



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.237 *bis*

(09/98)

SERIES X: DATA NETWORKS AND OPEN SYSTEM
COMMUNICATIONS

Open Systems Interconnection – Connectionless-mode
protocol specifications

**Information technology – Open Systems
Interconnection – Connectionless protocol for
the Application Service Object Association
Control Service Element**

ITU-T Recommendation X.237 *bis*

(Previously CCITT Recommendation)

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INTERNATIONAL STANDARD 15955

ITU-T RECOMMENDATION X.237 *bis*

**INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
CONNECTIONLESS PROTOCOL FOR THE APPLICATION SERVICE OBJECT
ASSOCIATION CONTROL SERVICE ELEMENT**

Summary

This Recommendation | International Standard specifies the protocol for the A-UNIT-DATA service for the Association Control Service Element (ACSE). The A-UNIT-DATA service provides for information transfer between application-entities utilizing the connectionless presentation service.

Source

The ITU-T Recommendation X.237 *bis* was approved on the 25th of September 1998. The identical text is also published as ISO/IEC International Standard 15955.

FOREWORD

ITU (International Telecommunication Union) is the United Nations Specialized Agency in the field of telecommunications. The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the ITU. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

The approval of Recommendations by the Members of the ITU-T is covered by the procedure laid down in WTSC Resolution No. 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

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

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As of the date of approval of this Recommendation, the ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementors are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database.

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Introduction

This 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 ITU-T Recommendations | 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 areas of standardization for interconnection into a series of layers of specification, each of manageable size.

The goal 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; and
- of different technologies.

This Recommendation | International Standard specifies the protocol for the A-UNIT-DATA service for the Association Control Service Element (ACSE). The A-UNIT-DATA service provides for information transfer between application-entities utilizing the connectionless presentation service. This service is intended to be applicable to a wide range of application process communication requirements.

This Recommendation | International Standard includes an Annex 17 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).

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INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –
CONNECTIONLESS PROTOCOL FOR THE APPLICATION SERVICE
OBJECT ASSOCIATION CONTROL SERVICE ELEMENT****1 Scope**

This Recommendation | International Standard specifies:

- a) procedures for the transfer of information among application-service-objects (ASOs); and
- b) the abstract and concrete syntax for the representation of the A-UNIT-DATA ACSE APDU.

The A-UNIT-DATA procedure is defined in terms of:

- a) The interactions between peer ACSE protocol machines by the use of a supporting service; and
- b) the interaction between an ACSE protocol machine, its service-provider and its service-user.

These procedures are applicable to instances of communication between systems which wish to communicate in an open systems interconnection environment in a connectionless mode.

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

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 this 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 edition of the Recommendations and Standards listed below. Members of IEC and ISO 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.207 (1993) | ISO/IEC 9545:1994, *Information technology – Open Systems Interconnection – Application layer structure.*
- 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.*
- ITU-T Recommendation X.215 (1995) | ISO/IEC 8326:1996, *Information technology – Open Systems Interconnection – Session service definition.*
- ITU-T Recommendation X.215 (1995)/Amd.1 (1997) | ISO/IEC 8326:1996/Amd.1:1998, *Information technology – Open Systems Interconnection – Session service definition – Amendment 1: Efficiency enhancements.*
- ITU-T Recommendation X.215 (1995)/Amd.2 (1997) | ISO/IEC 8326:1996/Amd.2:1998, *Information technology – Open Systems Interconnection – Session service definition – Amendment 2: Nested connections functional unit.*