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SIST EN 301 069-1 V1.2.2:2005

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Digitalno omrežje z integriranimi storitvami (ISDN) - Signalizacija št. 7 – ISDN-uporabniški del (ISUP) - Aplikacijski prenosni mehanizem (APM) - 1. del: Specifikacija protokola [priporočilo ITU-T, Q.765, spremenjeno]

Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP); Application transport mechanism; Part 1: Protocol specification [ITU-T Recommendation Q.765, modified]

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[ITU-T Recommendation Q.765, modified]

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Signalling Protocols and Switching (SPS).

The present document is part 1 of a multi-part EN covering Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP); Application Transport Mechanism (APM), as identified below:

Part 1: "Protocol specification";

Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 3: "Test Suite Structure and Test Purposes (TSS&TP)";

Part 4: "Abstract Test Suite (ATS)";

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National transposition dates	
Date of adoption of this EN:	17 April 1998
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Endorsement notice

The text of ITU-T Recommendation Q.765 was approved by ETSI as an EN with agreed modifications as given below.

NOTE 1: New or modified text is indicated using sidebars. In addition, underlining and/or strike-out are used to highlight detailed modifications where necessary.

NOTE 2: ITU-T Recommendation Q.765 had not yet been adopted by ITU-T prior to the submission for Vote of the present document. This endorsement is based upon the draft of that Recommendation which accompanies the present document, located in an archive file named 9wc90ipc.lzh.

Clause 2, References

Replace this clause by:

Normative references

References may be made to:

a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or

b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or

c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or

d) publications without mention of a specific version, in which case the latest version applies.

A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] EN 300 356-1 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No. 7; ISDN User Part (ISUP) version 3 for the international interface; Part 1: Basic services [ITU-T Recommendations Q.761 to Q.764 (1997), modified]".

[2] ITU-T Recommendation Q.1400 (1993): "Architecture framework for the development of signalling and OA&M protocols using OSI concepts".

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Throughout the text of ITU-T Recommendation Q.765

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Replace references as shown below.

Reference in ITU-T Recommendation Q.765	Modified reference
ITU-T Recommendation Q.761 [1]	EN 300 356-1 [1]
ITU-T Recommendation Q.762 [2]	EN 300 356-1 [1]
ITU-T Recommendation Q.763 [3]	EN 300 356-1 [1]
ITU-T Recommendation Q.764 [4]	EN 300 356-1 [1]
Annex T	EN 300 356-1 [1]

Annex T (temporary), Changes to ITU-T Recommendations Q.761, Q.762, Q.763 and Q.764

Not supported, see EN 300 356-1 [1].

Appendix I, Example sequence diagrams of APM segmentation

Appendix I has the status of an informative annex.

Temporary Annex A (normative): Modifications to ITU-T Recommendation Q.765

This annex contains the proposed changes to the text of the ITU-T Recommendation Q.765 as agreed by TC SPS in the meeting which addressed the national comments received following PE9748. The complete text of this annex will be contributed to the ITU-T resolution 1 procedure for approval of Q.765. Once this procedure is finished, it is intended that the annex be removed from this EN.

Since it is possible that some of the modifications below will not be included in Q.765 those that will not create any compatibility problems in the case of mismatch between Q.765 and the present docuement are to become a part of the main body of this EN. The modifications that do not become part of Q.765 and may result in an incompatibility when a Q.765 based service and an EN 301 069-1 based service interwork will be removed from this EN. Each of the proposals below is, therefore, marked appropriately in one of the following two ways:

- if the item is to be removed from the EN ***"remove"***
- if the item is to be included in the EN "***keep"***

Clause 4, Abbreviations *keep*

Modify in the following way:

ACM	Address Complete Message
APM-user	Application Transport Mechanism User Application
CPG	Call Progress Message
IAM	Initial Address Message
PRI	Pre-Release Information Message

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Subclause 7.2.1, Introduction *keep*

Add the following note just before the third bullet point:

NOTE: In the case that no such acknowledgement is received by the PIN before reception of either:

an ACM indicating "subscriber free", or

a CPG indicating "alerting", or

an ANM or CON

with no APP (for the appropriate context) then if the application association for the call was essential, the call shall be release and the maintenance function shall be notified.

Subclause 8.3, Information flows related to messages received by the node *keep*

Modify the 2nd sentence of the 2nd paragraph as follows:

For received messages, the mapping of APM_U_Data, APM_Data and APM_Transfer (tables 4, 5 and 6) primitives is the reverse to that described in the tables for ~~outgoing~~ messages sent by the node in subclause ~~6.2~~8.2.

Subclause 9.1, Table 14/Q.765 - Primitives between ISUP ASE and SACF *keep*

Replace note of table 14 by:

NOTE: Primitive flow from SACF to ISUP ASE - ←

Primitive flow from ISUP ASE to SACF - →

Subclause 10.2.1, Normal Procedures - Sending *keep*

Replace the sentence "How this is determined is implementation specific" by:

APM segmentation procedures shall only apply if it is not possible to transfer all parameters in the IAM, ACM, CPG, CON, ANM or PRI message and SGM, if simple segmentation procedures are used, because the 272 octet MTP limit would be exceeded.

Subclause 10.2.4, Segmentation *keep*

Modify the 2nd paragraph as follows:

The initial segment for each context must be transported in the first message and this initial segment size may be of zero length. The first ~~segment~~ message may be an ~~ISUP call control~~ IAM, ACM, CPG, CON, ANM or PRI message (when available) and this procedure ensures that the reassembling node is able to associate the APM information with the ~~call control~~ first ISUP message. A maximum of one ~~call control~~ such message can be associated with the transport of segmented application data. Any additional segments will be included in the APP within subsequent APM message(s). In order to associate all the reassembled application data with the ~~call control~~ first ISUP message the AP is informed when reassembly procedures are invoked by sending the More_APP_Info indication primitive. On completion of reassembly for all contexts for which initial segments were received in the first message, the End_APP_Info indication primitive is sent.

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Subclause 10.2.4, Segmentation *keep*

Insert the word "empty" in the 2nd sentence of the 3rd paragraph as follows:

To avoid this situation occurring, the PIN shall not send subsequent segments to an IAM message until a first backward message is received containing an empty APP, which implicitly indicates that a path has been successfully routed through the network to the PAN.

Subclause 10.2.4, Segmentation *keep*

Modify the 3rd paragraph as follows:

There would be a possibility that user information segments could be lost when sent forward during call setup if sent before the receipt of a first backwards message. To avoid this situation occurring, the PIN shall not send subsequent segments to an IAM message until a ~~first~~ backward message is received containing an APP, which implicitly indicates that a path has been successfully routed through the network to the PAN. The PAN initiates the backwards acknowledgement indication only in the case that an IAM is received containing an APP which indicates that segmentation has occurred.

Subclause 10.2.4, Segmentation *keep*

Add the following paragraph at the end of subclause 10.2.4:

For segmented application data associated with an ACM, CPG, CON, ANM or PRI message, this message shall be sent first, followed by the SGM message (when ISUP Simple segmentation applies to remaining information in the ISUP message), and then followed by the APM messages containing subsequent segments. In case a PRI message is sent, the REL message shall be sent following the APM message containing the last segment.

Subclause 10.2.4.1, Procedures for segmentation *keep*

Replace each occurrence of "APM Segmentation indicator" by "Sequence Indicator".

Subclause 10.2.4.1, Procedures for segmentation *keep*

Replace each occurrence of "Number of Segments Remaining" by "APM Segmentation indicator".

Subclause 10.2.4.1, Procedures for segmentation *keep*

Modify item d) as follows:

d) Once the first segment has been transmitted, then all remaining segments of that Application Information shall be sent except in the case that the first segment is sent in an IAM in which case the reception of an empty APP ~~(empty)~~ is awaited prior to the sending of subsequent segments.

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Subclause 10.2.4.2, Procedures for re-assembly *keep*

Replace each occurrence of "Number of Segments Remaining" or "number of segments remaining" by "APM Segmentation indicator".

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Subclause 11.2.2, Signalling Congestion *keep*

Replace "REMOTE-STATUS primitive" by "Remote_Status primitive".

Subclause 13.1.2, Unidentified Context Handling (PIN) *keep*

Modify the 2nd bullet item as follows:

- if the node is not a "pass-on" node for this Context Identifier, then this Context Identifier will be used to identify the APM-user to which the APM_Error indication primitive will be sent from the UCEH ASE. The APM_Error indication primitive will indicate that the reason for the error was that the peer APM-user was not present at the PAN. If the APM-user indicated by the Context Identifier carried by the Application Transport Notification Information does not exist, then no APM_Error primitive will be sent and the Application Transport Notification Information will be discarded.

Subclause 13.4.1, Normal Procedures - Remote error handling *keep*

Modify the 3rd paragraph as follows:

If this is not to behave as a "pass-on" node then the Context Identifier within the received Notification parameter (clause 14) is used to determine the APM-user that should be notified. If the APM-user indicated by the Context Identifier does not exist, then the Application Transport Notification Information will be discarded. If the APM-user indicated by the Context Identifier does exist, an ~~An~~ APM_Error indication primitive is sent to the APM-user via SACF indicating the Reason for the error. The maintenance function will be notified.