INTERNATIONAL STANDARD

ISO/IEC 10165-6

Second edition
1997-08-01

Information technology — Open Systems Interconnection — Structure of management information: Requirements and guidelines for implementation conformance statement proformas associated with OSI management

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Structure des informations de gestion: Exigences et principes directeurs pour la mise en œuvre des proformes d'avis de conformité associée à la gestion OSI

Reference number
ISO/IEC 10165-6:1997(E)

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 10165-6 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.724.

This second edition cancels and replaces the first edition (ISO/IEC 10165-6:1994), which has been technically revised.

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 L form an integral part of this part of ISO/IEC 10165. Annexes M to R are for information only.

Introduction

This Recommendation | International Standard includes the modifications necessary to 10165-6 to cover all types of conformance claims associated with management information and an overview of the situation related to ICS proformas. The major part of the modifications are necessary for claims of conformance for systems supporting management information in the manager role. This Recommendation | International Standard also includes an issues list related to manager role ICS proformas.

The modifications are an attempt to satisfy the following requirements:

- the addition of manager role proformas should have minimal impact on existing ICS proformas;
- the proformas must be flexible enough for all possible conforming implementations;
- the proformas should be as compact as possible;
- the proformas should be easy to reference from Profile Requirements Lists;

Related work

The following related work is being performed to provide the complete framework for manager role ICS proformas:

- Guidance are given in 10040 – SMO on how specifications defining management information should define conformance requirements in the conformance clause.
- The basis for all claims of conformance to a specification are defined in the conformance clause of this Specification. For Specifications defining management information (including SMFs), which can be supported by a system in the manager role, the conformance clauses are being amended to contain a requirement that an implementation identifies the management information it supports in the manager role.
- Standards defining management information include or reference an MCS proforma. A supplier of an implementation should be able to use the MCS proforma to provide a summary of the management information supported in the agent role and/or the manager role.
- Standards defining management information are being amended to provide MICS proformas for all management information defined in those standards.

Current situation

Guidelines for the definition of proformas for conformance claims are defined in this Recommendation | International Standard. These guidelines are currently restricted to agent role conformance claims. Guidelines are given for MCS, MOCS and MRCS proformas.

The MIDS proforma defined in this Recommendation | International Standard cannot be used for conformance claims, it is only used as a building block in the construction of a MOCS proforma.

ICS proformas following these guidelines are currently being developed as amendments to standards defining management information. New standards are expected to include the proformas as they are developed.

Conformance claims for systems supporting the manager role cannot be made using the current MCS, MOCS and MRCS proformas. Manager role proformas are being added in the current standards to allow claims of conformance in the manager role. These proformas and guidelines to use them should be documented in this Recommendation | International Standard to ensure consistent use of manager role ICS proformas in all systems management standards.

Structure for ICS proformas related to OSI Management

A conformance claim for a system supporting management information can be structured in two levels. The first level is a summary of the implemented management information. This information is given in the MCS. The second level is the support of individual management information. This is given in MOCS, MICS and MRCS.

A MICS proforma (Management Information Conformance Statement) must be defined together with any definition of management information if claims in the manager role should be possible. The proforma can be used by an implementation to provide information on the options implemented. It can also be used as the basis for Profile Requirements Lists used in the definition of profiles.

For a system implementing agent role, the claim should include MCS, MOCS and MRCS. For a system implementing manager role, the claim should include MCS and MICS.

The conformance clause of a Specification defining management information should reference an MCS proforma where all requirements for support are explicitly defined. The conformance clause must identify the mandatory requirements and any optional requirements.

Proformas for conformance claims must in general be sufficiently flexible to enable all possible conformance claims allowed by this Specification. For standards defining management information some guidelines for the structure should be given in this Recommendation | International Standard (and in CCITT Rec. X.701 | ISO/IEC 10040).

The MICS proformas include an Additional Information column, that could be used to give information about how the management information is supported. The use of the Additional Information column is described in 5.2.

INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – STRUCTURE OF MANAGEMENT INFORMATION: REQUIREMENTS AND GUIDELINES FOR IMPLEMENTATION CONFORMANCE STATEMENT PROFORMAS ASSOCIATED WITH OSI MANAGEMENT

1 Scope

This Recommendation | International Standard provides requirements and guidelines for Management Conformance Summary (MCS) proformas, Management Information Conformance Statement (MICS) proformas, Managed Object Conformance Statement (MOCS) proformas, Management Information Definition Statement (MIDS) proformas, and Managed Relationship Conformance Statement (MRCS) proformas and for the specification of these proformas. These proformas are applicable to standards for OSI management including definitions of managed objects. The MCS proforma provides a summary of PICS proforma, MICS proforma, MOCS proforma and MRCS proforma. The PICS is a statement made by an implementor to claim conformance to a protocol specification. The MICS is a statement made by an implementor to claim conformance to management information in the manager role. The MOCS is a statement made by an implementor to claim conformance to a managed object class definition. The MRCS is a statement made by an implementor to claim conformance to a managed relationship definition, such as a name binding definition.

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 International 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 edition of the Recommendations and International 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 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.722 (1992) | ISO/IEC 10165-4:1992, *Information technology – Open Systems Interconnection – Structure of management information: Guidelines for the definition of managed objects.*

2.2 Paired ITU-T 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.290 (1992), *OSI conformance testing methodology and framework for protocol Recommendations for CCITT applications – General concepts.*

  ISO/IEC 9646-1:1994, *Information technology – Open Systems Interconnection – Conformance testing methodology and framework – Part 1: General concepts.*

- 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.*