

INTERNATIONAL  
STANDARD

**ISO/IEC**  
**8822**

Second edition  
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**Information technology — Open Systems  
Interconnection — Presentation service  
definition**

*Technologies de l'information — Interconnexion de systèmes ouverts —  
Définition du service de présentation*



Reference number  
ISO/IEC 8822:1994(E)

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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 8822 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.216.

This second edition cancels and replaces the first edition (ISO 8822:1988), and is a consolidation of the first edition, Amendment 1:1991 and Amendment 5:1992.

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

## Introduction

This ITU-T Recommendation | International Standard is one of a set of ITU-T Recommendations | International Standards, produced to facilitate the interconnection of information processing systems. It is related to other ITU-T Recommendations | International Standards in the set as defined by the Reference Model for Open Systems Interconnection (ITU-T Rec. X.200 | ISO/IEC 7498). The Reference Model subdivides the area of standardization for interconnection into a series of layers of specification, each of manageable size.

The aim of Open Systems Interconnection is to allow, with a minimum of technical agreement outside the interconnection standards, the interconnection of information processing systems

- from different manufacturers;
- under different managements;
- of different levels of complexity;
- of different ages.

This ITU-T Recommendation | International Standard defines the service available to entities within the Application Layer of the Reference Model.

This ITU-T Recommendation | International Standard recognizes that application-entities may wish to intercommunicate for a wide variety of reasons. While not all systems will share a common method of representing the information they wish to intercommunicate, they will be agreed about the subject matter of their communication and the meanings to be assigned to that information. The presentation-service provides the proper means of transferring information so that the semantics are preserved during the transfer.

It is recognized that, with respect to presentation quality of service (QOS) described in clause 9, work is still in progress to provide an integrated treatment of QOS across all of the layers of the OSI Reference Model and to ensure that the individual treatments in each layer satisfy overall QOS objectives in a consistent manner. As a consequence, an addendum may be added to this ITU-T Recommendation | International Standard at a later time which reflects further QOS developments and integration.

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## INTERNATIONAL STANDARD

## ITU-T RECOMMENDATION

## INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – PRESENTATION SERVICE DEFINITION

### 1 Scope

1.1 This ITU-T Recommendation | International Standard defines (in an abstract way) the externally visible service provided by the OSI Presentation Layer in terms of

- a) the primitive actions and events at the user/service boundary;
- b) the parameter data associated with each primitive action and event;
- c) the relationship between, and the valid sequences of, those actions and events.

1.2 The service defined in this ITU-T Recommendation | International Standard is the connection-oriented service which is provided by the OSI connection-oriented presentation protocol and the connectionless service which is provided by the OSI connectionless presentation protocol, each in conjunction with the OSI session-service.

The connection-oriented presentation service defined in this ITU-T Recommendation | International Standard may be used by an OSI application protocol defined for connection-oriented transmission. The connectionless presentation service defined in this ITU-T Recommendation | International Standard may be used by an OSI application protocol defined for connectionless transmission.

1.3 This ITU-T Recommendation | International Standard does not specify individual implementations or products, nor does it constrain the implementation of entities and interfaces within a computer system. There is, therefore, no conformance to this ITU-T Recommendation | International Standard.

### 2 Normative references

The following Recommendations and International Standards contain provisions which, through reference in this text, constitute provisions of this ITU-T 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 ITU-T 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 ITU-T Secretariat maintains a list of currently valid ITU-T Recommendations.

#### 2.1 Identical Recommendations | International Standards

- ITU-T Recommendation X.215 (1994) | ISO/IEC 8326:—<sup>2)</sup>, *Information technology – Open Systems Interconnection – Session service definition.*
- ITU-T Recommendation X.680 (1994) | ISO/IEC 8824-1:—<sup>1)</sup>, *Information technology – Open Systems Interconnection – Abstract Syntax Notation One (ASN.1): Specification of basic notation.*
- ITU-T Recommendation X.226 (1994) | ISO/IEC 8823:1994, *Information technology – Open Systems Interconnection – Connection oriented presentation protocol: Protocol specification.*
- 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.236 | ISO/IEC 9576-1: ...<sup>1)</sup>, *Information technology – Open Systems Interconnection – Connectionless presentation protocol specification.*
- ITU-T Recommendation X.660 (1992) | ISO/IEC 9834-1:1993, *Information technology – Open Systems Interconnection – Procedures for the operation of OSI registration authorities: General procedures.*

1) Presently at the stage of draft.

2) Under revision. To be published.

## 2.2 Paired Recommendations | International Standards equivalent in technical content

- CCITT Recommendation X.210 (1988), *Open Systems Interconnection layer service definition conventions*.  
ISO/TR 8509, *Information processing systems – Open Systems Interconnection – Service conventions*.
- CCITT Recommendation X.650 (1992), *Open Systems Interconnection (OSI) – Reference Model for naming and addressing*.  
ISO 7498-3:1989, *Information processing systems – Open Systems Interconnection – Basic Reference Model – Part 3: Naming and addressing*.

## 2.3 Additional references

- CCITT Recommendation X.410 (1984), *Message Handling Systems: Remote Operations and Reliable Transfer Server*.

## 3 Definitions

For the purposes of this ITU-T Recommendation | International Standard, the following definitions apply.

### 3.1 Basic Reference Model definitions

This ITU-T Recommendation | International Standard is based on the concepts developed in ITU-T Rec. X.200 | ISO/IEC 7498 and makes use of the following terms defined in it:

- a) application-entity;
- b) application-protocol-control-information;
- c) presentation-connection;
- d) presentation-entity;
- e) Presentation Layer;
- f) presentation-service;
- g) presentation-service-access-point;
- h) presentation-service-data-unit;
- i) session-connection;
- j) session-service;
- k) transfer syntax;
- l) concrete syntax;
- m) real open system;
- n) (N)-connectionless-mode transmission.

NOTE – The abbreviations in clause 4 apply to some of these terms.

### 3.2 Service conventions definitions

This ITU-T Recommendation | International Standard makes use of the following terms defined in CCITT Rec. X.210 | ISO/TR 8509 as they apply in the Presentation Layer:

- a) service-user;
- b) service-provider;
- c) service primitive;
- d) request;
- e) indication;
- f) response;
- g) confirm;
- h) non-confirmed-service;
- i) confirmed-service;
- j) provider-initiated-service.