

BRITISH STANDARD

**BS ISO/IEC TR
10000-1 : 1990**

**Implementation of
ISO/IEC TR 10000-1 : 1990**

**Information technology —
Framework and taxonomy of
International Standardized
Profiles —**

Part 1. Framework

National foreword

This British Standard reproduces verbatim ISO/IEC TR 10000-1 : 1990 and implements it as the UK national standard.

This British Standard is published under the direction of the Information Technology Systems Standards Policy Committee who has the responsibility to:

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

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TECHNICAL REPORT

ISO/IEC TR 10000-1

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Information technology — Framework and taxonomy of International Standardized Profiles —

Part 1: Framework

*Systèmes de traitement de l'information — Cadre et taxonomie des profils
internationaux normalisés —*

Partie 1: Cadre



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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) together form a system for worldwide standardization as a whole. 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.

The main task of a technical committee is to prepare International Standards but in exceptional circumstances, the publication of a Technical Report of one of the following types may be proposed:

- type 1, when the required support cannot be obtained for the publication of an International Standard, despite repeated efforts;
- type 2, when the subject is still under technical development or where for any other reason there is the future but not immediate possibility of an agreement on an International Standard;
- type 3, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example).

Technical Reports of types 1 and 2 are subject to review within three years of publication, to decide whether they can be transformed into International Standards. Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.

ISO/IEC/TR 10000-1, which is a Technical Report of type 3, was prepared by the Special Group on Functional Standardization of ISO/IEC JTC 1, *Information technology*.

The structure of ISO/IEC/TR 10000 is as follows:

- Part 1: Framework
- Part 2: Taxonomy of Profiles

This part of ISO/IEC/TR 10000 has four annexes:

- Annex A is an integral part of the Technical Report, and is binding on submitters of ISPs.
- Annex B is illustrative, and has no binding significance.
- Annexes C and D are for information only, and have no binding significance.

Introduction

The context of Functional Standardization is one part of the overall field of IT standardization activities covering

- Base Standards, which define fundamentals and generalized procedures. They provide an infrastructure that can be used by a variety of applications, each of which can make its own selection from the options offered by them.
- Profiles, which define subsets or combinations of base standards used to provide specific functions. Profiles identify the use of particular options available in the base standards, and provide a basis for the development of uniform, internationally recognized, conformance tests.
- Registration Mechanisms, which provide the means to specify detailed parameterization within the framework of the base standards or Profiles.

Within ISO/IEC JTC 1, the process of Functional Standardization is concerned with the methodology of defining Profiles, and their publication in documents called "International Standardized Profiles" (ISPs).

In addition to ISO/IEC/TR 10000, the secretariat of the Special Group on Functional Standardization maintains a "Directory of ISPs and Profiles contained therein" This is a factual record of which ISPs exist, or are in preparation, together with a summary description of the scope, scenario, and model for each Profile. It is subject to regular updating by the Secretariat of ISO/IEC JTC 1/SGFS.

Information technology - Framework and taxonomy of International Standardized Profiles - Part 1: Framework

1 Scope

This part of ISO/IEC/TR 10000 defines the concept of Profiles, and the way in which they are documented in International Standardized Profiles. It gives guidance to organizations making proposals for Draft International Standardized Profiles, on the nature and content of the documents they are producing.

This part of ISO/IEC/TR 10000 outlines concepts of Profiles, the general Taxonomy (or Classification Scheme), and the format and content of ISPs. Annex A gives details of the format and content of ISPs as required by ISO/IEC JTC 1. Annex B gives examples of the ways in which Profile definitions are incorporated in ISPs for publication. Annex C gives guidance on conformance aspects of Profiles, and indicates the direction in which ISO/IEC/TR 10000 may be developed in the future. Annex D lists those ISO/IEC Standards and CCITT Recommendations which are quoted in examples.

ISO/IEC/TR 10000-2 provides a full classification for Profiles which may be or have been submitted for ratification as International Standardized Profiles.

ISO/IEC/TR 10000 is applicable to Profiles in the area of competence of ISO/IEC JTC 1, and within this, priority consideration has been given to Profiles in the OSI area, i.e. those which specify OSI base standards, and those concerned with interchange formats and data representation which are expected to be used in conjunction with them, though this subject is still for further study. In addition, as a lower priority, it is also applicable to Profiles specifying the use of other ISO/IEC JTC 1 base standards, for example:

- Open Distributed Processing;
- the representation of information or objects on storage media (as opposed to the current limitation to use with communications protocols);
- logical and physical storage structures.

However, it is recognized that the scope of the concept of Profiles may ultimately be wider than that of ISO/IEC JTC1. Examples of other areas to which the concept may eventually be extended by other Technical Committees are:

- interchange formats defined for particular application areas (e.g. trade data interchange formats in ISO/TC 154);
- protocols used in particular application areas (e.g. banking protocols in ISO/TC 68, industrial automation protocols in ISO/TC 184), which may also specify particular uses of the more generic Profiles included in this Taxonomy.

2 Normative References

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC/TR 10000. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO/IEC/TR 10000 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 7498:1984, *Information processing systems - Open Systems Interconnection - Basic Reference Model*.
(Corresponds to CCITT X.200)

ISO/IEC 9646-1:.....,¹⁾ *Information technology - OSI conformance testing methodology and framework - Part 1: General Concepts*.
(Corresponds to CCITT X.290 Part 1)

ISO/IEC 9646-2:.....,¹⁾ *Information technology - OSI conformance testing methodology and framework - Part 2: Abstract test suite specification*.
(Corresponds to CCITT X.290 Part 2)

ISO/IEC/TR 10000-2:1990 *Information technology - Framework and taxonomy of International Standardized Profiles - Part 2: Taxonomy*.

IEC/ISO Directives Part 3:1989, *Drafting and presentation of International Standards*

A number of other ISO Standards and CCITT Recommendations are quoted in examples which do not constitute provisions of this part of ISO/IEC/TR 10000. They are listed in annex D.

¹⁾ To be published.

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3 Definitions

For the purposes of this part of ISO/IEC/TR 10000, the following definitions apply:-

3.1 Terms defined in this part of ISO/IEC/TR 10000

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

3.1.2 Profile: A set of one or more base standards, and, where applicable, the identification of chosen classes, subsets, options and parameters of those base standards, necessary for accomplishing a particular function.

NOTE - An International Standardized Profile includes the specification of one or more Profiles.

3.1.3 ISP Implementation Conformance Statement: A statement made by the supplier of a system which claims to conform to an ISP, stating the capabilities and options which have been implemented, and all optional features which have been omitted.

3.1.4 Group: A set of Profiles that are compatible, in the sense that a system implementing one Profile from a Group can interwork, according to OSI, with another system implementing a different Profile from the same Group, in terms of the operation of the protocols specified within those Profiles.

3.1.5 Base Standard: An approved International Standard, Technical Report or CCITT Recommendation which is used in the definition of a Profile.

NOTE - See also 6.1 for an indication of circumstances under which documents other than these may be referenced informatively in an ISP.

3.2 Terms defined in ISO 9646-1

This part of ISO/IEC/TR 10000 uses the following terms defined in ISO 9646-1:

- a) Conformance testing
- b) Conforming implementation
- c) Dynamic conformance requirements
- d) Protocol Implementation Conformance Statement (PICS)
- e) PICS proforma
- f) Static conformance requirements

4 Abbreviations

ISP	International Standardized Profile
IPRL	ISPICS Requirements List
ISPICS	ISP Implementation Conformance Statement
PICS	Protocol Implementation Conformance Statement
A-Profile	Application Profile (requiring Connection-mode Transport Service)
B-Profile	Application Profile (requiring Connectionless-mode Transport Service)
F-Profile	Interchange Format and Representation Profile
R-Profile	Relay Profile
T-Profile	Transport Profile (providing Connection-mode Transport Service)
U-Profile	Transport Profile (providing Connectionless-mode Transport Service)

5 Purpose of Profiles

Profiles define combinations of base standards for the purpose of

- identifying the base standards, together with appropriate classes, subsets, options and parameters, which are necessary to accomplish identified functions for purposes such as interoperability;
- providing a system of referencing the various uses of base standards which is meaningful to both users and suppliers;
- providing a means to enhance the availability for procurement of consistent implementations of functionally defined groups of base standards, which are expected to be the major components of real application systems;
- promoting uniformity in the development of conformance tests for systems that implement the functions associated with the Profiles.

Various bodies throughout the world are undertaking work, in either regional or topic-oriented groups, in the area of Functional Standardization. Various names are given to the results of this work (such as Profiles, Functional Standards, Implementation Agreements, Specifications) and various approaches are being taken to the scope of the Profiles and to the style in which they are documented. This Taxonomy of International Standardized Profiles has been developed by ISO/IEC JTC 1 in order to create a common classification scheme, and documentation scope and style, into which the work of Functional Standardization bodies can be submitted, along with corresponding work from the members and subcommittees of ISO/IEC JTC 1.



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