

SLOVENSKI STANDARD SIST ETS 300 009:199+ 01-a UryW199+

Digitalno omrežje z integriranimi storitvami (ISDN) - Signalizacija št. 7 - Krmilni del signalizacijske zveze (SCCP) (nepovezavni in povezavni) za podporo mednarodnega vzajemnega povezovanja

Integrated Services Digital Network (ISDN); Signalling System No.7; Signalling Connection Control Part (SCCP) [connectionless and connection-oriented] to support international interconnection

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Foreword

This second edition European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

This ETS further develops the Signalling System No.7 protocols for the Integrated Services Digital Network (ISDN), Public Switched Telephone Network (PSTN) and Public Land Mobile Networks (PLMNs). It is based on ITU-T Recommendations Q.711 to Q.714 and Q.716 (1993).

This ETS is based on the assumption concerning the interconnection of national Signalling Connection Control Parts (SCCPs) that the Message Transfer Part (MTP) specified in ETS 300 008 (1991) supports the SCCP for international interconnection.

This second edition of ETS 300 009 introduces:

- the use of connectionless functions in international relay points and gateways;
- the use of the connection-oriented (Class 2, with embedded connection setup only) service, which is required to support the ISDN User-To-User Signalling Service 3 (UUS3) (see ETS 300 356-2);
- the procedures for connectionless segmentation and reassembly, needed to support the Intelligent Network Application Protocol (INAP) and the Mobile Application Part (MAP), Version 2;
- the rules for the application of Signalling Connection Control Part (SCCP) addressing in the international network.

In (a) later edition(s), the following features are foreseen to be added:

- the possibility of having subsystems within the international network, for example the Operations, Maintenance and Administration Part (OMAP);
- the SCCP restart procedure; <u>SIST ETS 300 009:1997</u> https://standards.iteh.ai/catalog/standards/sist/1a5b50eb-403b-4716-adaf-
- Open System Interconnection (OSI) /adaptations to lallow the use of Signalling System No.7 as transport network for Telecommunications Management Network (TMN) information.

Proposed transposition dates				
Date of latest announcement of this ETS (doa):	30 April 1995			
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 October 1995			
Date of withdrawal of any conflicting National Standard (dow):	31 October 1995			

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1 Scope

This European Telecommunication Standard (ETS) defines the use of connectionless functions in international relay points and gateways¹), the use of the connection-oriented (Class 2, with embedded connection setup only) service, the procedures for connectionless segmentation and reassembly, and the rules for the application of Signalling Connection Control Part (SCCP) addressing in the international network.

This ETS is applicable to the international network and does not intend to restrict national networks.

2 Normative references

This ETS incorporates by dated or undated reference, provisions from other publications. These normative references are cited as the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1]	ITU-T Recommendation Q.711 (1993): "Specifications of Signalling System No.7; Functional description of the signalling connection control part".
[2]	ITU-T Recommendation Q.712 (1993): "Specifications of Signalling System No.7; Definition and function of SCCP messages".
[3]	ITU-T Recommendation Q.713 (1993): "Specifications of Signalling System No.7; SCCP formats and codes".
[4]	TU-TRecommendation Q.714 (1993): "Specifications of Signalling System No.7; Signalling connection control part procedures".
[5]	ITU-T Recommendation Q.716 (1993): "Specifications of Signalling System No.7; Signalling Connection Control Part (SCCP) performances".
[6]	https://standards.iteh.ai/catalog/standards/sist/1a5b50eb-403b-4716-adaf- ETS 300.008 (1991): "Integrated Services Digital Network (ISDN); CCITT Signalling System No.7; Message Transfer Part (MTP) to support international interconnection".

3 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

~~	
CCBS	Completion of Calls to Busy Subscriber
	Connection Request message
	Dote Asknowledgement message
	Data Acknowledgement message
DPC	Destination Point Code
DT2	Data Form 2 message
EA	Expedited Data Acknowledgement message
ED	Expedited Data message
INAP	Intelligent Network Application Protocol
ISDN	Integrated Services Digital Network
ISS	ISDN Supplementary Services
ISUP	ISDN User Part
IT	Inactivity Test message
LBCS	Local Broadcast Control
MAP	Mobile Application Part
MTP	Message Transfer Part
OMAP	Operations, Maintenance and Administration Part
OPC	Originating Point Code

¹⁾ The SCCP gateway functions are relay functions that bridge two Message Transfer Part (MTP) networks.

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OSI PLMN PSTN RI RSC RSR SCCP SCLC SCOC SDL SLS SOG SOR SPAC SPC SPC SPC SPPC SSA SSN SSP SST TCAP TMN UDT UDT UDTS	Open System Interconnection Public Land Mobile Network Public Switched Telephone Network Routeing Indicator Reset Confirm message Reset Request message Signalling Connection Control Part SCCP ConnectionLess Control SCCP Connection-Oriented Control Specification and Description Language Signalling Link Selection Subsystem-Out-of-service-Grant message Subsystem-Out-of-service-Request message Signalling Point Allowed Control Signalling Point Code Signalling Point Congested Control Signalling Point Prohibited Control SubSystem-Allowed message SubSystem-Prohibited message SubSystem-Prohibited message SubSystem-Status-Test message Transaction Capabilities Application Part Telecommunications Management Network UnitDaTa message UnitDaTa Service message
UDT	UnitDaTa message UnitDaTa Service message
UUS	User-to-User Signalling
UUS3	UUS Service 3
XUDT	eXtended UnitDaTa message
XUDIS	

4 Requirements

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This ETS is based on ITU-T Recommendations: Q.71(10(to 1 Q.714 ([1] to [4]) and Q.716 [5]. The requirements of these recommendations shall apply with the modifications identified in clause 5 and the specific requirements given in clause 6 of this ETS af7/sist-ets-300-009-1997

NOTE: Some of the clauses in this ETS on SCCP management procedures are indicated as "not required". In these cases, ITU-T White Book (1993) procedures may be applied if desirable. This should not cause incompatibilities with this ETS.

5 Modifications to ITU-T Recommendations Q.711 to Q.714

The following exceptions to ITU-T Recommendations Q.711 to Q.714 ([1] to [4]) shall apply.

5.1 Modifications to ITU-T Recommendation Q.711 "Functional description of the signalling connection control part"

§ 2 Services provided by the SCCP

Class 3 is not required.

§ 2.1 Connection-oriented services

Permanent signalling connections are not required.

§ 2.1.1.1.2 Data transfer phase

Sequence control and Flow control are not required.

§ 2.1.1.2.1 Overview

N-CONNECT REQUEST is not required. N-EXPEDITED DATA, N-DATA ACKNOWLEDGE, and N-RESET are not required.

§ 2.1.1.2.2 Connection establishment phase

The N-CONNECT REQUEST primitive shall not be used. Instead, the ISDN User Part (ISUP) requests connection setup with the REQUEST TYPE 1 or REQUEST TYPE 2 interface elements.

Negotiation of expedited data is not required.

§ 2.1.1.2.3 Data transfer phase

N-EXPEDITED DATA, N-DATA ACKNOWLEDGE, and N-RESET are not required.

§ 2.1.1.3.2 Connection establishment interface elements

These interface elements are used by ISUP for the embedded setup of connections. The "receipt confirmation selection" shall be set to false. The "quality of service parameter set" shall indicate protocol class 2.

NOTE: In the international network, the REQUEST TYPE 1 interface element would normally not be used. This interface element only applies at the originating node in the national network. However, it should be possible that ISUP performs an association of connection sections itself on user level (see ITU-T Recommendation Q.730, figure 12/Q.730). This may be necessary if different versions of SCCP are used in the national and international networks, or if User-to-User data are transported in the national network in another way.

§ 2.1.2 Permanent signalling connections

Not required. SIST ETS 300 009:1997 https://standards.iteh.ai/catalog/standards/sist/1a5b50eb-403b-4716-adaf-1f6c5bd51af7/sist-ets-300-009-1997

§ 2.2.1 Description

If the in-sequence delivery is not required (protocol class 0), the SCCP shall insert Signalling Link Selection (SLS) codes with respect to the appropriate load sharing within the signalling network. If the insequence delivery is required (protocol class 1), the SCCP, at the originating node, while adhering to the sequence control instruction from the user, shall allocate SLS codes between sequence streams with respect to appropriate load sharing within the signalling network.

As in relay nodes, user sequence control is not available, there shall be a fixed mapping between incoming and outgoing SLS code values for class 1. This mapping may be different for different signalling relations.

§ 2.3.2.1 Overview

N-STATE and N-COORD are not required.

NOTE: N-STATE and N-COORD are not required as long as there are no (duplicated) subsystems (other than ISUP) in the international network.

§ 2.3.2.2 Parameters

"Affected subsystem", "Subsystem multiplicity indicator", "User status" and "Remote SCCP status" are not required.

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§ 2.3.2.3.1 COORD

N-COORD is not required.

NOTE: N-COORD is not required as long as there are no (duplicated) subsystems (other than ISUP) in the international network.

§ 2.3.2.3.2 STATE

Subsystem management is not required.

NOTE: Subsystem management is not required as long as there are no (duplicated) subsystems (other than ISUP) in the international network.

§ 3.2 Primitives and parameters

The "cause" parameter in the MTP-STATUS primitive may take the values:

- "Signalling point congested";
- "User part unavailable".

For the cause "Signalling point congested", no congestion priorities are used.

- NOTE: The values:
 - "User part unavailability: unknown";
 - "User part unavailability: unequipped remote user";
 - "User part unavailability: inaccessible remote user",

occur in ITU-T Recommendation Q.701, § 8. The first one corresponds to "User part unavailable" in ETS 300 008 [6], the latter two are not part of ETS 300 008 [6].

§ 3.2.4 STATUS <u>SIST ETS 300 009:1997</u>

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The "cause" parameter in the MTP-STATUS primitive may take the values:

- "Signalling point congested";
- "User part unavailable".

For the cause "Signalling point congested", no congestion priorities are used.

- NOTE: The values:
 - "User part unavailability: unknown";
 - "User part unavailability: unequipped remote user";
 - "User part unavailability: inaccessible remote user",

occur in ITU-T Recommendation Q.701, § 8. The first one corresponds to "User part unavailable" in ETS 300 008 [6], the latter two are not part of ETS 300 008 [6].

§ 4.1 Connection-oriented functions

Class 3 functions are not required.

§ 4.1.1.2 Data transfer function

Flow control is not required. Expedited data support is not required. Missequence detection is not required. Reset is not required. Receipt confirmation is not required.