EQUALITY
        ::= {fdi-6-at4}


eDIMessageCapability ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX MessageCapability
        ::= {fdi-6-at5}

MessageCapability ::= SEQUENCE {
        messageType          MessageType,
        version              Version,
        release              Release,
        directorySet         DirectorySet,
        implementationGuide  ImplementationGuideline,
        codingSceme          CodingSceme,
        interchangeRoles     InterchangeRoles}

MessageType ::= PrintableString

Version ::= PrintableString

Release ::= PrintableString

DirectorySet ::= PrintableString

ImplementationGuideline ::= PrintableString

CodingSceme ::= PrintableString

InterchangeRoles ::= BIT STRING {
        sender (0),
        receiver (1)}


eDIMessageTypes ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX PrintableString
        MATCHES FOR EQUALITY
        ::= {fdi-6-at6}

eDIMode ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        batch (0),
        interactive (1)}
        SINGLE VALUE
        MATCHES FOR EQUALITY
        ::= {fdi-6-at7}


eDIOtherRegistrations ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
        MATCHES FOR EQUALITY
        ::= {fdi-6-at8}
```

```
eDIProfileReference ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
        SINGLE VALUE
        MATCHES FOR EQUALITY
    ::= {fdi-6-at9}

eDIReceptionPreferences
    WITH  ATTRIBUTE-SYNTAX SEQUENCE OF INTEGER {
        any-method          (0),
        mhs-ipms            (1), --     MHS - IPMS

        mhs-edims           (2), --     MHS EDIMS
        ftam                (3), --     File Transfer
        tpmq                (4), --     Transaction Processing Message Queue
        tp                  (5)  --     Transaction Processing
        }
    ::= {fdi-6-at10}


eDISchemeRulesReference ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX PrintableString
    SINGLE VALUE
    ::= {fdi-6-at11}


eDISecuredObject ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        interchange(0),
        message(1),
        data-element (2)}
        SINGLE VALUE
        ::= {fdi-6-at12}


eDISecurityAgreement ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX objectIdentifier
    SINGLE VALUE
        ::= {fdi-6-at13}

eDISeeAlso ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
        ::= {fdi-6-at14}

eDIServiceMessages ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX BIT STRING {
        contrl-send-capable (0),
        contrl-expected-on-reception (1)}
        SINGLE VALUE
        ::= {fdi-6-at15}


eDIServiceSegments ATTRIBUTE
    WITH ATTRIBUTE-SYNTAX SEQUENCE {
            repertoire,
            character-coding,
            BIT STRING {
            sends-ascending-sequence-count (0),
            requires-ascending-sequence-count (1)}}
```

```
                SINGLE VALUE
                ::= {fdi-6-at16}

    character-coding ::= objectIdentifier

    repertoire ::= objectIdentifier

    eDISyntax ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX INTEGER {
            edifact (0),
            untdi (1),
            ansix12 (2),
            odette (3)}
            MATCHES FOR EQUALITY
            SINGLE VALUE
            ::= {fdi-6-at17}


    eDITradingAgreementIdentifier ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
            SINGLE VALUE
            MATCHES FOR EQUALITY
            ::= {fdi-6-at18}


    eDIVan ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX caseIgnoreStringSyntax
            SINGLE VALUE
            MATCHES FOR EQUALITY
        ::= {fdi-6-at19}


    oSIApplicationReferences ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX distinguishedNameSyntax
        ::= {fdi-6-at20}


    oSIApplicationType ATTRIBUTE
        WITH ATTRIBUTE-SYNTAX INTEGER {
            ftam (0),
            mhs-ipms (1),
            mhs-edims (2),
            tpmq (3),
            tp (4)}
            SINGLE VALUE
            MATCHES FOR EQUALITY
        ::= {fdi-6-at21}

END
```

Annex D
(informative)

EDI Identifier Subtree Structure

Two object classes are required in the DIT to specify information about the EDI identifier structure and the objects which administer allocation of EDI identifiers. These are:

eDIIdentifierRoot. The entry defined by this object class serves as a subtree root for all EDI registration schemes. This entry can be placed directly subordinate to the root of the Global DIT and is held by a specially designated DSA which is possibly shadowed by other DSAs.

eDIRegistrationScheme. Entries of this object class hold information about one of the EDI sender recipient identifier registration schemes. The diagram below illustrates the International EDI Identification DIT and its possible relationship to the DIT specified in ISO/IEC ISP 12073.

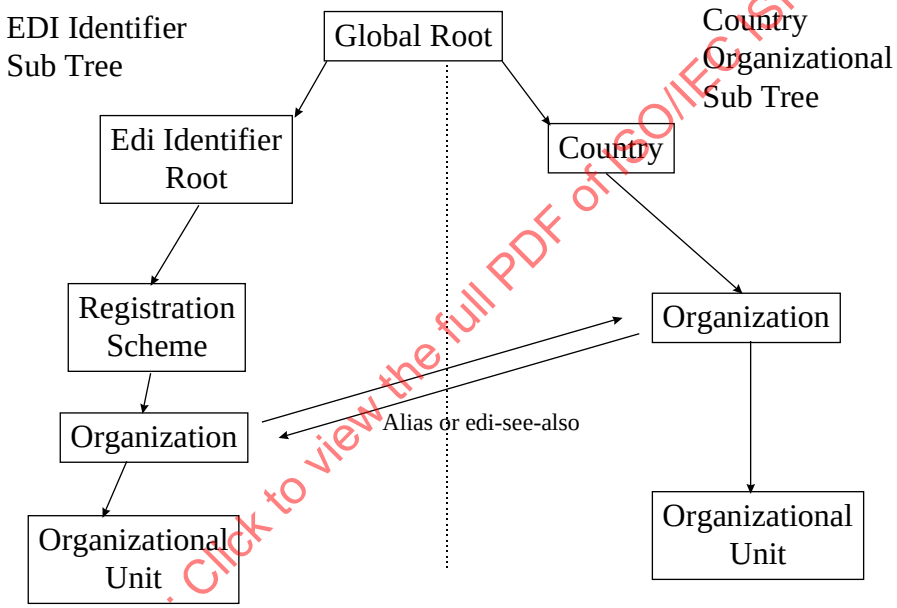

Figure D.1 — The EDI Identifier Tree and the Global DIT

The left hand portion of the tree supports entries identified by Directory names derived from the sender/recipient identifier fields of EDI Interchanges. A coding scheme for sender/recipient identifiers has been defined in the EDIRA Memorandum of Understanding. An organization to operate the EDI Identifier Root, the ERSC, is <being> established. EDI User entries can be located in either portion of the tree (associated with organizational or organizational-unit entries). Users can choose to hold this information at either one or the other of two entries, or they can chose to nominate one to be an alias. In addition to this, the **eDISeeAlso** attribute can be used to link different entries representing the same organization.

Annex E
(informative)

EDI User Information Structure in the Directory

E.1 Introduction

This section outlines the structure and information content of Directory entries of objects which represent EDI Users.

In order for one EDI User to establish communications with another, some a-priori knowledge about the communications and EDI capabilities of the other EDI User must be available. This information includes all of those communications parameters which are already defined in X.520 such as communications system addresses (OSI addresses, postal addresses), and it must also include EDI specific information. ISO/IEC ISP 12073 specifies the Directory schema component attributes, object classes and DIT structure necessary to achieve this.

E.2 Requirements

Each EDI User's entry should be capable of holding information describing a number of distinct types of information:

- A set of communications attributes known as the Communications and Protocols sub-profile;
- A set of security attributes known as the Security sub-profile;
- A set of EDI syntax and (EDI) messages attributes known as the Messages and Syntax sub-profile;
- A set of EDI Trading Agreement attributes known as the Trading Agreement sub-profile.

Each of these sub-profiles is represented by a Directory object class specified in ISO/IEC ISP 12073.

E.3 Structure of EDI User Entries

Each EDI User's information is held in a number of directory entries, each of the object class **eDITradingProfile**. These form a one-level subtree under the EDI User entry.

Each EDI User's entry is assumed to be defined by an existing structural object class (e.g. organization, organizational unit) which are defined in IS 9594.

Each **eDITradingProfile** entry is a structural object class identified by a commonName RDN, and it may be augmented by any one or more of the following auxiliary object classes:

- **eDICommunicationsSubprofile**
- **eDISecuritySubprofile**
- **eDISyntaxAndMessagesSubprofile**
- **eDITradingAgreementSubprofile**

Each Trading Profile entry contains or refers to a single, complete set of information which will enable another EDI user to form an appropriate interchange and pass it to EDI User described by the Trading Profile. A separate Trading profile must be constructed for each variant of the information contained in a Trading Profile.

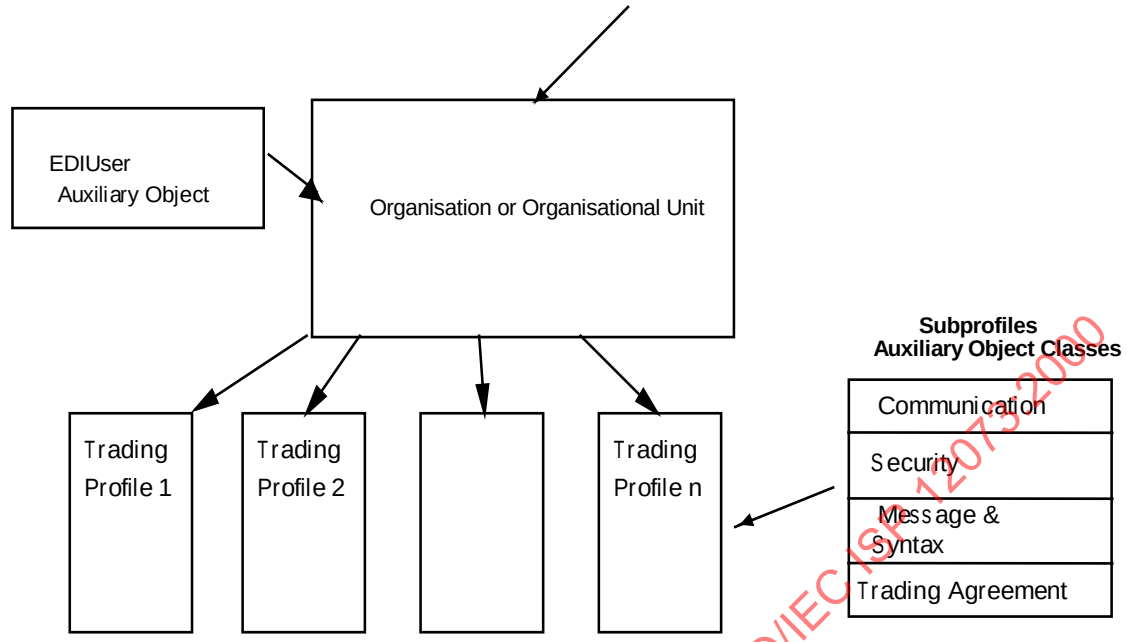

Figure E.1 — Structure of an EDI User's Information

Figure D.1 illustrates the structure of entries needed to support a single EDI-user's Directory information, where the user supports multiple EDI Trading Profiles. Each EDI Trading Profile is represented as an entry subordinate to the EDI-user's main entry.

The RDNs of the EDI Trading Profile and sub-profile entries are used solely to distinguish between EDI Trading Profiles[4)].

E.4 Addition of auxiliary object classes to DIT structure elements

The table below is an illustration of how auxiliary object classes defined in ISO/IEC ISP 12073 are related to structure elements in the DIT to form entries suitable for holding EDI User information.

Structural object class	Superclasses of structural object class	auxiliary object classes
eDIUserTradingProfile		**eDICommunicationsSubprofile** **eDISecuritySubprofile** **eDISyntaxAndMessagesSubprofile** **eDITradingAgreementsSubprofile** **mHSUser** **strongAuthenticationUser**

4) Such a structure is necessary since each Trading Profile will potentially hold the same set of attribute types, but with distinct values. If all of the attributes of a number of different Trading Profiles were held in a single entry, there would be no means to distinguish between attributes of the same type belonging to different profiles.

Annex F
(informative)

Scenarios and Procedures for FDI6 Use of the Directory

Introduction

This annex outlines a number of scenarios of directory information use by EDI Users in various EDI roles. The annex is structured as a set of scenarios together with the procedures for directory use.

The EDI User's entry structures defined in this profile apply to the EDI User's (Trading Partner's) own EDI interchange capability. A Trading Partner may have an EDI User entry either under the Country based Directory tree (in which case it is identified by a Directory Name in that country based organizational tree) or in the EDI Identifier Subtree, (in which case it is identified by a directory name derived directly from the EDI Identifier carried in the sender-recipient identifier of the EDIFACT UNB segment or its equivalent in other syntaxes.

Scenario 1 - Initial (first ever) transmission of an EDI interchange to another organization

The sender organization has to initialise the EDI software and the local database in order to be sure that the interchange will be correctly received and interpreted. Moreover, the telecommunication software must know the network/MHS address of the recipient system's EDI software.

The sender organization probably knows some of the recipient's information such as the name of the organization, the country where it is located and perhaps the name of a key person belonging to it. The directory (see functional view section) allows the user to search and list information in order to progressively converge and finally exactly identify the target organization.

Once the directory name of the organization has been determined, the user can obtain all of the relevant information (see functional information section) about the other organization such that the interchange may be correctly formatted and sent.

If the sender continues with future exchanges with this other organization, this information can be captured and stored in the local database for future use to avoid repetitive directory access.

This means that the Directory must ensure a mapping of a set of general information like organization name, country, person etc. to a set of EDI-related information.

Scenario 2 - Sending EDI interchanges to known partners

When an EDI interchange is sent to a well known partner, the local database contains all the needed information to format this interchange.

However, several situations may occur where the Directory must be consulted i.e.: To counter specific security threats; where different messages or trading services are used; where different message versions are used...

Moreover, before an EDI Interchange can be transmitted, the communication software must obtain the current Network/MHS address of the EDI recipient.

In an inter-sector EDI environment, this address must be read from a Directory, using an unambiguous name identifying the recipient. The easiest way is to read the Directory using the unambiguous EDI identifier carried in the interchange to be transmitted.

This means that the Directory must ensure a mapping of an EDI identifier to a network address.

Scenario 3 - Initial reception of an EDI interchange from an unknown organization

When an EDI interchange is received by the recipient's software, the EDI attributes of the originator must be known in order to process the contents.

The processing at the syntactical level requires information on syntax and messages which the interchange contains. It might also be that the signature must be authenticated, and this needs the senders security certificate information stored in the directory. At the trading level, the recipient must know about the EDI Trading Agreements that the sender supports.

In an inter-sector EDI environment, these attributes will be read from the Directory, using an unambiguous Directory name identifying the originator. However, the recipient must have an unambiguous way of identifying the sender. The only information that the recipient will always receive (i.e. by mandate) is the sender's network/MHS address and the EDI identifier of the originator as a part of the interchange. Since the network address cannot generally be converted into a Directory Name, it is not considered to be a read argument for the Directory and cannot really be used, so the easiest way for the recipient's software to identify the sender is to read the Directory using the EDI identifier carried in the received interchange using the EDI Identifier subtree.

If the recipient receives future exchanges from the organization that sent the interchange initially, this information can be captured and stored in the recipient's local database for future uses.

This means that the Directory must ensure a mapping of an EDI identifier to a set of EDI-related attributes.

Scenario 4 - Receiving EDI interchanges from known partners

When an EDI interchange is received from a well known partner, the local database contains all the needed information to process this interchange.

However, several situations may occur where the Directory must be consulted i.e.: to counter certain security threats; where different messages or trading services are used; where different message versions are used...

The EDI identifier mentioned in the interchange remains the best key to access the Directory.

This means that the Directory must ensure a mapping of an EDI identifier to a set of EDI-related attributes.

Scenario 5 - Validation of a registration

In a number of EDI scenarios, EDI originators, recipients and third parties will need to determine whether another EDI party has actually been registered by the registration scheme identified by that EDI parties' EDI identifier. For this to work properly, the **<EDI Identifier Subtree>** must be controlled to exactly represent the register maintained by the operator of the identified registration scheme. The **<EDI Identifier Subtree>** must contain all EDI parties registered under the scheme and no more. Such validation may be required to give a degree of confidence to EDI Users prior to dispatching goods etc. to other EDI trading partners. The EDI identifier is of central importance in this scenario for a number of reasons:

- The EDI identifier may be the only information available from the EDI Interchange;
- Other identifiers (such as postal address, Network address, MHS OR-Address etc.) which may be available in the interchange may not be 'registered' under an appropriate registration scheme and potentially leave the way open for masquerade threats.

Validation may be required on a periodic basis to ensure that an organization has not become 'de-registered'.

Procedure

To fulfil this scenario, the enquiring EDI User must generate the Directory Name equivalent of the other EDI Trading Partner's EDI Identifier and use it to invoke a Directory read operation. If the read is successful, then the validation is successful, otherwise not.

Scenario 6 - Determine an EDI User's Communications and other EDI trading parameters

As EDI trade increases, it will often be the case that an EDI User will need to determine a range of communications and EDI interchange capability information about other potential or existing EDI Trading Partners. This may be because:

- Only the EDI identifier is available - e.g. of a potential new EDI Trading Partner;
- EDI Trading Partners change their EDI capabilities and communications addresses from time to time (i.e. postal and electronic addresses).

So it may be periodically necessary for an EDI User to update its knowledge of addressing and capabilities of its trading partners.

Procedure

The procedure for obtaining this information is the same as that for scenario 1 above, but in this case, the directory user requests the return of the required communications information.

Scenario 7 - Search Requirements

So far, no user requirements for general directory search spanning multiple EDI Users have been identified within the current scope of the EDI entry definitions. This is because the information contained in the entries are generally not the sort of attributes one would use as a search basis anyway (unless requirements were established to determine 'all EDI Users registered by registration authority X in town Y'). However, this situation may change if certain classes of business data is included in the entries. This is something that the existence of the EDI Subtree will enable and may encourage. Given business information, searches for EDI Users could be made on specific commercial product types and services.

However, within the context of a single EDI User's Directory information, there is the technical need to select only those EDI Trading Profiles (from the many that a EDI Trading Partner might have) which are of most relevance to the enquirer. This can be adequately achieved using the following search procedure.

Procedure

The enquirer specifies a filter of attributes and attribute values which represent how the enquirer's system can interwork with other EDI User's systems for the purpose of EDI interchanges. This filter will contain attribute expressions from the EDI sub-profiles such as MessageTypes, Syntax, Mode, oSIApplicationType etc., The User's DUA forms the Directory Name of the other EDI User from the registered EDI Identifier and invokes a one level Directory search operation using the filter and the other EDI User’s entry as a base. The directory will return the requested details from only those EDI Trading Profiles that match the filter.

Scenario 8 - Determine other facts (from related entries) about EDI Trading Partners

A directory entry identified by some EDI identifier can carry the user friendly directory name of the organization which 'owns' the EDI identifier. This latter Directory Name can be used to access the organization's main entry in the global organization oriented DIT i.e. that profiled by ISO/IEC ISP 10616. This entry may contain further information which is not specific to EDI.

Procedure

The enquirer invokes a Directory read operation specifying the information required (e.g. the organization's Directory name in the global DIT) and either the directory name of the EDI User or the

directory name derived from the registered EDI identifier. The directory will respond according to the information content in one of the following ways:

- If the supplied Directory name identifies an entry with appropriate information, that information is returned.
- If the supplied Directory Name identifies an alias, the Directory operation will be de-referenced, and the directory will read the information (if present) from the aliased entry.
- If the result of (1) above contains an 'eDISeeAlso' attribute, or 'other-edi-registrations' attribute values, the enquirer can use these to invoke further Directory read operations if required.

Scenario 9 - Mapping between multiple EDI Identifiers

EDI Users will often have multiple EDI identifiers, each registered by a different EDI registration authority under a different scheme (and possibly for different purposes), and although a particular EDI User may know of one of the EDI identifiers belonging to another EDI User, it may be necessary or beneficial to be able to determine any other EDI identifiers registered for that EDI User. The Directory entries identified by means of EDI identifiers are constructed to hold a list of other EDI identifiers of the EDI User concerned. Such information may enable an 'EDI originating' user to establish the most convenient EDI identifier and EDI communications parameters which are associated with the destination of the EDI transfers. This arrangement will also be of use to determine whether two different EDI identifiers identify the same EDI User.

Procedure

This service can be obtained by use of a simple directory read operation.

Scenario 10 - Business Information

The scope of the current EDI Directory content is limited to enabling and the establishment of EDI trading between EDI Users, and the information content of the directory is appropriately constrained. However, with definition of further contents (i.e. new object classes and attributes), the directory could hold further information for each EDI User, encompassing products and services supplied, prices, trading terms, financial status and banking information etc. In many senses, such a directory content would become a repository for business information enabling electronic trading in a much wider context than is possible with the current specification.

Scenario 11 - Multi Party Trading

All of the scenarios outlined so far are valid for EDI interactions between a single originator and a single recipient. However, in many EDI scenarios, an EDI interchange may traverse a number of systems (as may be typical in EDI messaging - X.435 scenarios), each of which plays a specific EDI task associated with the interchange. Examples of this are 'clearing house' operations and 'EDI gateways' between an organization and the outside world. The directory can be used in the same ways as described above to support these scenarios.