INTERNATIONAL STANDARD

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Information technology — Open Systems Interconnection — Structure of management information: General relationship model

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Structure des informations de gestion: Modèle général relationnel

Reference number
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Contents

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 10165-7 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 21, *Open Systems Interconnection, data management and open distributed processing*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.725.

ISO/IEC 10165 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Structure of management information*:

— *Part 1: Management Information Model*

— *Part 2: Definition of management information*

— *Part 4: Guidelines for the definition of managed objects*

— *Part 5: Generic management information*

— *Part 6: Requirements and guidelines for implementation conformance statement proformas associated with OSI management*

— *Part 7: General relationship model*

Annexes A to D form an integral part of this part of ISO/IEC 10165. Annexes E to G are for information only.

Introduction

This Recommendation | International Standard provides a model for the definition, representation and management of relationships between resources and the notational "tools" for specifying these. In addition, the definitions of general management information that may be used in the representation of relationships are specified. Finally guidelines for the development of conformance statement proformas are provided. The capability afforded by this Recommendation | International Standard is important for those concerned with specifying a management information model.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – STRUCTURE OF MANAGEMENT INFORMATION: GENERAL RELATIONSHIP MODEL

1 Scope

This Recommendation | International Standard provides:

a) a model for reasoning about, representing, managing, and developing re-usable specifications for relationships between resources;

b) notational tools for specifying relationships, their representation, and management;

c) definitions of generic management information that may be used in the representation and management of relationships;

d) guidelines for the development of conformance statement proforma;

e) example definitions.

The general relationship model is specified in clause 7. The notation tools are specified in Annex A. The generic management information is defined in clause 8 and Annex B. The guidelines for the specification of implementation conformance statement proforma are given in Annexes C and D. An illustration of the representation methods and example definitions are presented in Annex E and Annex F respectively. A commentary on the text is included in Annex G.

This Recommendation | International Standard does not provide a mechanism for the maintenance of consistency between resources that is implied by a relationship.

CCITT Rec. X.732 | ISO/IEC 10164-3 specifies a model of relationships represented by attributes and a set of generic attributes for representing specific types of relationships. The modelling concepts and specification tools defined in this Recommendation | International Standard are applicable to the definition of relationships in general, and hence, are also applicable to relationships represented by attributes as modelled in CCITT Rec. X.732 | ISO/IEC 10164-3.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation | International Standard. At the time of publication, the editions indicated were valid. All Recommendations and Standards are subject to revision, and parties to agreements based on this Recommendation | International Standard are encouraged to investigate the possibility of applying the most recent editions of the Recommendations and Standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards. The Telecommunication Standardization Bureau of the ITU maintains a list of the currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- CCITT Recommendation X.701 (1992) | ISO/IEC 10040:1992, *Information technology – Open Systems Interconnection – Systems management overview.*
- CCITT Recommendation X.720 (1992) | ISO/IEC 10165-1:1993, *Information technology – Open Systems Interconnection – Structure of management information: Management Information Model.*
- CCITT Recommendation X.721 (1992) | ISO/IEC 10165-2:1992, *Information technology – Open Systems Interconnection – Structure of management information: Definition of management information.*

- CCITT Recommendation X.722 (1992) | ISO/IEC 10165-4:1992, *Information technology – Open Systems Interconnection – Structure of management information: Guidelines for the definition of managed objects.*
- ITU-T Recommendation X.724 (1993) | ISO/IEC 10165-6:1994, *Information technology – Open Systems Interconnection – Structure of management information: Requirements and guidelines for implementation conformance statement proformas associated with OSI management.*
- CCITT Recommendation X.731 (1992) | ISO/IEC 10164-2:1993, *Information technology – Open Systems Interconnection – Systems management: State management function.*
- CCITT Recommendation X.732 (1992) | ISO/IEC 10164-3:1993, *Information technology – Open Systems Interconnection – Systems management: Attributes for representing relationships.*

2.2 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.208 (1988), *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.291 (1992), *OSI conformance testing methodology and framework for protocol Recommendations for CCITT applications – Abstract test suite specification.*

  ISO/IEC 9646-2:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 2: Abstract Test Suite specification.*
- ITU-T Recommendation X.296 (1995), *OSI conformance testing methodology and framework for protocol Recommendations for ITU-T applications – Implementation conformance statements.*

  ISO/IEC 9646-7:1995, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 7: Implementation Conformance Statements.*
- CCITT Recommendation X.700 (1992), *Management framework for Open Systems Interconnection (OSI) for CCITT applications.*

  ISO/IEC 7498-4:1989, *Information processing systems – Open Systems Interconnection – Basic Reference Model – Part 4: Management framework.*
- CCITT Recommendation X.710 (1991), *Common management information service definition for CCITT applications.*

  ISO/IEC 9595:1991, *Information technology – Open Systems Interconnection – Common management information service definition.*
- CCITT Recommendation X.711 (1991), *Common management information protocol for CCITT applications.*

  ISO/IEC 9596-1:1991, *Information technology – Open Systems Interconnection – Common management information protocol – Part 1: Specification.*