

# INTERNATIONAL STANDARD

# ISO/IEC 9548-1

First edition  
1996-08-01

**AMENDMENT 1**  
2000-12-15

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## Information technology — Open Systems Interconnection — Connectionless Session protocol: Protocol specification

### AMENDMENT 1: Efficiency enhancements

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

*AMENDEMENT 1: Améliorations du rendement*

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Reference number  
ISO/IEC 9548-1:1996/Amd.1:2000(E)



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## Foreword

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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.

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Amendment 1 to International Standard ISO/IEC 9548-1:1996 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 Rec. X.235/Amd.1.

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ISO/IEC 9548-1

## Introduction

This amendment is one of a set of amendments to the OSI upper-layers standards produced to facilitate the interconnection of information processing systems in an open environment where efficiency of communications is paramount. Such efficiencies include:

- a) reduction in the overhead needed to encode control information for use in bandwidth-limited environments (such as radio links) or processing-limited systems (such as switching systems);
- b) reduction in the delay to set up the association between the communicating applications so that data transfer can begin expeditiously;
- c) reduction in the support of unneeded functionality in certain environments where the communications requirements of the applications are limited.

This amendment modifies the connectionless Session Protocol to support the "short-encoding" protocol option. The short-encoding option provides alternative and smaller protocol control information for the connectionless-mode session protocol data units.

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## INTERNATIONAL STANDARD

## ITU-T RECOMMENDATION

**INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION –  
CONNECTIONLESS SESSION PROTOCOL:  
PROTOCOL SPECIFICATION**

**AMENDMENT 1**

**Efficiency enhancements**

**1) Subclause 2.1**

Add the following reference by numerical order:

- 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.*

**2) Subclause 3.2**

Add the following definitions after 3.2.2:

**3.2.3 Long-form SPDU:** An SPDU that has the long-form structure defined in 7.2.

**3.2.4 Short-form SPDU:** An SPDU that has the short-form structure defined in 7.4. All short-form SPDUs have names that begin with the word SHORT and abbreviations beginning with the letter S.

**3.2.5 Short-encoding protocol option:** An option of the session protocol that permits the use of smaller protocol control information of the Session SPDUs in the data transfer phase.

**3.2.6 Parameter indication:** A field in the low-order bits of the first octet of a short-form SPDU (the high-order bits will contain the SPDU identifier).

**3) Subclause 4.2**

Add the following abbreviation by alphabetical order:

SUD SPDU    Short Unit Data SPDU

**4) Subclause 4.3**

Add the following abbreviation by alphabetical order:

SI&P            SPDU identifier (for short-form SPDUs) and parameter indication

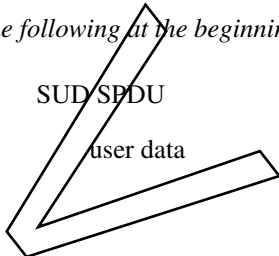
**5) Subclause 6.1.3**

Add the following SPDU at the beginning of the list:

SHORT-UNIT-DATA     SUD

**6) Subclause 6.2.3**

Add the following at the beginning of the list:



**7) Subclause 6.2.4**

Add the following to 6.2.4:

The UNIT-DATA SPDU is transmitted when the initiating SPM has chosen not to use a SHORT-UNIT-DATA SPDU.

**8) New subclauses 6.2.6 and 6.2.7**

Add the following two new subclauses after 6.2.5:

**6.2.6 Sending a SUD SPDU**

The initiating SPM can choose to use the SHORT-UNIT-DATA SPDU if in the parameters of the S-UNIT-DATA request the Called Session Address and Calling Session Address have NIL values of the Called and Calling Session Selectors.

The Called and Calling Session Address parameters of the S-UNIT-DATA request service primitive are used to determine the source and destination addresses.

If the length of the SPDU exceeds the maximum TSDU size supported by the transport service, then the S-UNIT-DATA request is discarded and a local report may be made to the SS-user indicating the inability of the session layer to provide the service requested.

A SUD SPDU is constructed with the user data supplied by the SS-user in the S-UNIT-DATA request.

The SHORT-UNIT-DATA SPDU is transmitted on the User-data of a T-UNIT-DATA request primitive.

A T-UNIT-DATA request service primitive is issued with the source and destination addresses determined above, the Quality of Service requested and a TS-user-data parameter containing the SHORT-UNIT-DATA SPDU.

**6.2.7 Receiving a SUD SPDU**

The SUD SPDU arrives in the TS-user-data field of a T-UNIT-DATA indication.

If the receiving SPM does not support the short-encoding protocol option and the SHORT-UNIT-DATA SPDU is received as user data on a T-UNIT-DATA indication primitive, it shall discard the SPDU without any notification.

A valid incoming SHORT-UNIT-DATA SPDU results in an S-UNIT-DATA indication.

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