TECHNICAL REPORT

ISO/IEC TR 10183-2

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Information technology — Text and office systems — Office Document Architecture (ODA) and interchange format — Technical Report on ISO 8613 implementation testing —

Part 2:
Framework for abstract test cases

Technologies de l'information — Bureautique — Architecture de documents de bureau (ODA) et format d'échange — Rapport technique sur la mise en application de tests de l'ISO 8613 —

Partie 2: Cadre général pour cas de tests abstraits

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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.

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

— 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 Technical Reports of type 3 do not necessarily have to be reviewed until the data they provide are considered to be no longer valid or useful.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 10183-2, which is a Technical Report of type 3, was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Sub-Committee SC 18, *Document processing and related communication.*

ISO/IEC TR 10183 consists of the following parts, under the general title *Information technology — Text and office systems — Office Document Architecture (ODA) and interchange format — Technical Report on ISO 8613 implementation testing*:

— *Part 1: Testing methodology*

— *Part 2: Framework for abstract test cases*

Information technology — Text and office systems — Office Document Architecture (ODA) and interchange format — Technical Report on ISO 8613 implementation testing —

Part 2:
Framework for abstract test cases

1 Scope

The purpose of ISO/IEC TR 10183 is to define a testing methodology and provide a framework for specifying abstract test cases for ISO 8613 implementation testing, the overall objective being the provision of a suitable base for testing the *interworking* capability of ODA implementations.

Such testing will assist in the analysis of an implementation's ability to interwork in an environment of implementations of ISO 8613 and implementations of International Standardized Profiles (ISPs) based on ISO 8613. ISPs are standardized document application profiles that have been internationally harmonized. As such they represent agreed stabilized subsets of ISO 8613 designed for the interworking of ODA systems at different levels of functionality.

In ISO 8613 the term "conformance" refers to the conformance of a data stream to the rules specified in ISO 8613. This includes the conformance of a data stream to a document application profile based on ISO 8613. Conformance testing methodology as defined in Annex G of ISO 8613-1 covers the analysis of data streams without regard to the capabilities of implementations to generate or receive conforming data streams. To achieve an environment of interworking ODA systems, it is necessary to have a testing methodology that can verify implementation support for ISO 8613 and DAP's at the semantic level as well as the data stream or syntax level.

Hence, implementation testing is additional testing that supplements the conformance testing of data streams. It increases the probability that different implementations of ISO 8613 and ISPs are able to interwork. Implementation testing is based on the concept of measuring an implementation's ability to generate and/or receive a representative set of documents. If an implementation can exhibit this capability, then it is more likely to interwork successfully with other verified implementations exchanging a wider range of documents.

The implementation testing methodology introduces the requirement for abstract test cases as well as procedures for their use in the generation and reception testing of implementations.

In establishing a framework for implementation testing, a conceptual model of ODA systems has been developed to describe, in an abstract sense, the multitude of configurations and limitations of real ODA systems.

The methodology contained in ISO/IEC TR 10183 caters for the testing of implementations of ISP's based on ISO 8613. The methodology may also be used for testing other Document Application Profiles based on ISO 8613.

This part of ISO TR 10183

- specifies a framework for the development of abstract test cases;
- specifies a test case notation used to specify abstract test cases;
- gives examples of abstract test cases.

ISO/IEC TR 10183 does not cover the testing of user interfaces in an ODA based system. Any suitable system interface

is only used as a point of control and observation to verify that ODA document transformations associated with the various ODA processes have been carried out as claimed by an implementor.

Abstract test cases created from the specifications in this part of ISO/IEC TR 10183 should be used in the definition of executable test suites and data streams for testing implementations of ISO 8613 and implementations of International Standardized Profiles based on ISO 8613.

Where appropriate, concepts and terminology described in ISO/IEC 9646 have been used. In some cases, definitions and concepts have been adapted to cater for the fact that ODA is not an OSI protocol.

2 References

The following documents are referenced within ISO/IEC TR 10183 and provide additional background information.

ISO/IEC 646:1991, *Information technology - ISO 7-bit coded character set for information interchange (3rd edition).*

ISO 2022:1986, *Information processing - ISO 7-bit and 8-bit coded character sets - Code extension techniques.*

ISO/IEC 6429:1992, *Information technology - Control functions for coded character sets.*

ISO 8613:1989, *Information processing - Text and office systems - Office Document Architecture (ODA) and interchange format.*

ISO/IEC 9646-1:1991, *Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts.*

ISO/IEC TR 10183-1:1993, *Information technology - Text and office systems - Office Document Architecture (ODA) and Interchange Format - Technical Report on ISO 8613 implementation testing - Part 1: Testing methodology.*

ISO/IEC ISP 10610-1:1993, *Information technology - International Standardized Profile FOD11 - Open Document Format - Simple document structure - Character content architecture only - Part 1: Document Application Profile (DAP).*

ISO/IEC ISP 11181-1:1993, *Information technology - International Standardized Profile FOD26 - Open Document Format - Enhanced document structure - Character, raster graphics and geometric graphics content architectures - Part 1: Document Application Profile (DAP).*

ISO/IEC ISP 11182-1:1993, *Information technology - International Standardized Profile FOD36 - Open Document Format - Extended document structure - Character, raster graphics and geometric graphics content architectures - Part 1: Document Application Profile (DAP).*