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INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Addendum No. 1

ITU-T

X.215

(11/95)

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

OPEN SYSTEMS INTERCONNECTION – SERVICE DEFINITIONS

OPEN SYSTEMS INTERCONNECTION – SERVICE DEFINITION FOR SESSION LAYER EFFICIENCY ENHANCEMENTS

ITU-T Addendum No. 1 to Recommendation X.215
Superseded by a more recent version

(Previously "CCITT Recommendation")

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FOREWORD

The ITU-T (Telecommunication Standardization Sector) is a permanent organ of the International Telecommunication Union (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 (Helsinki, March 1-12, 1993).

ITU-T Addendum No. 1 to Recommendation X.215, was prepared by ITU-T Study Group 7 (1993-1996) and was approved under the WTSC Resolution No. 1 procedure on the 21st of November 1995.

NOTE

In this ITU-T Addendum, the expression “Administration” is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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ITU-T X-SERIES RECOMMENDATIONS

DATA NETWORKS AND OPEN SYSTEM COMMUNICATIONS

(February 1994)

ORGANIZATION OF X-SERIES RECOMMENDATIONS

Subject area	Recommendation Series
PUBLIC DATA NETWORKS	
Services and Facilities	X.1-X.19
Interfaces	X.20-X.49
Transmission, Signalling and Switching	X.50-X.89
Network Aspects	X.90-X.149
Maintenance	X.150-X.179
Administrative Arrangements	X.180-X.199
OPEN SYSTEMS INTERCONNECTION	
Model and Notation	X.200-X.209
Service Definitions	X.210-X.219
Connection-mode Protocol Specifications	X.220-X.229
Connectionless-mode Protocol Specifications	X.230-X.239
PICS Proformas	X.240-X.259
Protocol Identification	X.260-X.269
Security Protocols	X.270-X.279
Layer Managed Objects	X.280-X.289
Conformance Testing	X.290-X.299
INTERWORKING BETWEEN NETWORKS	
General	X.300-X.349
Mobile Data Transmission Systems	X.350-X.369
Management	X.370-X.399
MESSAGE HANDLING SYSTEMS	X.400-X.499
DIRECTORY	X.500-X.599
OSI NETWORKING AND SYSTEM ASPECTS	
Networking	X.600-X.649
Naming, Addressing and Registration	X.650-X.679
Abstract Syntax Notation One (ASN.1)	X.680-X.699
OSI MANAGEMENT	X.700-X.799
SECURITY	X.800-X.849
OSI APPLICATIONS	
Commitment, Concurrency and Recovery	X.850-X.859
Transaction Processing	X.860-X.879
Remote Operations	X.880-X.899
OPEN DISTRIBUTED PROCESSING	X.900-X.999

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CONTENTS

Superseded by a more recent version

SUMMARY

This ITU-T Addendum specifies the session service No Orderly Release Functional Unit, whose selection by the session user indicates that the user has no requirements for orderly release of the session-connection. This, in turn, permits a bandwidth-efficient data transfer phase through the selection of the session null-encoding protocol option defined in ITU-T Addendum No. 1 to Recommendation X.225.

INTRODUCTION

This ITU-T Addendum is one of a set of Addenda 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 set of Addenda covers the services and protocols required to achieve such interconnection within the framework of the layers defined in the Reference Model for Open Systems Interconnection (ITU-T Rec. X.200 | ISO/IEC 7498-1).

This ITU-T Addendum specifies the no orderly release functional unit, whose selection by the session user indicates that the user has no requirements for orderly release of the session-connection. This, in turn, permits a bandwidth-efficient data transfer phase through the selection of the session null-encoding protocol option which is defined in ITU-T Addendum No. 1 to Recommendation X.225.

Superseded by a more recent version

ITU-T Addendum No. 1 to Recommendation X.215

OPEN SYSTEMS INTERCONNECTION – SERVICE DEFINITION FOR SESSION LAYER EFFICIENCY ENHANCEMENTS

(Geneva, 1995)

0 Preamble

This ITU-T Addendum No. 1 incorporates by reference the session layer service specification, ITU-T Rec. X.215 (1995) | ISO/IEC 8326: 1996, and modifies it as specified below. The modifications describe the manner in which the session user is able to signal that orderly release of the session-connection is not required. To provide compatibility with ITU-T Rec. X.215 (1995) | ISO/IEC 8326: 1996, this is done by defining a new session functional unit – the no orderly release functional unit.

1 Scope

{No change}

2 Normative References

2.1 through 2.2

{No change}

{Add a new subclause 2.3 as shown below}

2.3 Additional references

{Add the following reference}

– ITU-T Addendum No. 1 to Recommendation X.225 (1995), *Open Systems Interconnection – Protocol specification for Session layer efficiency enhancements*.

3 through 7

{No change}

8 Phases and services of the session service

{No change except to Table 2 which is referenced in this clause. Add the following row to Table 2}

TABLE 2/Add.1 X.215

Functional unit	Service(s)	Reference
No orderly release	(Note)	9.1.1 *bis*
NOTE – This functional unit removes the orderly release services from the kernel functional unit. This "negative" functional unit provides compatibility with ITU-T Rec. X.215 (1995) | ISO/IEC 8326:1996 which requires the (non-negotiable) kernel to be indivisible.		

9 Functional units and subsets

9.1 Functional units

{No change}

9.1.1 Kernel functional unit

{No change}

{Add the following new subclause 9.1.1 bis after 9.1.1}

9.1.1 *bis* No-orderly-release functional unit

This functional unit removes orderly release from the kernel functional unit. Abortive release is available, but no user data is available on the S-U-ABORT service. It is not possible to select this functional unit and the negotiated release functional unit for use on the same session connection.

NOTE – This orderly release capability would more logically be a functional unit separate from the kernel; this "negative" functional unit provides compatibility with earlier specifications that require the (non-negotiable) kernel to be indivisible.

9.1.2 through 9.2.14

{No change}

9.2 Subsets

{No change}

10 through 11

{No change}

12 Session connection establishment phase

12.1 Session connection service

12.1.1 Function

{No change}

12.1.2 Types of primitives and their parameters

{No change}

12.1.2.1 through 12.1.2.6

{No change}

12.1.2.7

{Add the following item to the list of functional units}

n) no orderly release functional unit.

{Add the following sentence to the ante-penultimate sentence of this subclause}

It is not possible to select the no orderly release functional unit and the negotiated release functional unit for use on the same session connection.

12.1.2.8 through 12.1.2.10

{No change}

12.1.3 Sequence of primitives

{No change}

13 Data transfer phase

{No change}

14 Session connection release phase

14.1 Orderly release service

14.1.1 Function

{Change the first sentence of 14.1.1 as shown by the underlined text}

The orderly release service is always provided and allows either SS-user to release the session connection in an orderly manner unless the no-orderly-release functional unit is selected on the session connection.

14.1.2 through 14.1.3

{No change}

14.2 through 14.3

{No change}

15 through 17

{No change}

Annex A

A.1 through A.4

{No change}

A.5 Definition of sets and variables

A.5.1 Functional units

{Add to the definition of fu-dom the underlined additional term}

fu-dom = {FD, HD, EXCEP, TD, NR, SY, SS, DS, MA, RESYN, EX, ACT, CD, NOR}

{Add the following definition of NOR to the list of abbreviations}

NOR = no orderly release functional unit.

Superseded by a more recent version

A.5.2 through A.5.4

{No change}

{Add a new row at the end of Table A.7 as shown below}

TABLE A.7/Add.1 X.215

p188	¬FU(NOR)

{Change Tables A.15 (Connection release state table without the symmetric synchronize functional unit) and A.23 (Connection release state table with the symmetric synchronize functional unit) in the identified rows according to the underlined changes shown below}

State Event	STA03 await SRELcnf	STA09 await SRELrsp	STA713 data transfer	Any other state
SRELind	[18] STA09		P188 STA09	
SRELreq		¬p65 [18] STA09	p188 & p63 [18] STA03	