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Broadband Integrated Services Digital Network (B-ISDN); Signalling System No.7;
 Message Transfer Part (MTP) level 3 functions and messages to support international
 interconnection; Part 2: Protocol Implementation Conformance Statement (PICS)
 proforma specification

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33.080	Digitalno omrežje z integriranimi storitvami (ISDN)	Integrated Services Digital Network (ISDN)
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**Broadband Integrated Services Digital Network (B-ISDN);
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Part 2: Protocol Implementation Conformance Statement
(PICS) proforma specification**

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ETSI

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

Office address650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C

Association à but non lucratif enregistrée à la
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Internet

secretariat@etsi.fr

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Foreword

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

The present document is part 2 of a multi-part EN covering the Broadband Integrated Services Digital Network (B-ISDN); Signalling System No.7; Messages Transfer Part (MTP) level 3 functions and messages to support international interconnection, as identified below:

Part 1: "Protocol specification [ITU-T Recommendation Q.2210 (1996), modified]";

Part 2: "**Protocol Implementation Conformance Statement (PICS) proforma specification**".

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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 Message Transfer Part (MTP) level 3 functions and messages, signalling protocol of Signalling System No.7 for use between and, optionally, in public networks as specified in EN 301 004-1 [1] based on ETS 300 008-1 [2] 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 301 004-1 [1] based on ETS 300 008-1 [2] 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, 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.

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- [1] EN 301 004-1 (V1.1): "Broadband Integrated Services Digital Network (B-ISDN); Signalling System No.7; Message Transfer Part (MTP) level 3 functions and messages to support international interconnection; Part 1: Protocol specification [ITU-T Recommendation Q.2210 (1996), modified]".
- [2] ETS 300 008-1: "Integrated Services Digital Network (ISDN); Signalling System No.7; Message Transfer Part (MTP) to support international interconnection; Part 1: Protocol specification [ITU-T Recommendations Q.701 (1993), Q.702 (1988), Q.703 to Q.706 (1993), modified]".
- [3] ISO/IEC 9646-1 (1994): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 1: General concepts".
- [4] ISO/IEC 9646-7 (1995): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 7: Implementation Conformance Statements".
- [5] ITU-T Recommendation Q.701 (1993): "Functional description of the message transfer part (MTP) of Signalling System No. 7".
- [6] ITU-T Recommendation Q.704 (1996): "Signalling network functions and messages".
- [7] CCITT Recommendation Q.707 (1988): "Testing and maintenance".
- [8] ITU-T Recommendation Q.2210 (1996): "Message transfer part level 3 functions and messages using the services of ITU-T Recommendation Q.2140".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the definitions in EN 301 004-1 [1], ISO/IEC 9646-1 [3] and SO/IEC 9646-7 [4] apply. In particular, the following terms defined in ISO/IEC 9646-1 [3] 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. 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 Symbols

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

c	Conditional
n/a	Not Applicable
o	Optional
o.<n>	Optional, but, if chosen, support is required for either at least one or only one of the options in the group labelled by the same numeral <n>
x	Excluded

3.3 Abbreviations

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

B-ISDN	Broadband Integrated Services Digital Network
DPC	Destination Point Code
ICS	Implementation Conformance Statement
MTP	Messages Transfer Part
OPC	Originating Point Code
OSI	Open System Interconnection
PICS	Protocol Implementation Conformance Statement

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:

- describe an implementation which conforms to EN 301 004-1 [1] based on ETS 300 008-1 [2];
- be a conforming PICS proforma, which has been completed in accordance with the instructions for completion given in clause A.1;
- include the information necessary to uniquely identify both the supplier and the implementation.

Annex A (normative): PICS proforma for EN 301 004-1 based on ETS 300 008-1

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 301 004-1 based on ETS 300 008-1 may provide information about the implementation in a standardized manner.

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

- guidance for completing the PICS proforma;
- identification of the implementation;
- identification of the ETS;
- global statement of conformance;
- capabilities.

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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; |
| i | out of scope ("i" stands for 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; |

- o.i qualified optional - for mutually exclusive or selectable options from a set. "i" is an integer which identifies an 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.

Reference column

The reference column makes reference to EN 301 004-1 based on ETS 300 008-1, except where explicitly stated otherwise.

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, directly or after evaluation of a conditional status).

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 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.

It is also possible to provide a comment to an answer in the space provided at the bottom of the table.

NOTE: 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 on a PDU means that the semantics of that parameter are supported. Unless specifically covered by a table listing PDU parameters and giving details regarding their status, all parameters of a PDU are required to be fully supported on sending. Support of a PDU therefore implies full support of all required PDU parameters.

Values allowed column

The values allowed column contains the type, the list, the range, or the length of values allowed. The following notations are used:

- range of values: <min value> ... <max value>;
example: 5 ... 20;
- list of values: <value1>, <value2>, ..., <valueN>;
example: 2, 4, 6, 8, 9;
example: '1101'B, '1011'B, '1111'B;
example: '0A'H, '34'H, '2F'H;
- list of named values: <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>);
example: reject(1), accept(2);
- length: size (<min size> ... <max size>);
example: size (1 ... 8).

Values supported column

The values supported column shall be filled in by the supplier of the implementation. In this column, the values or the ranges of values supported by the implementation shall be indicated.

References to items

For each possible item answer (answer in the support column) within the PICS proforma a unique reference exists, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solids character "/", followed by the item number in the table. If there is more than one support column in a table, the columns are discriminated by letters (a, b, etc.), respectively.

EXAMPLE 1: A.5/4 is the reference to the answer of item 4 in table 5 of annex A.

EXAMPLE 2: A.6/3b is the reference to the second answer (i.e. in the second support column) of item 3 in table 6 of annex A.

Prerequisite line

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

A prerequisite line after a clause or table title indicates that the whole clause 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 in each of the spaces provided. In particular, an explicit answer shall be entered, in each of the support or supported column boxes provided, using the notation described in subclause A.1.2.

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

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

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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:

.....