

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

ICS 35.100.05

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW



Document Sharing Hub

National foreword

This British Standard reproduces verbatim ISO/IEC ISP 10616:1995 and implements it as the UK national standard.

The UK participation in its preparation was entrusted to Technical Committee IST/21, Open Systems Interconnection, Data Management and Open Distributed Processing, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or using the “Find” facility of the BSI Standards Electronic Catalogue.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the ISO/IEC ISP title page, pages ii to iv, pages 1 to 23 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date	Comments

This British Standard, having been prepared under the direction of the DISC Board, was published under the authority of the Standards Board and comes into effect on 15 March 1997

© BSI 11-1998

ISBN 0 580 26559 5

Contents

	Page
National foreword	Inside front cover
Foreword	iv
Text of ISO/IEC ISP 10616	2

INTERNATIONAL
STANDARDIZED
PROFILE

ISO/IEC
ISP
10616

First edition
1995-04-15

**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)*



Reference number
ISO/IEC ISP 10616:1995(E)

Contents

	Page
Foreword	iv
Introduction	2
1 Scope	2
1.1 General	2
1.2 Position within the taxonomy	3
1.3 Scenario	3
2 Normative references	3
2.1 Paired Recommendations International Standards equivalent in technical content	3
2.2 Additional references	4
3 Definitions	4
3.1 General	4
3.1.1 auxiliary object class	4
3.1.2 structural object class	4
3.1.3 structure element	4
3.2 Support level	4
3.2.1 mandatory	4
3.2.2 optionally supported	5
4 Abbreviations	5
5 Conformance	5
5.1 DSA Conformance	5
5.2 DUA Conformance	5
6 Minimum set of structure and naming elements for DIT	5
6.1 Structure elements	5
6.2 Object class relationships	6
6.3 Auxiliary object classes	6
7 Object Classes	6
7.1 Standard Object Classes	6
7.2 Additional Object Classes	7
7.2.1 ISP Application Entity	7
7.2.2 Use of the ISP Application Entity Object Class	7
8 Attribute Types	7
8.1 Standard Attribute Types	7
8.2 Additional Attribute Types	8
8.2.1 Protocol Information	8
8.2.2 Upper Layer Profile Information	8
8.2.3 Application Entity OID	8
8.2.4 Transfer Syntaxes Supported	8
9 Attribute Syntaxes	8
9.1 Handling of T61Strings	8
9.1.1 Checking of T61Strings	9
9.1.2 T61String and PrintableString Matching Rules	9
9.1.3 Further Matching Rules	9
9.2 Checking Rules	10
9.3 Additional Checking Rules	10
9.3.1 Distinguished Name	10
9.3.2 Case Exact String	10
9.3.3 Case Ignore String	10
9.3.4 Case Ignore List	10
9.3.5 Integer	10

	Page
9.3.6 Syntax of Country Name	10
9.4 Matching Rules	10
9.4.1 Use of Normalization	10
9.4.2 Ordering of String Attributes	10
9.4.3 Basic Character String Normalization	11
9.4.4 ASN.1 Normalization	11
9.5 Additional Matching Rules	11
9.5.1 Case Ignore String	11
9.5.2 Case Ignore List	11
9.5.3 UTC Time	11
9.6 Unsupported Attributes	12
Annex A (normative) Profile Requirements List of FDI11 Common Directory Use	13
Annex B (normative) FDI11 Directory Definitions in ASN.1	17
Annex C (normative) Amendments and corrigenda	18
Annex D (normative) Profile Object Identifier	18
Annex E (informative) Bibliography	18
Annex F (informative) Application profiles for the Directory	19
Figure 1 — Access to the Directory	3
Table D.1 — Character sets in T61String	19
Table 1 — Structure elements for the supported DIT structure	21
Table 2 — Additional object classes for structure elements of minimum DIT and those listed in Table 1	21

Descriptors: Data processing, information interchange, data handling, data storage, definitions, directories.

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.

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 “interpersonal 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).

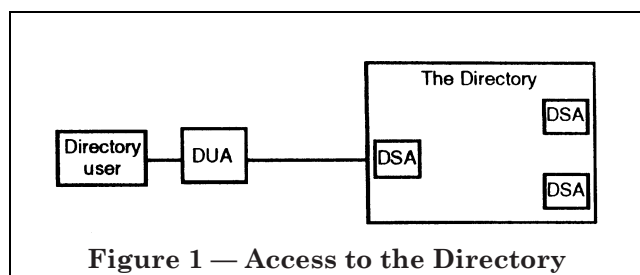


Figure 1 — Access to the Directory

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*.