INTERNATIONAL STANDARD

ISO/IEC 8823-1

Second edition
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Information technology — Open Systems Interconnection — Connection-oriented presentation protocol: Protocol specification

Technologies de l'information — Interconnexion de systèmes ouverts (OSI) — Protocole de présentation en mode connexion: Spécification du protocole

Reference number
ISO/IEC 8823-1:1994(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 8823-1 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.226.

This second edition cancels and replaces the first edition (ISO 8823:1988), and is a consolidation of the first edition and Amendment 5:1992.

ISO/IEC 8823 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Connection-oriented presentation protocol:*

— *Part 1: Protocol specification*

— *Part 2: Protocol Implementation Conformance Statement (PICS) Proforma*

Annexes A and B form an integral part of this part of ISO/IEC 10026. Annex C is for information only.

Introduction

This ITU-T Recommendation | International Standard is one of a set of Recommendations | International Standards produced to facilitate the interconnection of information processing systems. It is related to other 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.

This ITU-T Recommendation | International Standard specifies a common encoding and a number of functional units of presentation protocol procedures to be used to meet the needs of presentation-service-users. It is intended that the presentation protocol should be simple but general enough to cater for the total range of presentation-service-user needs without restricting future extensions.

The primary aim of this ITU-T Recommendation | International Standard is to provide a set of rules for communication expressed in terms of the procedures to be carried out by peer entities at the time of communication. These rules for communication are intended to provide a sound basis for development in order to serve a variety of purposes:

a) as a guide for implementors and designers;

b) for use in the testing and procurement of equipment;

c) as part of an agreement for the admittance of systems into the open systems environment;

d) as a refinement of the understanding of OSI.

It is expected that the initial users of this ITU-T Recommendation | International Standard will be designers and implementors of equipment and therefore it contains, in notes or in annexes, guidance on the implementation of its procedures.

It has not been possible as yet to prepare a product standard containing a set of objective tests for conformance to this ITU-T Recommendation | International Standard, but it does contain a section on conformance of equipment claiming to implement the procedures it specifies. Attention is drawn to the fact that this ITU-T Recommendation | International Standard does not contain any tests to demonstrate this conformance and cannot, therefore, be considered as a complete product standard. The variations and options available within this ITU-T Recommendation | International Standard are essential to enable a presentation-service to be provided for a wide variety of applications. Thus, a minimally conforming implementation will not be suitable for use in all possible circumstances. It is necessary, therefore, to qualify all references to this ITU-T Recommendation | International Standard with statements of the options provided or required, or with statements of the intended purpose of provision or use.

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ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – CONNECTION-ORIENTED PRESENTATION PROTOCOL: PROTOCOL SPECIFICATION

1 Scope[1)]

1.1 This ITU-T Recommendation | International Standard specifies:

a) procedures for the transfer of data and control information from one presentation-entity to a peer presentation-entity;

b) the means of selecting, by means of functional units, the procedures to be used by the presentation-entities;

c) the structure and encoding of the presentation-protocol-data-units used for the transfer of data and control information.

The procedures are defined in terms of

d) the interactions between peer presentation-entities through the exchange of presentation-protocol-data-units;

e) the interactions between a presentation-entity and the presentation-service-user in the same system through the exchange of presentation-service primitives;

f) the interactions between a presentation-entity and the session-service-provider through the exchange of session-service primitives.

1.2 These procedures are defined in the main text of this ITU-T Recommendation | International Standard supplemented by state tables in Annex A.

1.3 These procedures are applicable to instances of communication between systems which support the Presentation Layer of the OSI Reference Model and which wish to interconnect in an OSI environment.

1.4 This ITU-T Recommendation | International Standard also specifies conformance criteria for systems implementing these procedures. It does not contain tests which can be used to demonstrate this conformance.

2 Normative references

The following ITU-T Recomendations 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 appllying the most recent editions of the Standards and Recommendations 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 ITU-T Recommendations | International Standards

– ITU-T Recommendation X.200 (1994) | ISO/IEC 7498:1994, *Information technology – Open Systems Interconnection – Basic Reference Model: The basic model.*

[1)] The implementation and use of this Recommendation | International Standard for Open Systems Interconnection requires the public assignment of values of ASN.1 type OBJECT IDENTIFIER to specifications of abstract syntaxes and transfer syntaxes. Public specification and naming of abstract syntaxes and transfer syntaxes can occur in ISO standards or ITU-T Recommendations, or under the mechanisms identified in the Registration Authority procedures. A Registration procedures specification is given in Annex B.

- ITU-T Recommendation X.215 (1994) | ISO/IEC 8326:1994, *Information technology – Open Systems Interconnection – Session service definition.*
- ITU-T Recommendation X.246 (1994) | ISO/IEC 8823-2:1994, *Information technology – Open Systems Interconnection – Connection-oriented presentation protocol: Protocol implementation Conformance Statement (PICS) proforma.*
- ITU-T Recommendation X.680 (1994) | ISO/IEC 8824-1:1994, *Information technology – Abstract Syntax Notation One* (ASN.1): *Specification of basic notation.*
- ITU-T Recommendation X.690 (1994) | ISO/IEC 8825-1:1994, *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.216 (1994) | ISO/IEC 8822:1994, *Information technology – Open Systems Interconnection – Presentation service definition.*
- 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.*
- 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.*

2.2 Paired ITU-T Recommendations | International Standards equivalent in technical content

- ITU-T Recommendation X.208 (1992), *Open Systems Interconnection – Specification of Abstract Syntax Notation One (ASN.1).*

  ISO/IEC 8824:1990, *Information processing systems – Open Systems Interconnection – Specification of Abstract Syntax Notation One (ASN.1).*
- ITU-T Recommendation X.209 (1992), *Open Systems Interconnection – Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*

  ISO/IEC 8825:1990, *Information processing systems – Open Systems Interconnection – Specification of Basic Encoding Rules for Abstract Syntax Notation One (ASN.1).*
- 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.*