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Digitalno omrežje z integriranimi storitvami (ISDN) - Signalizacija št. 7 - Krmilni del signalizacijske zveze (SCCP) (nepovezavni in povezavni razred 2) za podporo mednarodnemu medsebojnemu povezovanju - 2. del: Izjava o skladnosti izvedbe protokola (PICS) - Proforma specifikacije

Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); Signalling Connection Control Part (SCCP) (connectionless and connection-oriented class 2) to support international interconnection; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification

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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Technical Committee Services and Protocols for Advanced Networks (SPAN).

The present document is part 2 of a multi-part deliverable covering the Integrated Services Digital Network (ISDN); Signalling System No.7 (SS7); Signalling Connection Control Part (SCCP) (connectionless and connection-oriented class 2) 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".

National transposition dates

Date of adoption of this EN:	12 April 2002
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Introduction

To evaluate conformance of a particular implementation, it is necessary to have a statement of which capabilities and options have been implemented for a given OSI protocol. Such a statement is called a Protocol Implementation Conformance Statement (PICS).

1   Scope

The present document provides the Protocol Implementation Conformance Statement (PICS) proforma for Signalling Connection Control Part (SCCP) signalling protocol of Signalling System No.7 for use between and, optionally, in public networks as specified in EN 300 009-1 [1] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4].

The supplier of a protocol implementation that is claimed to conform to EN 300 009-1 [1] is required to complete a copy of the PICS proforma provided in annex A of the present document and is required to provide the information necessary to identify both the supplier and the implementation.

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 and/or edition number or version number) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies.

[1]   ETSI EN 300 009-1 (V1.4.3): "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]".

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

[3]   ITU-T Recommendation Q.701: "Functional description of the message transfer part (MTP) of Signalling System No. 7".

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

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

[6]   ITU-T Recommendation Q.711: "Functional description of the signalling connection control part".

[7]   ITU-T Recommendation Q.712: "Definition and function of signalling connection control part messages".

[8]   ITU-T Recommendation Q.713: "Signalling connection control part formats and codes".

[9]   ITU-T Recommendation Q.714: "Signalling connection control part procedures".

[10]   ITU-T Recommendation Q.704: "Signalling network functions and messages".

[11]   ITU-T Recommendation Q.716: "Signalling System No. 7 - Signalling connection control part (SCCP) performance".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 300 009-1 [1], ISO/IEC 9646-1 [2] and ISO/IEC 9646-7 [4] apply:

Implementation Conformance Statement (ICS): statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented

NOTE: The ICS can take several forms: protocol ICS (PICS), profile ICS, profile specific ICS, and information object ICS.

Protocol Implementation Conformance Statement (PICS): ICS for an implementation or system claimed to conform to a given protocol specification

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

3.2 Abbreviations

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

AK	data AcKnowledgement message
c	conditional
CC	Connection Confirm message
CR	Connection Request message
CREF	Connection REFused message
DPC	Destination Point Code
DT1	Data Form 1 message
DT2	Data Form 2 message
EA	Expedited data Acknowledgement message
ED	Expedited Data message
ERR	protocol data unit ERRor message
GT	Global Title
i	irrelevant
ICS	Implementation Conformance Statement
ISDN	Integrated Services Digital Network
IT	Inactivity Test message
IUT	Implementation Under Test
LUDT	Long Unit DaTa message
LUDTS	Long Unit DaTa message Service
m	mandatory
MTP	Message Transfer Part
n/a	not/applicable
o	optional
OSI	Open System Interconnection
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
RLC	ReLease Complete message
RLSD	ReLeaSeD message
RSC	ReSet Confirm message
RSR	ReSet Request message
SCCP	Signalling Connection Control Part
SCS	System Conformance Statement
SOG	Subsystem Out of service Grant message
SOR	Subsystem Out of service Request message
SPC	Signalling Point Code
SSA	SubSystem Allowed message
SSC	SubSystem Congested

SSN   SubSystem Number
SSP   SubSystem Prohibited message
SST   Subsystem Status Test message
SUT   System Under Test
UDT   UnitDaTa message
UDTS   UnitDaTa Service message
x   eXcluded
XUDT   eXtended UnitDaTa message
XUDTS   eXtended UnitDaTa Service message

4   Conformance

A PICS proforma that conforms to this PICS proforma specification shall be technically equivalent to annex A, and shall preserve the numbering and ordering of the items in annex A.

A PICS that conforms to this PICS proforma specification shall:

a) describe an implementation which conforms to EN 300 009-1 [1];

b) be a conforming PICS proforma, which has been completed in accordance with the instructions for completion given in clause A.1;

c) include the information necessary to uniquely identify both the supplier and the implementation.

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Annex A (normative):
PICS proforma for EN 300 009-1

Notwithstanding the provisions of the copyright clause related to the text of the present document, ETSI grants that users of the present document may freely reproduce the PICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed PICS.

A.1 Guidance for completing the PICS proforma

A.1.1 Purposes and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in EN 300 009-1 may provide information about the implementation in a standardized manner.

The PICS proforma is subdivided into clauses for the following categories of information:

- guidance for completing the PICS proforma;

- identification of the implementation;

- identification of the protocol;

- global statement of conformance;

- explicit statements about the implemented capabilities.

A.1.2 Abbreviations and conventions

The PICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7.

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?"

Status column

The following notations, defined in ISO/IEC 9646-7, are used for the status column:

m mandatory - the capability is required to be supported.

o optional - the capability may be supported or not.

n/a not applicable - in the given context, it is impossible to use the capability.

x prohibited (excluded) - there is a requirement not to use this capability in the given context.

o.i qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table.

ci	conditional - the requirement on the capability ("m", "o", "x" or "n/a") depends on the support of other optional or conditional items. "i" is an integer identifying an unique conditional status expression which is defined immediately following the table.
c:	Conditional upon the immediately previous item at the next higher level.
i	irrelevant - this capability is outside the scope of the given base standard and hence irrelevant and not subject to conformance testing. No answer is requested from the supplier.

Reference column

The reference column gives reference to ITU-T Recommendations Q.711, Q.712, Q.713 and Q.714 as modified by EN 300 009-1, except where explicitly stated otherwise.

NOTE 1: However, a reference merely indicates the place where the core of a description of an item can be found. Any additional information contained in EN 300 009-1 needs to be taken into account when making a statement about the conformance of that particular item.

Support column

The support column shall be filled in by the supplier of the implementation. The following common notations, defined in ISO/IEC 9646-7, are used for the support column:

Y or y	supported by the implementation.
N or n	not supported by the implementation.
N/A, n/a or -	no answer required (allowed only if the status is n/a or i, directly or after evaluation of a conditional status c).

NOTE 2: For automatic test selection, a N/A after evaluation of a conditional status has to be interpreted as not supported (N or n).

NOTE 3: As stated in ISO/IEC 9646-7, support for a received PDU requires the ability to parse all valid parameters of that PDU. Supporting a PDU while having no ability to parse a valid parameter is non-conformant. Support for a parameter of a PDU implies that the semantics of that parameter are supported.

If this PICS proforma is completed in order to describe a multiple-profile support in a system, it is necessary to be able to answer that a capability is supported for one profile and not supported for another. In that case, the supplier shall enter the unique reference to a conditional expression, preceded by "?" (e.g. ?3). This expression shall be given in the space for comments provided at the bottom of the table. It uses predicates defined in the System Conformance Statement (SCS), each of which refers to a single profile and which takes the value TRUE if and only if that profile is to be used.

EXAMPLE: ?3: IF prof1 THEN Y ELSE N

References to items

For each possible item answer (answer in the support column) within the PICS proforma exists a unique reference, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table.

EXAMPLE: A.5/4 is the reference to the answer of item 4 in table A.5 of annex A.

A.1.3 Instructions for completing the PICS

The supplier of the implementation shall complete the PICS proforma in each of the spaces provided. In particular, an explicit answer shall be entered in each of the support boxes provided, using the notation described in clause A.1.2.

If necessary, the supplier may provide additional comments in the space at the bottom of the tables or separately.

More detailed instructions are given at the beginning of the different clauses of the PICS proforma.

A.2   Identification of the implementation

Identification of the Implementation Under Test (IUT) and the system in which it resides (the System Under Test (SUT)) should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the PICS should be named as the contact person.

A.2.1   Date of the statement

....

A.2.2   Implementation Under Test (IUT) identification

IUT name:

....

....

IUT version:

....

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A.2.3   System Under Test (SUT) identification

SUT name:

....

Hardware configuration:

....

....

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Operating system:

....

A.2.4   Product supplier

Name:

....

Address:

....

....

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