



INTERNATIONAL TELECOMMUNICATION UNION

CCITT

X.733

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

DATA COMMUNICATION NETWORKS

**INFORMATION TECHNOLOGY –
OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT: ALARM
REPORTING FUNCTION**

Recommendation X.733



Geneva, 1992



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Foreword

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the ITU. Some 166 member countries, 68 telecom operating entities, 163 scientific and industrial organizations and 39 international organizations participate in CCITT which is the body which sets world telecommunications standards (Recommendations).

The approval of Recommendations by the members of CCITT is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988). In addition, the Plenary Assembly of CCITT, which meets every four years, approves Recommendations submitted to it and establishes the study programme for the following period.

In some areas of information technology, which fall within CCITT's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC. The text of CCITT Recommendation X.733 was approved on 10th of February 1992. The identical text is also published as ISO/IEC International Standard 10164-4.

CCITT NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized private operating agency.

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INFORMATION NOTE

The following table gives a list of X.700 Series Recommendations which were developed in collaboration with the ISO/IEC and are identical to the corresponding International Standard. Cross-references to the corresponding ISO/IEC International Standard number and the short title of the Recommendation | International Standard are provided.

CCITT Recommendation ISO/IEC International Standard	Short Title
X.700 7498-4 (Note)	Management Framework
X.701 10040	System Management Overview
X.710 9595	Common Management Information Service Definition
X.711 9596-1	Common Management Information Protocol Specification
X.712 9596-2	CMIP PICS
X.720 10165-1	Management Information Model
X.721 10165-2	Definition of Management Information
X.722 10165-4	Guidelines for the Definition of Managed Objects
X.730 10164-1	Object Management Function
X.731 10164-2	State Management Function
X.732 10164-3	Attributes for Representing Relationships
X.733 10164-4	Alarm Reporting Function
X.734 10164-5	Event Management Function
X.735 10164-6	Log Control Function
X.736 10164-7	Security Alarm Reporting Function
X.740 10164-8	Security Audit Trail Function
<i>Note</i> – This Recommendation and International Standard are not identical, but are technically aligned.	

INTERNATIONAL STANDARD

CCITT RECOMMENDATION

**INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
SYSTEMS MANAGEMENT: ALARM REPORTING FUNCTION****1 Scope**

This Recommendation | International Standard defines a Systems Management Function that may be used by an application process in a centralized or decentralized management environment to interact for the purpose of systems management, as defined by CCITT Rec. X.700 | ISO/IEC 7498-4. This Recommendation | International Standard defines a function which consists of generic definitions, services and functional units. This function is positioned in the application layer of the OSI reference model (CCITT Rec. X.200 | ISO 7498) 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. The alarm notifications defined by this function provides information that a manager may need to act upon pertaining to a system's operational condition and quality of service.

This Recommendation | International Standard

- establishes user requirements for the alarm reporting function;
- establishes a model that relates the service and generic definitions provided by this function to user requirements;
- defines the service provided by the function;
- defines generic notification types and parameters documented in accordance with CCITT Rec. X.722 | ISO/IEC 10165-4;
- specifies the protocol that is necessary in order to provide the service;
- specifies the abstract syntax necessary to identify and negotiate the functional unit in protocol;
- defines the relationship between this service and SMI notifications;
- specifies compliance requirements placed on other standards that make use of these generic definitions;
- defines relationships with other systems management functions;
- specifies conformance requirements.

This Recommendation | International Standard does not

- define the nature of any implementation intended to provide the Alarm Reporting function;
- specify the manner in which management is accomplished by the user of the Alarm Reporting function;
- define the nature of any interactions which result in the use of the Alarm Reporting function;
- specify the services necessary for the establishment, normal and abnormal release of a management association;
- preclude the definition of further notification types;
- define managed objects.

2 Normative references

The following CCITT 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 indicated below. Members of IEC and ISO maintain registers of currently valid International Standards. The CCITT Secretariat maintains a list of the currently valid CCITT Recommendations.

2.1 Identical CCITT Recommendations | International Standards

- CCITT Recommendation X.701 (1992) | ISO/IEC 10040 : 1992, *Information technology – Open Systems Interconnection – Systems management overview.*
- CCITT Recommendation X.731 (1992) | ISO/IEC 10164-2 : 1992, *Information technology – Open Systems Interconnection – Systems Management – State management function.*
- CCITT Recommendation X.732 (1992) | ISO/IEC 10164-3 : 1992, *Information technology – Open Systems Interconnection – Systems Management – Attributes for representing relationships.*
- CCITT Recommendation X.734¹⁾ | ISO/IEC 10164-5 : 1992, *Information technology – Open Systems Interconnection – Systems Management – Event report management function.*
- CCITT Recommendation X.720 (1992) | ISO/IEC 10165-1 : 1992, *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.*

2.2 Paired CCITT Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.700¹⁾, *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.200 (1988), *Reference Model of Open Systems Interconnection for CCITT Applications.*
ISO 7498 : 1984, *Information processing systems – Open Systems Interconnection – Basic Reference Model.*
- 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.210 (1988), *Reference Model of Open Systems Interconnection (OSI) Layer Service Definition Conventions for CCITT Applications.*
ISO/TR 8509 : 1987, *Information processing systems – Open Systems Interconnection – Service conventions.*
- 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.*

¹⁾ Presently at state of draft Recommendation.