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AMENDMENT 1
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Information technology — Protocol for providing the OSI connectionless-mode transport service

AMENDMENT 1: Addition of connectionless-mode multicast capability

Technologies de l'information — Protocole pour la fourniture du service de transport OSI en mode sans connexion

AMENDEMENT 1: Addition d'une capacité multidestinataire en mode sans connexion

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.

Amendment 1 to International Standard ISO/IEC 8602:1995 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*, in collaboration with ITU-T. The identical text is published as ITU-T Rec. X.234/Amd.1.

Introduction

This amendment to ITU-T Rec. X.234 (1994) I ISO/IEC 8602:1995 provides the capability to the connectionless-mode Transport protocol to support multicast PDU transfer when used in conjunction with the multicast services of the connectionless-mode Network service. The protocol for providing the connectionless-mode Transport service is contained entirely in ITU-T Rec. X.234 I ISO/IEC 8602.

ITU-T Rec. X.234 I ISO/IEC 8602 restricts the connectionless-mode Transport to the case of exchanging TPDUs between one sending TS-user and one receiving TS-user. Subnetwork standards exist which support the transfer of a SDU from one entity to a number of other entities in a single logical operation. Work is on-going to develop the capabilities for exchanging multicast PDUs at the Network layer. This amendment is directed at providing multicast Transport service via multicast capabilities of the Network service if they are available. With the current ITU-T Rec. X.234 I ISO/IEC 8602, no Transport layer capabilities are described to utilize such multicast Network services.

This amendment defines additional assumptions concerning the services optionally provided by the Network layer and adds no new functions of its own.

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ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – PROTOCOL FOR PROVIDING THE OSI CONNECTIONLESS-MODE TRANSPORT SERVICE

AMENDMENT 1
Addition of connectionless-mode multicast capability

1)   Clause 1

Change the end of item a) of the first paragraph from "to one peer transport entity." *to* "to one or more peer transport entities;".

2)   Subclause 3.3.2

Add to the end of the paragraph:

"The destination-transport address may identify a group of transport service users connected to different network entities depending on the services used and provided by the network service provider."

3)   Subclause 5.2

Add a new sentence at the end of the last paragraph:

"Depending on the services provided by the network service, a transport user may be able to send data to a group of other transport users and receive PDUs intended for a group of transport users via the use of the destination address parameters in Table 3."

4)   Subclause 5.3.1

Change the last sentence from "towards one TS-user" *to* "towards one or more TS-users".

5)   Subclause 5.3.2.3

Change the start of the sentence from "This function determines the network address" *to* "For non-multicast transmission, this function determines the network address".

Add a new sentence at the end of the paragraph:

"For multicast transmission, this function determines the group network address that will be used as a destination parameter in an N-UNITDATA request by examining the group transport address specified by the destination address parameter of a T-UNITDATA request."

6)   Subclause 6.2.4.1

Change the start of the first paragraph from "The source and" *to* "For non-multicast transmission, the source and".

Add a new sentence at the end of the first paragraph:

"For multicast transmission, the source and destination address parameters of the T-UNITDATA request service primitive are used to determine the source network address, source TSAP-ID, destination group network address, and destination TSAP-ID."

7)   Subclause 6.2.4.2

Change the start of the fourth paragraph from "The destination" *to* "For non-multicast transmission, the destination".

Add a new sentence at the end of the fourth paragraph:

"For multicast transmission, the destination group network address from the N-UNITDATA indication and the destination TSAP-ID from the UD TPDU will be used to determine the destination group transport address parameter for the T-UNITDATA indication."

8)   Subclause 6.2.4.3

Change the first sentence of the first paragraph from "a pair of NSAPs." *to* "a pair of NSAPs or a sending NSAP and a group of receiving NSAPs."

Add the following text to the end of 6.2.4.3:

"For multicast transmission, transport entities assume the multicast Network services optionally provided by the Network layer."

9)   Subclause 7.2.4.1

Change the second parameter code from "Destination TSAP" *to* "Destination TSAP or group Transport address".

Replace the Parameter value text with "Identifier of the source TSAP and destination transport address, respectively".

Add a note to the end of 7.2.4.1:

"NOTE – For non-multicast transfer, the destination TSAP-ID field is used to identify the destination TSAP address. For multicast transfer, the destination TSAP-ID field is used to identify the destination group transport address."

10)   Annex B

Add the following row to the end of B.7.3 table:

CLM	Connectionless-mode Multicast Network Service	6.2	O	Yes No