SLOVENSKI STANDARD
SIST ETS 300 403-3:1998

01-junij-1998

Digitalno omrežje z integriranimi storitvami (ISDN) - Protokol digitalne naročniške signalizacije št. 1 (DSS1) - Signalizacijska omrežna plast za krmiljenje vodovnega osnovnega klica - 3. del: Izjava o skladnosti izvedbe protokola (PICS) - Proforma specifikacije

Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 3: Protocol Implementation Conformance Statement (PICS) proforma specification

Ta slovenski standard je istoveten z: **ETS 300 403-3 Edition 1**

ICS:

33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
35.100.30	Omrežni sloj	Network layer

SIST ETS 300 403-3:1998 **en**

EUROPEAN TELECOMMUNICATION STANDARD

ETS 300 403-3

September 1996

Source: ETSI TC-SPS

Reference: DE/SPS-05050

ICS: 33.020, 33.080, 35.100.30

Key words: ISDN, DSS1, layer 3, PICS

Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 3: Protocol Implementation Conformance Statement (PICS) proforma specification

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Foreword

This 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 is part 3 of a multi-part standard covering the Digital Subscriber Signalling System No. one (DSS1) protocol specification for the Integrated Services Digital Network (ISDN) signalling network layer for circuit-mode basic call control, as described below:

Part 1: "Protocol specification";

Part 2: "Specification and Description Language (SDL) diagrams";

Part 3: "Protocol Implementation Conformance Statement (PICS) proforma specification";

Part 4: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";

Part 5: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user";

Part 6: "TSS&TP specification for the network";

Part 7: "ATS and partial PIXIT proforma specification for the network".

Transposition dates	
Date of adoption of this ETS:	6 September 1996
Date of latest announcement of this ETS (doa):	31 December 1996
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	30 June 1997
Date of withdrawal of any conflicting National Standard (dow):	30 June 1997

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 Open Systems Interconnection (OSI) protocol. Such a statement is called an Implementation Conformance Statement (ICS). An ICS stating what capabilities and options have been implemented for a particular protocol is called a protocol ICS. This is commonly abbreviated to "PICS".

ETS 300 403-1 is derived from ITU-T Recommendation Q.931 (1993). However, no PICS proforma exists for this Recommendation. Therefore, ETSI has created a PICS proforma that is specific to the European environment. This PICS proforma reflects the requirements contained in ITU-T Recommendation Q.931 with the modifications applied by ETS 300 403-1 [1]. This has been done to assist understanding of how the European requirements relate to the requirements contained within ITU-T Recommendation Q.931 (and in particular, to the options specified in that Recommendation that are selected by the ETS). In practical terms, this means that a number of capabilities specified by ITU-T Recommendation Q.931 appear as items in this PICS proforma with a status more akin to the status that would be expected in a profile ICS (i.e. out-of-scope (I), prohibited (X)).

Annex B of this ETS describes the differences between the proforma contained in annex A and the proforma for the earlier version of the DSS1 protocol as specified in ETS 300 102-1 (1990).

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1 Scope

This third part of ETS 300 403 provides the Protocol Implementation Conformance Statement (PICS) proforma for the Integrated Services Digital Network (ISDN) Digital Subscriber Signalling System No. one (DSS1) protocol signalling network layer for circuit-mode basic call control as specified in ETS 300 403-1 [1] and ETS 300 403-2 [2] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4].

Both the packet communication procedures (see clause 6 of ETS 300 403-1 [1]) and the User Signalling Bearer Service (USBS) procedures (see clause 7 of ETS 300 403-1 [1]) are excluded from this PICS proforma.

The supplier of an implementation that is claimed to conform to ETS 300 403-1 [1] and ETS 300 403-2 [2] is required to complete a copy of the PICS proforma provided in annex A of this ETS and is required to provide the information necessary to identify both the supplier and the implementation.

2 Normative references

This ETS incorporates by dated and undated reference, provisions from other publications. These normative references are cited at 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] ETS 300 403-1 (1995): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".

[2] ETS 300 403-2 (1995): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 2: Specification Description Language (SDL) diagrams".

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

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

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this ETS, the following definitions apply, in addition to those in ETS 300 403-1 [1], ETS 300 403-2 [2], ISO/IEC 9646-1 [3] and ISO/IEC 9646-7 [4]:

Implementation Conformance Statement (ICS): A statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented. The ICS can take several forms: protocol ICS, profile ICS, profile specific ICS, and information object ICS (see ISO/IEC 9646-1 [3]).

network: The DSS1 protocol entity at the network side of the user-network interface.

Protocol Implementation Conformance Statement (PICS): An ICS for an implementation or system claimed to conform to a given specification (see ISO/IEC 9646-1 [3]).

PICS proforma: A document, in the form of a questionnaire, which when completed for an implementation or system becomes a PICS (see ISO/IEC 9646-1 [3]).

user: The DSS1 protocol entity at the user side of the user-network interface.

3.2 Abbreviations

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

AND	Boolean "and"
BC	Bearer Capability information element
CDP	Called Party information element
CGP	Calling Party information element
DSS1	Digital Subscriber Signalling System No. one
HLC	High Layer Compatibility information element
ICS	Implementation Conformance Statement
IS	Information element structure
ISDN	Integrated Services Digital Network
IUT	Implementation Under Test
LLC	Low Layer Compatibility information element
M	Mandatory requirement (to be observed in all cases)
MC	Major Capabilities
MR	Messages Received
MT	Messages Transmitted
N/A	Not applicable, not supported or the conditions for status are not met
No	not supported
NOT	Boolean "not"
O	Option (may be selected to suit the implementation, provided that any requirements applicable to the option are observed)
O.n	Options, but support required for either at least one or only one of the options in the group labelled with the same numeral "n"
OR	Boolean "or"
OSI	Open Systems Interconnection
PABX	Private Automatic Branch eXchange
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
R	Roles
SC	Subsidiary Capabilities
SUT	System Under Test
(T)	Transparent (PDU parameter)
TI	Type of Implementation
TM	Timer
USBS	User Signalling Bearer Service
Yes	supported

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 ETS 300 403-1 [1] and ETS 300 403-2 [2];

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

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

Annex A (normative): PICS proforma for ETS 300 403-1 and ETS 300 403-2

A.1 Guidance for completing the PICS proforma

A.1.1 Purpose and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in ETS 300 403-1 [1] and ETS 300 403-2 [2] may provide information in a standardized manner.

The PICS proforma is subdivided into clauses as follows:

A.1: instructions for completing the various parts of the PICS proforma;
A.2: identification of the implementation;
A.3: identification of the protocol to which this PICS proforma applies;
A.4: explanation of the PICS proforma tables;
A.5: global statement of conformance;
A.6: questions to determine roles;
A.7: questions for the user role; and
A.8: questions for the network role.

A.1.2 Symbols, 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 [4].

Item column:

The item column contains a unique reference (a mnemonic plus a number) for each item within the PICS proforma.

NOTE: Where possible, backwards compatibility has been maintained between the item references used in this PICS proforma and those used in the PICS proforma for the earlier version of the DSS1 protocol described in ETS 300 102-1.

In general, the same mnemonics have been used in this PICS proforma as in earlier proforma. An additional lower case letter has been added to differentiate PICS items related to the user role (e.g. MCu) and PICS items related to the network role (e.g. MCn). In earlier PICS proforma both these cases were identified by the same mnemonic (e.g. MC).

A further consequence of maintaining backwards compatibility is the appearance of discontinuities in the numeric part of the item reference. There are, for example, PICS items listed as messages transmitted by the network with the references "MTn 2" and "MTn 4"; the reference between, "MTn 3" is not used.

Item description column:

The item description contains a brief summary of the static requirement for which a support answer is required.

Conditions for status column:

The conditions for status column contains a specification, if appropriate, of the predicate upon which a conditional status is based.

Status column:

The following notations, defined in ISO/IEC 9646-7 [4], are used for the status column:

I	Irrelevant or out-of-scope - this capability is outside the scope of the ETS to which this PICS proforma applies and is not subject to conformance testing in this context.
M	Mandatory - the capability is required to be supported.
N/A	Not Applicable - in the given context, it is impossible to use the capability. No answer in the support column is required.
O	Optional - the capability may be supported or not.
O.i	qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer that identifies an unique group of related optional items and the logic of their selection, defined below the table.
X	eXcluded or prohibited - there is a requirement not to use this capability in a given context.

NOTE: To support a capability means that the capability is implemented in conformance to ETS 300 403-1 [1] and ETS 300 403-2 [2].

Reference column:

Except where explicitly stated, the reference column refers to the appropriate parts of ETS 300 403-1 [1] describing the particular item.

NOTE: A reference indicates only the location of the most essential information about an item. All additional requirements contained in ETS 300 403-1 [1] and ETS 300 403-2 [2] have also to be taken into account when making a statement about the conformance of that particular item.

Support column:

The following notation, defined in ISO/IEC 9646-7 [4], is used for the support column:

[ ] Yes [ ] No	Tick "Yes" if item is supported, tick "No" if item is not supported.
[ ] N/A	Tick "N/A" if the item is "not applicable".

Prerequisite line:

A prerequisite line takes the form: Prerequisite: <predicate>.

A prerequisite line after a subclause heading or table title indicates that the whole subclause or the whole table is not required to be completed if the predicate is FALSE.

A.1.3 Instructions for completing the PICS proforma

The supplier of the implementation shall complete the PICS proforma. For each row in each PICS proforma table the supplier shall enter an explicit answer (i.e. by ticking the appropriate "Yes", "No", or "N/A" in each of the support column boxes provided. Where a support column box is left blank, or where it is marked "N/A" without any tickbox, no answer is required. If necessary, the supplier may enter additional comments at the end of each table, or separately.

More detailed instructions may be found at the beginning of each subclause of the 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 to provide as much detail as possible regarding version numbers and configuration options.

The product supplier 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:

.....

A.2.3 System Under Test (SUT) identification

SUT name:

.....

.....

Hardware configuration:

.....

.....

.....

Operating system:

.....

.....

A.2.4 Product supplier

Name:

.....

E-mail address:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

Additional information:

.....

.....

.....

A.2.5 Client

Name:

.....

E-mail address:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

Additional information:

.....

.....

.....

A.2.6 PICS contact person

Name:

.....

E-mail address:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

Additional information:

.....

.....

.....

A.3 Identification of the protocol to which this PICS proforma applies

This PICS proforma applies to the following standards:

ETS 300 403-1 (1995): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]"; and

ETS 300 403-2 (1995): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 2: Specification Description Language (SDL) diagrams".

A.4 The PICS proforma tables

A.4.1 Correspondence to a physical interface

The "implementation" (IUT) about which this PICS proforma asks questions corresponds to a layer 3 implementation on top of ONE physical interface (i.e. one ISDN Basic access or one ISDN Primary rate access interface structure). If the SUT implements both Basic access and Primary rate access interface structures, and in the case of the Basic access, supports more than one configuration, then a layer 3 PICS shall be created for each type of interface (and for each configuration of each interface) provided by the SUT.