

# INTERNATIONAL STANDARD

# ISO/IEC 9646-6

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## **Information technology — Open Systems Interconnection — Conformance testing methodology and framework —**

### **Part 6:**

Protocol profile test specification

*Technologies de l'information — Interconnexion de systèmes ouverts —  
Cadre général et méthodologie des tests de conformité OSI —*

*Partie 6: Spécification de test pour les profils de protocoles*



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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. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 9646-6 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee 21, *Open Systems Interconnection, data management and open distributed processing*.

ISO/IEC 9646 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Conformance testing methodology and framework*:

- *Part 1: General concepts*
- *Part 2: Abstract Test Suite specification*
- *Part 3: The Tree and Tabular Combined Notation*
- *Part 4: Test realization*
- *Part 5: Requirements on test laboratories and clients for the conformance assessment process*
- *Part 6: Protocol profile test specification*
- *Part 7: Implementation conformance statements*

Annex A forms an integral part of this part of ISO/IEC 9646.

## Introduction

This part of ISO/IEC 9646 provides OSI protocol profile testing methodology based on the protocol testing methodology specified in ISO/IEC 9646-2.

ISO/IEC 9646-1 defines terminology and introduces general concepts for both protocol and profile testing. ISO/IEC 9646-4 places requirements on test realization and ISO/IEC 9646-5 places requirements on the conformance assessment process, both of which are applicable to profile testing. ISO/IEC 9646-7 describes how profile requirements are documented in Implementation Conformance Statements (ICSs) and profile Requirements Lists (RLs).

A profile specification is a document containing one or more profiles. An International Standardized Profile (ISP) is an example of a standardized profile specification.

A profile is defined as the selection of one or more base specifications and the identification of the chosen classes, common subsets, options and parameters of those base specifications necessary for accomplishing a particular function. Profiles are defined to facilitate interworking between systems implementing the same profile.

A profile implementation is tested for conformance to the relevant profile specification in order to give confidence that interworking can be achieved, and to verify that the implementation conforms to the profile specification.

The meaning of conformance to a profile and the method of expressing profile conformance requirements are described in clause 6.

Profile testing principles, based on the methodology defined for the base protocol specifications, are described in clause 7.

The Profile Test Specification (PTS) is the complete set of documents needed to specify conformance testing for a profile. The PTS is based on the Abstract Test Suite (ATS) specifications of the protocols referenced by the profile. The PTS is described in clause 7.

The PTS-Summary provides, in a single document, references to all the elements of the PTS. The PTS-Summary is described in clause 8 and a template for a PTS-Summary is described in annex A.

The Profile Specific Test Specification (PSTS) contains any changes to the ATS specifications relevant to the base specifications and the additional test cases required for the profile testing. The PSTS is described in clause 9.

This part of ISO/IEC 9646 is also published by ITU as ITU-T Recommendation X.295, but not identical texts.

# Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification

## 1 Scope

This part of ISO/IEC 9646 specifies the requirements and provides guidance for the production of Profile Test Specifications (PTSs) for conformance testing of OSI protocol profiles. This part of ISO/IEC 9646 also specifies requirements concerning the expression of conformance requirements in protocol profile specifications.

This part of ISO/IEC 9646 is applicable to testing the conformance of a profile implementation to the static and dynamic conformance requirements of each protocol and any information objects included in the profile, by controlling and observing Protocol Data Unit (PDU) exchanges.

Testing requirements that go beyond conformance are outside the scope of this part of ISO/IEC 9646.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 9646. 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 9646 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*.  
(See also ITU-T Recommendation X.200 (1984)).

ISO/TR 8509: 1987, *Information processing systems - Open Systems Interconnection - Service conventions*.  
(See also ITU-T Recommendation X.209 (1988)).

ISO/IEC 9646-1: 1994, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts*.  
(See also ITU-T Recommendation X.290<sup>1)</sup>).

ISO/IEC 9646-2: 1994, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification*.  
(See also ITU-T Recommendation X.291<sup>1)</sup>).

ISO/IEC 9646-3: 1992, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)*.  
(See also ITU-T Recommendation X.292 (1993)).

ISO/IEC 9646-3 Amd 1: -<sup>1)</sup>, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN) - Amendment 1: TTCN extensions*.

ISO/IEC 9646-4: 1994, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization*.  
(See also ITU-T Recommendation X.293<sup>1)</sup>).

ISO/IEC 9646-5: 1994, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process*.  
(See also ITU-T Recommendation X.294<sup>1)</sup>).

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1) To be published

ISO/IEC 9646-7: -<sup>1)</sup>, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements*

(See also ITU-T Recommendation X.296 <sup>1)</sup>).

ISO/IEC TR 10000-1:1990, *Information technology - Framework and Taxonomy of International Standardized Profiles. Part 1: Framework.*

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

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