INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

X.227

Amendment 2
(08/97)

SERIES X: DATA NETWORKS AND OPEN SYSTEM COMMUNICATION

Open System Interconnection – Connection-mode protocol specifications

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Information technology – Open Systems Interconnection – Connection-oriented protocol for the association control service element: Protocol specification

Amendment 2: Fast-associate mechanism

ITU-T Recommendation X.227 – Amendment 2

(Previously CCITT Recommendation)

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INTERNATIONAL STANDARD 8650-1

ITU-T RECOMMENDATION X.227

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – CONNECTION-ORIENTED PROTOCOL FOR THE ASSOCIATION CONTROL SERVICE ELEMENT: PROTOCOL SPECIFICATION

AMENDMENT 2
Fast-associate mechanism

Summary

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.

Source

The ITU-T Recommendation X.227, Amendment 2 was approved on the 9th of August 1997. The identical text is also published as ISO/IEC International Standard 8650-1.

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.

INTELLECTUAL PROPERTY RIGHTS

The ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. The ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

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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INTERNATIONAL STANDARD

ITU-T RECOMMENDATION

INFORMATION TECHNOLOGY – OPEN SYSTEMS INTERCONNECTION – CONNECTION-ORIENTED PROTOCOL FOR THE ASSOCIATION CONTROL SERVICE ELEMENT: PROTOCOL SPECIFICATION

AMENDMENT 2
Fast-associate mechanism

1) Introduction

Add the following paragraphs:

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.

2) Subclause 2.1

Insert the following references by numerical order:

- ITU-T Rec. X.216 (1994)/Amd.1 (1997) | ISO/IEC 8822:1994/Amd.1:1998, *Information technology – Open Systems Interconnection – Presentation service definition – Amendment 1: Efficiency enhancements.*
- ITU-T Rec. X.217 (1995)/Amd.2 (1997) | ISO/IEC 8649:1996/Amd.2:1998, *Information technology – Open Systems Interconnection – Service definition for the association control service element – Amendment 2: Fast-associate mechanism*.

3) Subclause 6.3

In Table 2, add User Summary *to the list of parameters for* A-ASSOCIATE request *after* User Information.

4) New subclause 6.4 *bis*

Add a new subclause after 6.4:

6.4 *bis* User summary mechanism

If the fast-associate mechanism is used during association establishment, the initiating ACPM as well as forming an AARQ APDU to be passed to the Presentation service-provider in the User-Data parameter of a P-CONNECT request, also passes the semantic content of the AARQ in the User Summary parameter of the P-CONNECT request. The User

Summary parameter references an Upper-Layer Context specification and is a purely abstract parameter. If the A-ASSOCIATE request User Information parameter was present, the semantic content of this will have been supplied to the ACPM in the User Summary parameter of the A-ASSOCIATE request, and is conceptually included in the User Summary parameter of the P-CONNECT request.

If the Presentation provider (via the Session service and protocol) makes use of the fast-associate mechanism, the responding ACPM will receive only the User Summary parameter on the P-CONNECT indication, and not the User-Data. The responding implementation will reconstruct the semantic content of the AARQ that would have been present in the P-CONNECT User-Data, and issue an A-ASSOCIATE indication with a User Summary parameter in place of its User-Data.

Similarly, the responding ACPM will form a User Summary parameter on the P-CONNECT response from the AARE APDU, including the semantic content of the User Summary parameter of the A-ASSOCIATE response (if present) by reference to the same Upper-Layer Context specification. The initiating ACPM reconstructs the AARE.

NOTE – The passing of the User Summary parameters and reconstruction of the ACSE APDUs from the Presentation User Summary parameters is abstract. There is no requirement for a real implementation to perform these actions.

5) Subclause 7.1.3

Add in b):

… User-Data or a User Summary parameter on a P-CONNECT ...

Add at the end of d):

or have a User Summary parameter)

6) Subclause 7.1.3.1

Add after the first paragraph:

If the fast-associate mechanism is supported, the requesting ACPM identifies the semantic content of the AARQ, including the User-Data, in the User Summary parameter of the P-CONNECT request.

7) Subclause 7.1.3.2

Add at the end of the first paragraph:

or reconstructs an AARQ APDU from the User Summary parameter of the P-CONNECT indication primitive.

8) Subclause 7.1.3.3

Add after the first paragraph:

If the fast-associate mechanism is supported, the accepting ACPM identifies the semantic content of the AARE, including the User-Data, in the User Summary parameter of the P-CONNECT response, by reference to the Upper-Layer Context specification identified by the User Summary parameter of the received P-CONNECT indication.

9) Subclause 7.1.3.4

Replace the second sentence of the second paragraph with the following:

Either the User-Data parameter contains an AARE APDU or the User Summary parameter is a value from which the requesting ACPM can reconstruct the AARE APDU.

10) Subclause 8.1.2

Add the following new subclause after 8.1.2.2:

8.1.2.3 User Summary

The User Summary parameter, if used, summarizes the semantic content of the AARQ by reference to an Upper-Layer Context specification.

11) Subclause 8.1.3

Add the following new subclause after 8.1.3.2:

8.1.3.3 User Summary

The User Summary parameter, if used, summarizes the semantic content of the AARQ by reference to the same Upper-Layer Context specification as was used in the User Summary parameter of the P-CONNECT request and indication.

12) Clause 12

Change three *to* four *in first paragraph and add* – Upper-Layer Context specifications *to the list.*

Consequently, change the period at the end of the last item of the list, to a semi-colon.

Add a new subclause 12.4, at the end of the 2nd paragraph of 12.3:

12.4 Upper-layer context specifications

An upper-layer context specification is a definition of all the field values that are required to format the full-form ACSE, presentation and session establishment PDUs for a given application context and a given peer presentation address.

NOTE – In practice, it is expected that an upper-layer context specification will be parameterized to allow for values which may be expected to be different for each establishment exchange between two peers (e.g. ACSE user information), or for the same application between different peers (e.g. addressing information).

An upper-layer context specification may be specified as part of an ITU-T Recommendation | International Standard.

An upper-layer context specification may also be specified outside of ITU-T Recommendations | International Standards. In this situation, ISO/IEC 9834-1 specifies the procedures to register such an upper-layer context specification.

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