INTERNATIONAL STANDARD

ISO/IEC
10742

Information technology — Telecommunications and information exchange between systems — Elements of management information related to OSI Data Link Layer standards

Technologies de l'information — Télécommunications et échange d'information entre systèmes — Éléments de l'information de gestion liés aux normes de la couche de liaison de données OSI

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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 10742 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology.*

Annexes A and B form an integral part of this International Standard. Annexes C and D are for information only.

Introduction

This document is intended to become one of a set of International Standards produced to facilitate the interconnection of open systems. The set of International Standards covers the services, protocols and management information required to achieve such interconnection.

This International Standard is positioned with respect to other related Specifications by the layers defined in the *Reference Model for Open System Interconnection* (ISO 7498). In particular, it is concerned with the definition of Data Link Layer management information.

Information technology — Telecommunications and information exchange between systems — Elements of management information related to OSI Data Link Layer standards

1 Scope

This International Standard provides the specification of management information within an Open System related to those operations of the OSI Data Link Layer specified by the specifications in this document. Specifics on how Data Link layer management is accomplished is beyond the scope of this International Standard. Data Link Layer management is defined by specifying:

- the managed object class definition of Data Link Layer Managed Objects following guidelines put forth by the *Structure of Management Information* (ISO/IEC 10165)

- the relationship of the Managed Objects and attributes to both the operation of the layer and to other objects and attributes of the layer, and

- the action type operations on the attributes of Data Link Layer Managed Objects that are available to OSI Systems Management.

2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this Recommendation I 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 I 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 I International Standards

- ITU-T Recommendation X.200(1993) I ISO 7498-1: 1994, *Information technology - Open Systems Interconnection Reference Model: Basic Reference Model.*

- CCITT Recommendation X.701(1992) I ISO/IEC 10040: 1992, *Information technology - Open Systems Interconnection - Systems management overview.*

- CCITT Recommendation X.720(1992) I ISO/IEC 10165-1: 1993, *Information technology - Open Systems Interconnection - Structure of management information: Management Information Model.*

- CCITT Recommendation X.721(1992) I ISO/IEC 10165-2: 1992, *Information technology - Open Systems Interconnection - Structure of management information: Definition of Management Information.*

- CCITT Recommendation X.722(1992) I 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.723(1993) I ISO/IEC 10165-5:1994, *Information technology - Open Systems Interconnection -Structure of Management Information: Generic management information.*

- CCITT Recommendation X.730(1992) I ISO/IEC 10164-1: 1993, *Information technology - Open Systems Interconnection - Systems management: Object management function.*

- CCITT Recommendation X.731(1992) I ISO/IEC 10164-2: 1993, *Information technology - Open Systems Interconnection - Systems management: State management function.*

- CCITT Recommendation X.732(1992) I ISO/IEC 10164-3: 1993, *Information technology - Open Systems Interconnection - Systems management: Attributes for representing relationships.*

- CCITT Recommendation X.733(1992) I ISO/IEC /10164-4: 1992, *Information technology - Open Systems Interconnection - Systems management: Alarm reporting function.*

- CCITT Recommendation X.734(1992) I ISO/IEC 10164-5: 1993, *Information technology - Open Systems Interconnection - Systems management: Event report management function.*

- CCITT Recommendation X.735(1992) I ISO/IEC 10164-6: 1993, *Information technology -Open Systems Interconnection - Systems management: Log control function.*

2.2 Paired Recommendations I International Standards equivalent in technical content

- CCITT Recommendation X.700 (1992), *Management Framework for Open Systems Interconnection (OSI) for CCITT Applications.*

ISO 7498 - 4: 1989, *Information Processing Systems - Open Systems Interconnection - Basic Reference Model - Management framework.*

- CCITT Recommendation X.212(1988), *Data link service definition for open systems interconnection for CCITT applications.*

ISO/IEC 8886: 1992, *Information technology - Telecommunications and information exchange between systems - Data link service definition for Open Systems Interconnection.*

- CCITT Recommendation X.208(1988), *Specification of abstract syntax notation one (ASN.1).*

ISO/IEC 8824:1990, *Information technology - Open Systems Interconnection - Specification of the Abstract Syntax Notation One (ASN.1).*

- 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 Specification for CCITT Applications.*

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

2.3 Additional references

- ITU-T Recommendation X.25 (1993), *Interface between data terminal equipment (DTE) and data circuit-terminating equipment (DCE) for terminals operating in the packet mode and connected to public data networks by dedicated circuit.*

ISO 7776: 1986, *Information processing Systems - Data communications - High-level data link control procedures - Description of the X.25 LAPB-compatible DTE data link procedures.*

- ISO 8802-2: 1989, *Information processing systems - Local area networks - Logical link control.*

- ISO/IEC 8802-3: 1993, *Information technology - Local and metropolitan area networks - Carrier Sence multiple access with collision detection (CSMA/CD) access method and physical layer specifications.*

- ISO/IEC 11575, *Information Technology - Telecommunications and Information Exchange Between Systems - Protocol Mappings for the OSI Data Link Service.*