



SLOVENSKI STANDARD

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8 [[]HJbc`ca fYy`Y`n`]bhY[f]fUb]a]`glcf]hj Ua]`f!G8 B!`G][bU]nUW]U`yh`+`!`?fa]`b]`XY`
 g][bU]nUW]g_`Y`nj YnY`fG7 7 D!`fbYdcj YnUj b]`]b`dcj YnUj b]`#`UnfYX`&#`LnUdcXdcfc`
 a YXbUfcXbY[Ua YXca fYybY[Udcj Yncj Ub`U!`%`"XY. `GdYV]Z_`UW]Udfcfc_`c`U`
 Qlf]dcfc]U`=H !H`E`"+%%Xc`E`"+%`"ff%`-`*`lZgdfYa Yb`YbUQ`

Integrated Services Digital Network (ISDN); Signalling System No.7; Signalling Connection Control Part (SCCP) (connectionless and connection-oriented) to support international interconnection; Part 1: Protocol specification [ITU-T Recommendations Q.711 to Q.716 (1996), modified]

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Ta slovenski standard je istoveten z:9B`' \$\$\$`\$\$-`!%J%{`"&`%`-`-`!%%

ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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European Standard (Telecommunications series)

**Integrated Services Digital Network (ISDN);
Signalling System No.7;
Signalling Connection Control Part (SCCP)
(connectionless and connection-oriented)
to support international interconnection;
Part 1: Protocol specification**

[ITU-T Recommendations Q.711 to Q.716 (1996), modified]

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Foreword

This European Standard (Telecommunications series) has been produced by the ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN), and is now submitted for the Public Enquiry phase of the ETSI standards Two-step Approval Procedure.

The present document is part 1 of a multi-part EN covering the Integrated Services Digital Network (ISDN); Signalling System No.7; Signalling Connection Control Part (SCCP) (connectionless and connection-oriented) to support international interconnection, as identified below:

- Part 1:** " Protocol specification [ITU-T Recommendations Q.711 to Q.716 (1996), modified]";
- Part 2: "Protocol Implementation Conformance Statement (PICS) proforma specification";
- Part 3: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification".

The present document implies the existence of a number of functional subsets of the SCCP protocol without, however, explicitly identifying them. Depending on their functional requirements, conforming implementations would probably only implement a subset of the overall functions, e.g. a switch might only implement class 2 embedded, or a GSM basestation might not handle Global Titles. The possibility of having such implementations is reflected by the optionality of the corresponding capabilities in the PICS proforma specification ETS 300 009-2 [4].

The present document also incorporates agreements made at ITU-T since the last formal issue of the Q.71x recommendations.

iTech STANDARD PREVIEW Proposed national transposition dates (standards.iteh.ai)

Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

Endorsement notice

The elements of ITU-T Recommendation Q.711 to Q.716 apply, with the following modifications:

Global modifications to ITU-T Recommendations Q.711 to Q.716

Insert the following three clauses (scope, normative references and abbreviations):

1 Scope

The present document defines the Signalling Connection Control Part (SCCP) signalling protocol of Signalling System No.7 for use in and between international relay points and gateways and, optionally, in public networks.

The present document covers the use of connectionless functions (class 0 and class 1) and connection-oriented functions (class 2, excluding embedded connection set-up).

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

The present document is applicable to the international network and does not intend to restrict national networks. However, to facilitate SCCP interworking, its adoption within national networks is recommended.

Concerning the interconnection of SCCPs, the present document is based on the assumption that the Message Transfer Part (MTP) specified in ETS 300 008-1 [1] and EN 301 004-1 [2] support the SCCP.

LUDT(S) messages and associated procedures need not be provided. If they are provided they shall be provided according to the ITU-T recommendations endorsed by the present document, unless modified herein.

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2 References (standards.iteh.ai)

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

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- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, 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] ETS 300 008-1 (1997): "Signalling System No.7; Message Transfer Part (MTP) to support international interconnection".
- [2] EN 301 004-1: "Signalling System No.7; B-ISDN Message Transfer Part (MTP-3b) to support international interconnection".
- [3] EG 201 693: "Integrated Services Digital Network (ISDN); Signalling System No.7; Master list of codepoints" (DEG/SPAN-01065).
- [4] ETS 300 009-2: "Integrated Services Digital Network (ISDN); Signalling System No.7; Signalling Connection Control Part (SCCP) (connectionless and connection-oriented class 2) to support international interconnection; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CC	Connection Confirm message
CR	Connection Request message
CREF	Connection Refused message
DPC	Destination Point Code
ERR	protocol data unit Error message
GT	Global Title
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
IT	Inactivity Test message
LU DT	Long Unitdata message
LU DTS	Long Unitdata Service message
MTP	Message Transfer Part
OPC	Originating Point Code
RI	Routing Indicator
RLC	Release Complete message
RLSD	Released message
SCCP	Signalling Connection Control Part
SLS	Signalling Link Selection
SPC	Signalling Point Code
SS	Subsystem
SSN	Subsystem Number
UDT	Unitdata message
UDTS	Unitdata Service message
XUDT	Extended Unitdata message
XUDTS	Extended Unitdata Service message

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Modifications to ITU-T Recommendation Q.711

Page 7, subclause 6

Class 3 is not in the scope of this EN.

Page 8, subclause 6.1

Permanent signalling connections are not in the scope of this EN.

Page 8, subclause 6.1.1.1.2

Sequence control and flow control are not in the scope of this EN.

Page 10, subclause 6.1.1.2.1

N-EXPEDITED DATA and N-RESET are not in the scope of this EN.

Page 11, figure 8/Q.711

~~REQUEST type 1, REQUEST type 2, REPLY, N-EXPEDITED DATA and N-RESET are not in the scope of this EN.~~

~~Add the following note to figure 8/Q.711:~~

~~NOTE: ISUP requests connection setup with the REQUEST Type 1 or REQUEST Type 2 interface elements.~~

Page 11, subclause 6.1.1.2.2

Negotiation of expedited data is not in the scope of this EN.

Page 13, subclause 6.1.1.2.3

N-EXPEDITED DATA and N-RESET are not in the scope of this EN.

Page 17, subclause 6.1.1.3.2

~~Delete subclause 6.1.1.3.2. User part type A interface is not in the scope of this EN. Connection establishment interface elements are used by ISUP for the embedded setup of connections. The "quality of service parameter set" shall indicate 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 ("chaining") of connection sections itself on the user level (see figure 12 of ITU-T Recommendation Q.730 as modified by ETS 300 356-2). This may be necessary if different versions of SCCP are used in the national and international networks, or if User to user data is transported in the national network in another way.~~

Page 17, subclause 6.1.2

Delete subclause 6.1.2. Permanent signalling connections are not in the scope of this EN.

Page 18, subclause 6.2.1

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 in-sequence 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.

Page 22, subclause 6.3.2.1

N-COORD is only needed in nodes that contain local-replicated subsystems.

Page 24, subclause 6.3.2.3.1

N-COORD is only needed in nodes that contain local-replicated subsystems.

Page 31, subclause 8.1

Class 3 functions are not in the scope of this EN.

Page 31, subclause 8.1.1.2

Flow control is not in the scope of this EN.

Expedited data support is not in the scope of this EN.

Missequence detection is not in the scope of this EN.

Reset is not in the scope of this EN.

Page 31, subclause 8.1.2

Delete subclause 8.1.2. Functions for permanent signalling connections are not in the scope of this EN.

Page 32, subclause 8.3

Co-ordinated state change is only needed in nodes that contain local-replicated subsystems.

Page 32, subclause 8.4

The routing and translation function of SCCP does not apply for the embedded method.

NOTE: ISUP executes its own routing function. It provides the minimally necessary information for SCCP in the MTP routing label and the Originating Point Code (OPC) field of the embedded request (see subclause 3.15 of ITU-T Recommendation Q.763 as modified by ETS 300 356-1).

Modifications to ITU-T Recommendation Q.712

Page 1, subclause 1.4

Delete subclause 1.4. Data acknowledgement is not in the scope of this EN.

Page 1, subclause 1.6

Delete subclause 1.6. Data form 2 is not in the scope of this EN.

Page 1, subclause 1.7

Delete subclause 1.7. Expedited data is not in the scope of this EN.

Page 2, subclause 1.8

Delete subclause 1.8. Expedited data acknowledgement is not in the scope of this EN.

Page 2, subclause 1.13

Delete subclause 1.13. Reset confirm is not in the scope of this EN.

Page 2, subclause 1.14

Delete subclause 1.14. Reset request is not in the scope of this EN.

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Page 2, subclause 1.16

Subsystem-out-of-service-grant is only needed in nodes that contain local-replicated subsystems.

Page 2, subclause 1.17

Subsystem-out-of-service-request is only needed in nodes that contain local-replicated subsystems.

Page 4, subclause 2.4

Delete subclause 2.4. Credit is not in the scope of this EN.

Page 5, subclause 2.11

Delete subclause 2.11. Receive sequence number is not in the scope of this EN.

Page 5, subclause 2.14

Delete subclause 2.14. Reset cause is not in the scope of this EN.

Page 5, subclause 2.17

Delete subclause 2.17. Sequencing/segmenting is not in the scope of this EN.

Modifications to ITU-T Recommendation Q.713

Page 8, subclause 3.4.1

Insert after the third paragraph, beginning with "A "1" in bit 2 ...":

On transmission of the called or calling party address, the Subsystem Number (SSN) indicator field shall always be included and set to 0 if unknown.

Page 9, subclause 3.4.2.2, list of subsystem numbers

The SSN values recorded in the master list of codepoints [3] apply.

~~Replace codepoint 0000-1100, reserved for international use, by INAP (Intelligent Network Application Protocol).~~

NOTE: ~~Although, there are currently no SCCP users in the international network and~~ Addressing codes not standardized within ITU-T may be exchanged subject to agreement of all concerned operators. It is recommended to allocate SSNs in ETSI and/or ITU for all those SCCP subsystems whose messages may cross network boundaries, so that international agreement is ~~required~~ secured for the SSNs used. ~~Address codes for the support of services not standardised in ITU-T but agreed within ETSI are recorded in [3].~~

Page 10, subclause 3.4.2.3.1

Global title indicator = 0001 ~~is not in the scope of this EN.~~

The NAI values recorded in the master list of codepoints [3] apply.

Page 11, subclause 3.4.2.3.2

Global title indicator = 0010 ~~is not in the scope of this EN.~~

Page 12, subclause 3.4.2.3.3

Global title indicator = 0011 ~~is not in the scope of this EN.~~

The NP values recorded in the master list of codepoints [3] apply.

Page 13, subclause 3.4.2.3.4

The TT values recorded in the master list of codepoints [3] apply.

Page 13, subclause 3.5

Insert after the last paragraph:

If segmenting/reassembly of connectionless messages or the return option are used, an unambiguous (note) identification of the originating SCCP user (possibly complemented by additional MTP information) shall be supplied in the calling party address.

NOTE: "unambiguous" is used here as defined in ITU-T Recommendation X.650: "A name is unambiguous within a given scope when it identifies one and only one object within that scope. Unambiguity does not preclude the existence of synonyms".