
Information technology — Open Systems Interconnection — Systems management: Scheduling function

*Technologies de l'information — Interconnexion de systèmes ouverts
(OSI) — Gestion-systèmes: Fonction de programmation*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

ISO/IEC 10164-15 was prepared by ITU-T (as ITU-T Rec. X.746) and was adopted, under a special “fast-track procedure” by Joint Technical Committee ISO/IEC JTC 1, in parallel with its approval by national bodies of ISO and IEC. The identical text is published as ITU-T Rec. X.746.

This second edition cancels and replaces the first edition (ISO/IEC 10164-15:1995), which has been technically revised.

ISO/IEC 10164 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Systems management*:

- *Part 1: Object management function*
- *Part 2: State management function*
- *Part 3: Attributes for representing relationships*
- *Part 4: Alarm reporting function*
- *Part 5: Event report management function*
- *Part 6: Log control function*
- *Part 7: Security alarm reporting function*
- *Part 8: Security audit trail function*
- *Part 9: Objects and attributes for access control*
- *Part 10: Usage metering function for accounting purposes*
- *Part 11: Metric objects and attributes*
- *Part 12: Test management function*
- *Part 13: Summarization function*

- *Part 14: Confidence and diagnostic test categories*
- *Part 15: Scheduling function*
- *Part 16: Management knowledge management function*
- *Part 17: Change over function*
- *Part 18: Software management function*
- *Part 19: Management domain and management policy management function*
- *Part 20: Time management function*
- *Part 21: Command sequencer for systems management*
- *Part 22: Response time monitoring function*

Introduction

ITU-T Rec. X.746 | ISO/IEC 10164-15 is a member of a family of Recommendations | International Standards dealing with *Systems Management*:

- X.730 (1992) | ISO/IEC 10164-1:1993: Object management function.
- X.731 (1992) | ISO/IEC 10164-2:1993: State management function.
- X.732 (1992) | ISO/IEC 10164-3:1993: Attributes for representing relationships.
- X.733 (1992) | ISO/IEC 10164-4:1992: Alarm reporting function.
- X.734 (1992) | ISO/IEC 10164-5:1993: Event report management function.
- X.735 (1992) | ISO/IEC 10164-6:1993: Log control function.
- X.736 (1992) | ISO/IEC 10164-7:1992: Security alarm reporting function.
- X.737 (1995) | ISO/IEC 10164-14:1996: Confidence and diagnostic test categories.
- X.738 (1993) | ISO/IEC 10164-13:1995: Summarization function.
- X.739 (1993) | ISO/IEC 10164-11:1994: Metric objects and attributes.
- X.740 (1992) | ISO/IEC 10164-8:1993: Security audit trail function.
- X.741 (1995) | ISO/IEC 10164-9:1995: Objects and attributes for access control.
- X.742 (1995) | ISO/IEC 10164-10:1995: Usage metering function for accounting purposes.
- X.743 (1998) | ISO/IEC 10164-20:1999: Time management function.
- X.744 (1996) | ISO/IEC 10164-18:1997: Software management function.
- X.745 (1993) | ISO/IEC 10164-12:1994: Test management function.
- X.746 (2000) | ISO/IEC 10164-15:2001: Scheduling function.
- X.748 (1999) | ISO/IEC 10164-22:2000: Response time monitoring function.
- X.749 (1997) | ISO/IEC 10164-19:1998: Management domain and management policy management function.
- X.750 (1996) | ISO/IEC 10164-16:1997: Management knowledge management function.
- X.751 (1995) | ISO/IEC 10164-17:1996: Changeover function.
- X.753 (1997) | ISO/IEC 10164-21:1998: Command sequencer for systems management.

**INTERNATIONAL STANDARD
ITU-T RECOMMENDATION****INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT: SCHEDULING FUNCTION****1 Scope**

This Recommendation | International Standard defines the scheduling function. The scheduling function is a systems management function which may be used by an application process in a centralized or decentralized management environment to exchange information and commands for the purpose of systems management, as defined by CCITT Rec. X.700 | ISO/IEC 7498-4. This Recommendation | International Standard is positioned in the application layer of ITU-T Rec. X.200 | ISO/IEC 7498-1 and is defined according to the model provided by ISO/IEC 9545. The role of systems management functions is described by CCITT Rec. X.701 | ISO/IEC 10040.

This Recommendation | International Standard:

- identifies a set of requirements satisfied by the function;
- provides a model for scheduling;
- specifies the management requirements of the function and how these are realized by specification of managed objects and their behaviour;
- defines the conformance requirements to be met by implementations of this Recommendation | International Standard;
- defines managed objects.

This Recommendation | International Standard does not define:

- the manner in which management is to be accomplished by the user of the scheduling function;
- the nature of any implementation intended to provide the scheduling function;
- the nature of any interactions which result in the use of the scheduling function;
- the interactions which result by the simultaneous use of several management functions;
- the occasions where the use of the scheduling function is appropriate;
- the services necessary for the establishment, normal and abnormal release of a management association.

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 edition 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 currently valid ITU-T Recommendations.

2.1 Identical Recommendations | International Standards

- ITU-T Recommendation X.200 (1994 | ISO/IEC 7498-1:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The Basic Model*).
- ITU-T Recommendation X.210 (1993 | ISO/IEC 10731:1994, *Information technology – Open Systems Interconnection – Basic Reference Model – Conventions for the definition of OSI services*).
- ITU-T Recommendation X.680 (1997 | ISO/IEC 8824-1:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Specification of basic notation*).
- ITU-T Recommendation X.681 (1997 | ISO/IEC 8824-2:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Information object specification*).

- ITU-T Recommendation X.682 (1997) | ISO/IEC 8824-3:1998, *Information technology – Abstract Syntax Notation One (ASN.1): Constraint specification.*
- ITU-T Recommendation X.690 (1997) | ISO/IEC 8825-1:1998, *Information technology – ASN.1 encoding rules: Specification of Basic Encoding Rules (BER), Canonical Encoding Rules (CER) and Distinguished Encoding Rules (DER).*
- ITU-T Recommendation X.691 (1997) | ISO/IEC 8825-2:1998, *Information technology – ASN.1 encoding rules: Specification of Packed Encoding Rules (PER).*
- CCITT Recommendation X.701 (1992) | ISO/IEC 10040:1992, *Information technology – Open Systems Interconnection – Systems management overview.*
- ITU-T Recommendation X.710 (1997) | ISO/IEC 9595:1998, *Information technology – Open Systems Interconnection – Common management information service.*
- 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.730 (1992) | ISO/IEC 10164-1:1993, *Information technology – Open Systems Interconnection – Systems Management: Object management function.*
- CCITT Recommendation X.731 (1992) | ISO/IEC 10164-2:1993, *Information technology – Open Systems Interconnection – Systems Management: State management function.*
- CCITT Recommendation X.734 (1992) | ISO/IEC 10164-5:1993, *Information technology – Open Systems Interconnection – Systems Management: Event report management function.*
- ITU-T Recommendation X.738 (1993) | ISO/IEC 10164-13:1995, *Information technology – Open Systems Interconnection – Systems Management: Summarization function.*
- ITU-T Recommendation X.739 (1993) | ISO/IEC 10164-11:1994, *Information technology – Open Systems Interconnection – Systems Management: Metric objects and attributes.*
- ITU-T Recommendation X.745 (1993) | ISO/IEC 10164-12:1994, *Information technology – Open Systems Interconnection – Systems Management: Test Management Function.*

2.2 Paired Recommendations | International Standards equivalent in technical content

- 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.*
- 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.*

2.3 Additional references

- ITU-T Recommendation M.3100 (1995), *Generic network information model.*
- ISO/IEC 9545:1994, *Information technology – Open Systems Interconnection – Application Layer structure.*