INTERNATIONAL STANDARD

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Information technology — Open Systems Interconnection — Connection-oriented Session protocol: Protocol specification

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

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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 8327-1 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.225.

This second edition cancels and replaces the first edition (ISO 8327:1987), which has been technically revised. It also incorporates Amendment 3:1992.

ISO/IEC 8327 consists of the following parts, under the general title *Information technology — Open Systems Interconnection — Connection-oriented Session protocol*:

— *Part 1: Protocol specification*

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

Annexes A to C form an integral part of this part of ISO/IEC 8327. Annex D is for information only.

Introduction

This Recommendation | International Standard is one of a set of Recommendations | International Standards produced to facilitate the interconnection of computer systems. The set of Recommendations | International Standards covers the services and protocols required to achieve such interconnection.

This Recommendation | International Standard is positioned with respect to other related Recommendations | International Standards by the layers defined in the Reference Model for Open Systems Interconnection (see ITU-T Rec. X.200 | ISO/IEC 7498-1). It is most closely related to and lies within the field of application of the Session Service Definition (see ITU-T Rec. X.215 | ISO/IEC 8326). It also uses and references the Transport Service Definition (see ITU-T Rec. X.214 | ISO/IEC 8072), whose provisions it assumes in order to accomplish the aims of the session protocol. The interrelationship of these Recommendations | International Standards is depicted in Figure Intro. 1.

This Recommendation | International Standard specifies a single protocol with a common encoding.

It is intended that the session protocol should be general enough to cater for the total range of session service users without restricting future extensions.

The protocol is structured so that subsets of protocol can be defined.

The primary aim of this Recommendations | International Standards is to provide a set of rules for communication expressed in terms of the procedures to be carried out by peer session 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 a part of an agreement for the admittance of systems into the open systems environment;

d) as a refinement to the understanding of OSI.

It is expected that the initial users of this Recommendation | International Standard will be designers and implementors of equipment and the Recommendation | International Standard contains, in Notes or in annexes, guidance on the implementation of the procedures defined in this Recommendation | International Standard.

It should be noted that, as the number of valid protocol sequences is very large, it is not possible with current technology to verify that an implementation will operate the protocol defined in this Recommendation | International Standard correctly under all circumstances. It is possible by means of testing to establish confidence that an implementation correctly operates the protocol in a representative sample of circumstances. It is, however, intended that this Recommendation | International Standard can be used in circumstances where two implementations fail to communicate in order to determine whether one or both have failed to operate the protocol correctly.

The variations and options available within this Recommendation | International Standard are essential as they enable a session 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 important, therefore, to qualify all references to this Recommendation | International Standard with statements of the options provided or required or with statements of the intended purpose of provision or use.

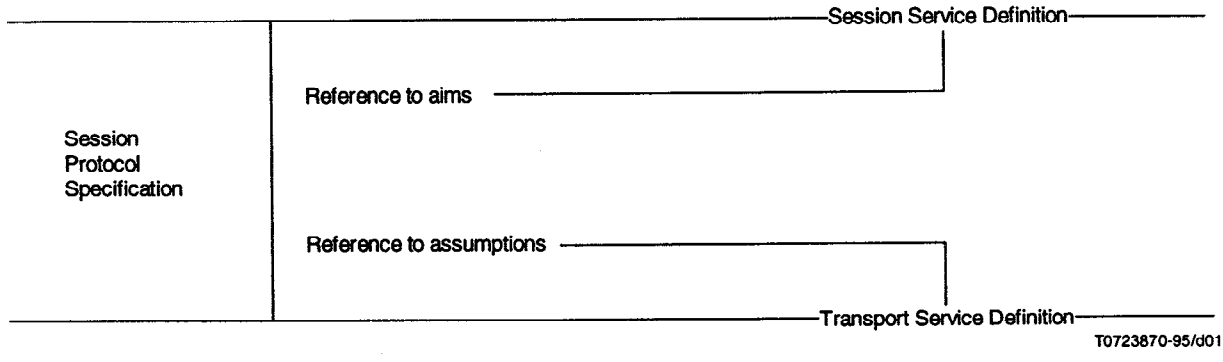


Figure Intro. 1 – Relationship between the connectionless session protocol and adjacent services

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INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

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

SECTION 1 – GENERAL

1 Scope

This Recommendation | International Standard specifies:

a) procedures for a single protocol for the transfer of data and control information from one session entity to a peer session entity;

b) the means of selecting the functional units to be used by the session entities;

c) the structure and encoding of the session protocol data units used for the transfer of data and control information;

The procedures are defined in terms of:

a) the interactions between peer session entities through the exchange of session protocol data units;

b) the interactions between a session entity and the session service user in the same system through the exchange of session service primitives;

c) the interactions between a session entity and the transport service provider through the exchange of transport service primitives.

These procedures are applicable to instances of communication between systems which support the session layer of the OSI Reference Model and which wish to interconnect in an open systems environment.

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

The text pertaining to the symmetric synchronization functional unit is not applicable to the support of ITU-T applications.

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 International 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 International Standards listed below. Members of ISO and IEC 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.214 (1993) | ISO/IEC 8072:1994, *Information technology – Open Systems Interconnection – Transport service definition.*