

INTERNATIONAL ISO/IEC
STANDARD 15954

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Information technology — Open Systems Interconnection — Connection-mode protocol for the Application Service Object Association Control Service Element

*Technologies de l'information — Interconnexion des systèmes ouverts —
Protocole en mode connexion pour l'élément de service de contrôle
d'association des objets de service d'application*

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

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.

Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

International Standard ISO/IEC 15954 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, in collaboration with ITU-T. The identical text is published as ITU-T Recommendation X.227 bis.

This first edition of ISO/IEC 15954 cancels and replaces ISO/IEC 8650-1:1999 and its Amendment 1:1997 and Amendment 2:1998, of which it constitutes a technical revision.

Annexes A to D form a normative part of this International Standard. Annex E is for information only.

Introduction

This 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 and International Standards in the set as defined by the Reference Model for Open Systems Interconnection (see ITU-T Rec. X.200 | ISO/IEC 7498-1). The Reference model subdivides the area of standardization for interconnection into a series of layers of specification, each of manageable size.

The goal of Opens 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; and
- of different technologies.

This Recommendation | International Standard specifies the connection-mode protocol for the application service element for ASO-association control: the Association Control Service Element (ACSE). The protocol for ACSE connectionless mode service (A-UNIT-DATA) is specified in ITU-T Rec. X.237 *bis* | ISO/IEC 15955. The ACSE provides services for establishing and releasing associations. The ACSE protocol includes three optional functional units. One functional unit supports the exchange of information in support of authentication during association establishment. The second functional unit supports the negotiation of ASO-context during association establishment. The optional Higher Level Association functional unit provides for the facility to identify ASO-associations and transparently pass data to child ASOs and allows the ASO-context or the presentation context on an ASO-association to be modified during the lifetime of the association.

The fast-associate mechanism allows a session connection, including its embedded presentation connection and application association, to be established using a compressed form of the information that would otherwise be sent on the S-CONNECT exchange. The compressed form, called the upper layer context identifier, is a reference to an upper-layer context specification, which is a definition of the fields of the application, ACSE, presentation, and session protocols that would be sent on the full-form connect messages. The upper-layer context identifier may be parameterized to include values for variable fields allowed by the full form protocols for the upper layers.

Within the ACSE protocol, the addition is the definition of the construction of the User summary parameter of the P-CONNECT primitives from the semantics of the AARQ fields and the User summary parameter of the corresponding A-ASSOCIATE primitive.

This Recommendation | International Standard maintains compatibility with earlier editions of ACSE. This Recommendation | International Standard does not support X.410 mode nor Session Version 1.

This Recommendation | International Standard includes an annex that describes the protocol machine of ACSE in terms of a state table. This protocol machine is referred to as the Association Control Protocol Machine (ACPM).

The protocol defined in this Recommendation | International Standard is also governed by the use of the Presentation service (see ITU-T Rec. X.216 | ISO/IEC 8822).