SLOVENSKI STANDARD
SIST EN 300 356-34 V3.0.5:2005

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8][ ]HʹUʹbcˈca fYÿ˄Yˈn`]bhY[ f]fUb]a ]ˈghcf]hj Ua ]ˈf+G8 BŁ!ˈG][ bUˈ]nUW]˄Uˈýhˈʺ+˙!ˈHfYhˈU fUn`]ˈ]WUˈ=G8 B!i dcfUVb]ý_Y[Uˈ XYˈUf+GU DŁˈnUˈa YXbUfcXb]ˈj a Ygb]_ˈ!ˈʺˈ(˙ʺXYˈˈ=n˄Uj U cˈgˈ_ˈUXbcgh]ˈ]nj YXVYˈdfchc_ˈcˈUˈfD=7GŁ!ˈDfcˈ cfa UˈgdYW]ˈ_UW]˄UˈnˈUˈXcdc`b]ˈbY ghcf]hj Y

Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 34: Protocol Implementation Conformance Statement (PICS) proforma specification for supplementary services

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Foreword

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

The present document is part 34 of a multi-part EN covering the Integrated Services Digital Network (ISDN); Signalling System No.7 ISDN User Part (ISUP) version 3 for the international interface, as identified below:

Part 1:   "Basic services [ITU-T Recommendations Q.761 to Q.764 (2000) modified]";

Part 2:   "ISDN supplementary services [ITU-T Recommendation Q.730 (2000) modified]";

Part 3:   "Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993) modified]";

Part 4:   "Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993) modified]";

Part 5:   "Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993) modified]";

Part 6:   "Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993) modified]";

Part 7:   "Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993) modified]";

Part 8:   "User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737 , clause 1 (1997) modified]";

Part 9:   "Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993) modified]";

Part 10:   "Subaddressing (SUB) supplementary service [ITU-T Recommendation Q.731, clause 8 (1992) modified]";

Part 11:   "Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997) modified]";

Part 12:   "Conference Call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993) and implementors guide (1998) modified]";

Part 14:   "Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996) and implementors guide (1998) modified]";

Part 15:   "Diversion supplementary services [ITU-T Recommendation Q.732, clauses 2 to 5 (2000) modified]";

Part 16:   "Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993) modified]";

Part 17:   "Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992) modified]";

Part 18:   "Completion of Calls to Busy Subscriber (CCBS) supplementary service [ITU-T Recommendation Q.733, clause 3 (1997) modified]";

Part 19:   "Three-Party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996) and implementors guide (1998) modified]";

Part 20:   "Completion of Calls on No Reply (CCNR) supplementary service [ITU-T recommendation Q.733, clause 5 (2000) modified]";

Part 21   "Anonymous Call Rejection (ACR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993)]";

Part 31:   "Protocol Implementation Conformance Statement (PICS) proforma specification for basic services";

Part 32:   "Test Suite Structure and Test Purposes (TSS&TP) specification for basic services";

Part 33:   "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for basic services";

Part 34:   "Protocol Implementation Conformance Statement (PICS) proforma specification for supplementary services";

Part 35:   "Test Suite Structure and Test Purposes (TSS&TP) specification for supplementary services";

Part 36:   "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for supplementary services".

NOTE: Part 13 and 21 to 30 have not been issued.

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National transposition dates	
Date of adoption of this EN:	1 September 2000
Date of latest announcement of this EN (doa):	31 December 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 June 2001
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1   Scope

The present document contains the Protocol Implementation Conformance Statements (PICS) for ISUP v3 supplementary services. The present document applies only to exchanges having implemented the ISUP v3 protocol specification. It is applicable for validation testing of all types of exchanges as defined in the ISUP v3 protocol specification.

Part 35 [28] of the document series EN 300 356 presents the Test Suite Structure and the Test Purposes (TSS&TP) for ISUP v3 basic call control procedures and part 36 [29] presents the actual ATS, which is delivered in electronic form only, and the Protocol Conformance Test Report (PCTR).

2   References

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

- 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.

[1]   ISO/IEC 9646-1: "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General Concepts".

[2]   ISO/IEC 9646-3: "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)".

[3]   ISO/IEC 9646-7: "Information Technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[4]   ETSI EN 300 356-1 (V3.2): "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]".

[5]   ETSI EN 300 356-2 (V3.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 2: ISDN supplementary services [ITU-T Recommendation Q.730 (1997), modified]".

[6]   ETSI EN 300 356-3 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 3: Calling Line Identification Presentation (CLIP) supplementary service [ITU-T Recommendation Q.731, clause 3 (1993), modified]".

[7]   ETSI EN 300 356-4 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 4: Calling Line Identification Restriction (CLIR) supplementary service [ITU-T Recommendation Q.731, clause 4 (1993), modified]".

[8]   ETSI EN 300 356-5 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 5: Connected Line Identification Presentation (COLP) supplementary service [ITU-T Recommendation Q.731, clause 5 (1993), modified]".

[9]   ETSI EN 300 356-6 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 6: Connected Line Identification Restriction (COLR) supplementary service [ITU-T Recommendation Q.731, clause 6 (1993), modified]".

[10]   ETSI EN 300 356-7 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 7: Terminal Portability (TP) supplementary service [ITU-T Recommendation Q.733, clause 4 (1993), modified]".

[11]   ETSI EN 300 356-9 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 9: Closed User Group (CUG) supplementary service [ITU-T Recommendation Q.735, clause 1 (1993), modified]".

[12]   ETSI EN 300 356-10 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 10: Subaddressing (SUB) supplementary service [ITU-T Recommendation Q.731, clause 8 (1992), modified]".

[13]   ETSI EN 300 356-11 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 11: Malicious Call Identification (MCID) supplementary service [ITU-T Recommendation Q.731, clause 7 (1997), modified]".

[14]   ETSI EN 300 356-12 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 12: Conference Call, add-on (CONF) supplementary service [ITU-T Recommendation Q.734, clause 1 (1993), modified]".

[15]   ETSI EN 300 356-14 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 14: Explicit Call Transfer (ECT) supplementary service [ITU-T Recommendation Q.732, clause 7 (1996), modified]".

[16]   ETSI EN 300 356-15 (V3.2): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 15: Diversion supplementary services [ITU-T Recommendation Q.732, clauses 2 to 5 (1997), modified]".

[17]   ETSI EN 300 356-16 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 16: Call Hold (HOLD) supplementary service [ITU-T Recommendation Q.733, clause 2 (1993), modified]".

[18]   ETSI EN 300 356-17 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 17: Call Waiting (CW) supplementary service [ITU-T Recommendation Q.733, clause 1 (1992), modified]".

[19]   ETSI EN 300 356-18 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 18: Completion of Calls to Busy Subscriber (CCBS) supplementary service [ITU-T Recommendation Q.733, clause 3 (1997), modified]".

[20]   ETSI EN 300 356-19 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 19: Three-Party (3PTY) supplementary service [ITU-T Recommendation Q.734, clause 2 (1996), modified]".

[21]   ITU-T Recommendation Q.731 (1993): "Stage 3 description for number identification supplementary services using Signalling System No. 7".

[22]   ITU-T Recommendation Q.731.1 (1996): "Stage 3 description for numbering identification supplementary services using Signalling System No. 7: Direct-Dialling-In (DDI)".

[23]   ITU-T Recommendation Q.733.1 (1992): "Stage 3 description for call completion supplementary services using Signalling System No.7: Call Waiting (CW)".

[24]   ITU-T Recommendation Q.735.3: "Multi lever precedence and preemption".

[25]   ITU-T Recommendation Q.733.5 (1999): "Signalling System No. 7 - Completion of calls on no reply".

[26]   ITU-T Recommendation Q.735.6 (1996): "Stage 3 description for community of interest supplementary services using Signalling System No. 7; Global Virtual Network Service (GVNS)".

[27]   ETSI EN 300 356-8 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 8: User-to-User Signalling (UUS) supplementary service [ITU-T Recommendation Q.737, clause 1 (1997), modified]".

[28]   ETSI EN 300 356-35 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 35: Test Suite Structure and Test Purposes (TSS&TP) specification for supplementary services".

[29]   ETSI EN 300 356-36 (V3.1): "Integrated Services Digital Network (ISDN); Signalling System No.7; ISDN User Part (ISUP) version 3 for the international interface; Part 36: Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for supplementary services".

[30]   ITU-T Recommendation E.164: "The international public telecommunication numbering plan".

[31]   ITU-T Recommendation Q.732.2 (1996): "Stage 3 description for call offering supplementary services using Signalling System No. 7: Call diversion services: call forwarding, call forwarding no reply, call forwarding unconditional, call deflection".

[32]   ITU-T Recommendation Q.734.1 (1993): "Stage 3 description for multiparty supplementary services using Signalling System No. 7: Conference calling".

[33]   ITU-T Recommendation Q.735.1 (1993): "Stage 3 description for community of interest supplementary services using Signalling System No. 7: Closed user group (CUG)".

[34]   ITU-T Recommendation Q.737 (1993): "Stage 3 description for additional information transfer supplementary services using Signalling System No. 7".

[35]   ITU-T Recommendation Q.785.2: "ISUP'97 supplementary services - Test suite structure and test purposes (TSS & TP)".

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3   Definitions and abbreviations

3.1   Definitions

For the purposes of the present document, the following terms and definitions apply:

- terms defined in ISDN User Part (ISUP) reference specification [5];

- terms defined in ISO/IEC 9646-1 [1], ISO/IEC 9646-3 [2] and in ISO/IEC 9646-7 [3].

In particular, the following terms apply:

Abstract Test Case (ATC): complete and independent specification of the actions required to achieve a specific test purpose, defined at the level of abstraction of a particular Abstract Test Method, starting in a stable testing state and ending in a stable testing state (see ISO/IEC 9646-1 [1], clause 3.3.3)

Abstract Test Method (ATM): description of how an IUT is to be tested, given at an appropriate level of abstraction to make the description independent of any particular realization of a Means of Testing, but with enough detail to enable abstract test cases to be specified for this method (see ISO/IEC 9646-1 [1], clause 3.3.5)

Abstract Test Suite (ATS): test suite composed of abstract test cases (see ISO/IEC 9646-1 [1], clause 3.3.6)

Implementation Under Test (IUT): implementation of one or more OSI protocols in an adjacent user/provider relationship, being part of a real open system which is to be studied by testing (see ISO/IEC 9646-1 [1], clause 3.3.43)

ISDN number: number conforming to the numbering and structure specified in ITU-T Recommendation E.164 [30]

Means of Testing (MOT): combination of equipment and procedures that can perform the derivation, selection, parameterization and execution of test cases, in conformance with a reference standardized ATS, and can produce a conformance log (see ISO/IEC 9646-1 [1], clause 3.3.54)

PICS proforma: document, in the form of a questionnaire, which when completed for an implementation or system becomes the PICS

PIXIT proforma: document, in the form of a questionnaire, which when completed for the IUT becomes the PIXIT

Point of Control and Observation: point within a testing environment where the occurrence of test events is to be controlled and observed, as defined in an Abstract Test Method (see ISO/IEC 9646-1 [1], clause 3.3.64)

Protocol Implementation Conformance Statement (PICS): statement made by the supplier of a protocol claimed to conform to a given specification, stating which capabilities have been implemented (see ISO/IEC 9646-1 [1], clause 3.3.39 and clause 3.3.80)

Protocol Implementation eXtra Information for Testing (PIXIT): statement made by a supplier or implementor of an IUT (protocol) which contains or references all of the information related to the IUT and its testing environment, which will enable the test laboratory to run an appropriate test suite against the IUT (see ISO/IEC 9646-1 [1], clauses 3.3.41 and 3.3.81)

System Under Test (SUT): real open system in which the IUT resides (see ISO/IEC 9646-1 [1], clause 3.3.103)

User: access protocol entity at the User side of the user-network interface where a T reference point or coincident S and T reference point applies

3.2 Abbreviations

The ISUP message acronyms can be found in table 2 of EN 300 356-1 [4].

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

ASP	Abstract Service Primitive
ATC	Abstract Test Case
ATM	Abstract Test Method
ATS	Abstract Test Suite
CCBS	Completion of Calls to Busy Subscribers
CCNR	Completion of Calls on No Reply
CD	Call Deflection
CFB	Call Forwarding Busy
CFNR	Cal Forwarding No Reply
CFU	Call Forwarding Unconditional
CIC	Circuit Identification Code
CLIR	Calling Line Identity Restriction
CntrlE	Controlling Exchange
CON	CONnect message
CONF	Conference
CPG	Call Progress message
CUG	Closed User Group
CW	Call Waiting
DLE	Destination Local Exchange
DSS 1	Digital Subscriber System No. 1
ECT	Explicit Call Transfer
IAM	Initial Address Message
ICS	Implementation Conformance Statement
IncIE	Incoming International Exchange
IntermE	Intermediate Exchange
IWorkE	Interworking Exchange
ISC	International Switching Centre
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
IUT	Implementation Under Test
ITE	International Transit Exchange
OLE	Originating Local Exchange
OutIE	Outgoing International Exchange
LAPD	Link Access Protocol for the D-channel