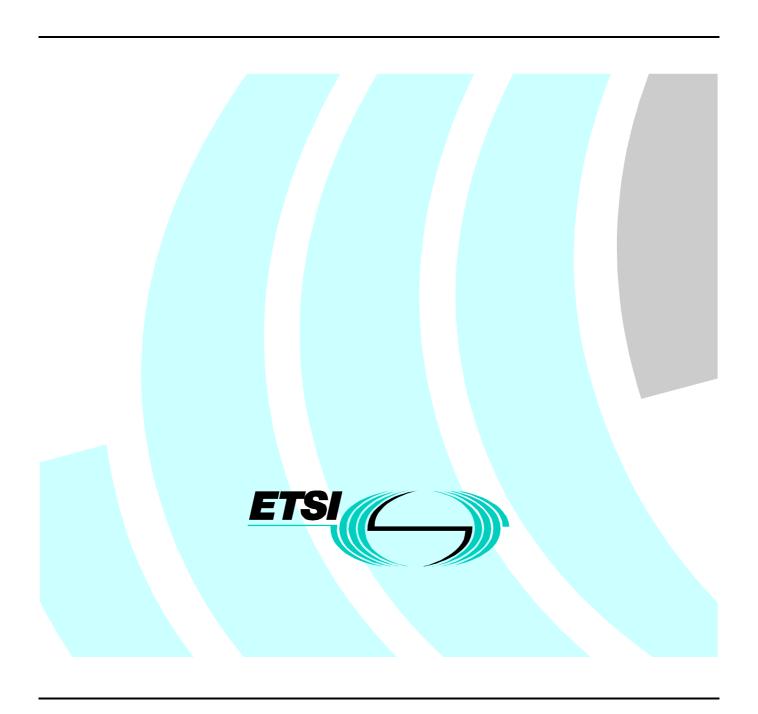# ETSI EN 302 093-2 V1.1.1 (2000-06)

European Standard (Telecommunications series)

Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Point-to-point multiconnection bearer control specification in a separated call and bearer environment; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification

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Reference

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Keywords

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Foreword

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

The present document is part 2 of a multi-part standard covering the Digital Subscriber Signalling System No. two (DSS2) protocol; Point-to-point multiconnection bearer control specification in a separated call and bearer environment, as described below:

Part 1: "Protocol specification";

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

Part 3: "Test Suite Structure and Test Purposes (TSS&TP) specification for the user";

Part 4: "Abstract Test Suite (ATS) and partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification for the user".

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 protocol. Such a statement is called a Protocol Implementation Conformance Statement (PICS). The Protocol specification of the present document, builds upon the basic call control procedures defined in EN 300 443-1 [6] by adding protocol elements and procedures required to enable separate call and bearer control.

National transposition dates	
Date of adoption of this EN:	5 May 2000
Date of latest announcement of this EN (doa):	31 August 2000
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	28 February 2001
Date of withdrawal of any conflicting National Standard (dow):	28 February 2001

1 Scope

The present document provides the Protocol Implementation Conformance Statement (PICS) proforma for the Broadband Integrated Services Digital Network (B-ISDN) Digital Subscriber Signalling System No. two (DSS2) protocol to support point-to-point Multiconnection call Bearer control protocol defined in EN 302 093-1 [2] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-7 [4] and ETS 300 406 [5].

The supplier of a protocol implementation which is claimed to conform to EN 302 093-1 [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 the supplier and the implementation.

Further ENs (or further parts of the present document) provide the method of testing and detailed application specific requirements to determine conformance to the present document.

The provision of this capability requires the support of the point-to-point Multiconnection call control protocol as defined in EN 302 091-1 [1] or of another relevant separated call control protocol.

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, subsequent revisions do apply.

- 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]   ETSI EN 302 091-1: "Broadband Integrated Services Digital Network (B-ISDN) and Broadband Private Integrated Services Network (B-PISN); Digital Subscriber Signalling System No. two (DSS2), Broadband Inter-Exchange Signalling (B-QSIG), and Signalling System No. 7 (SS7); Prenegotiation; Part 1: Protocol specification".

[2]   ETSI EN 302 093-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Point-to-point multiconnection bearer control specification in a separated call and bearer environment; Part 1: Protocol specification".

[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]   ETSI ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".

[6]   ETSI EN 300 443-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; B-ISDN user-network interface layer 3 specification for basic call/bearer control; Part 1: Protocol specification [ITU-T Recommendation Q.2931 (1995), modified]".

[7]   ETSI EN 301 068-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Connection characteristics; ATM transfer capability and traffic parameter indication; Part 1: Protocol specification [ITU-T Recommendations Q.2961.1 (1995), Q.2961.2 (1997), Q.2961.3 (1997), Q.2961.4 (1997), modified]".

3 Definitions and abbreviations

3.1 Definitions

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

- terms defined in EN 302 093-1 [2];

- terms defined in ISO/IEC 9646-1 [3] and ISO/IEC 9646-7 [4].

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, profile ICS, profile specific ICS, information object ICS, etc.

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

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

3.2 Abbreviations

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

B-ISDN	Broadband ISDN
DSS2	Digital Subscriber Signalling System No. two
ICS	Implementation Conformance Statement
IUT	Implementation Under Test
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
SUT	System Under Test

4 Conformance

If it claims to conform to the present document, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma given in annex A, and shall preserve the numbering/naming and ordering of the proforma items.

A PICS which conforms to the present document shall be a conforming PICS proforma completed in accordance with the guidance for completion given in clause A.1.

Annex A (normative):
PICS proforma for EN 302 093-1

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 302 093-1 may provide information about the implementation in a standardized manner.

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

- instructions for completing the PICS proforma;

- identification of the implementation;

- identification of the protocol;

- global statement of conformance;

- roles.

- user role:

  - major capabilities;

  - PDUs;

  - PDU parameters;

  - timers;

  - call states.

- network role:

  - major capabilities;

  - PDUs;

  - PDU parameters;

  - timers;

  - call states.

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 an unique group of related optional items and the logic of their selection which is defined immediately following the table.

NOTE 1: In the case where items of the group do not always belong to the same table, all o.i shall be defined in the last subclause of the PICS proforma, and the text "which is defined immediately following the table" should be replaced by "which is defined in the last subclause of this annex".

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:o: conditional optional - the capability may be supported or not if the hierarchically preceding capability is supported.

c:m: conditional mandatory - the capability is required to be supported if the hierarchically preceding capability is supported.

Reference column

The reference column makes reference to EN 301 068-1, except where explicitly stated otherwise. Whenever reference is made directly to ITU-T Recommendation Q.2961.x, it means as endorsed by EN 301 068-1.

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 1: ?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 2: 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.

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 2:   5 .. 20

- list of values: <value1>, <value2>, ..., <valueN>

EXAMPLE 3:   2, 4, 6, 8, 9

EXAMPLE 4:   '1101'B, '1011'B, '1111'B

EXAMPLE 5:   '0A'H, '34'H, '2F'H

- list of named values: <name1>(<val1>), <name2>(<val2>), ..., <nameN>(<valN>

EXAMPLE 6:   reject(1), accept(2)

- length: size (<min size> .. <max size>)

EXAMPLE 7:   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 solidus 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 8:   A.5/4 is the reference to the answer of item 4 in table 5 of annex A.

EXAMPLE 9:   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 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.

A.2   Identification of the implementation

Identification of the IUT and the system in which it resides (the 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 identification

IUT name:

....

....

IUT version:

....

A.2.3   System under test identification

SUT name:

....

....

Hardware configuration:

....

....

....

Operating system:

....

A.2.4   Product supplier

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

A.2.5   Client (if different from product supplier)

Name:

....

Address:

....

....

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

A.2.6   PICS contact person

(A person to contact if there are any queries concerning the content of the PICS)

Name:

....

Telephone number:

....

Facsimile number:

....

E-mail address:

....

Additional information:

....

....

....

A.3 Identification of the protocol

This PICS proforma applies to the following standard:

EN 302 093-1: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; Point-to-point multiconnection bearer control specification in a separated call and bearer environment; Part 1: Protocol specification".

A.4 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)

NOTE: Answering "No" to this question indicates non-conformance to the <reference specification type> specification. Non-supported mandatory capabilities are to be identified in the *PICS*, with an explanation of why the implementation is non-conforming, on pages attached to the *PICS* proforma.

A.5 Roles

Table A.1: Roles

Item	Major role: Does the implementation support...	Conditions for status	Status	Reference	Support
R1.1	the user role?		O.1		[ ] Yes [ ] No
R1.2	the network role?		O.1		[ ] Yes [ ] No
O.1 It is mandatory to support exactly one of these items.					
Comments:					

A.6 User role

This clause contains the PICS proforma tables related to the user role. They are to be completed only for user implementations:

Prerequisite: R1.1 user role

A.6.1   Major capabilities

Table A.2: Major capabilities

Item	Major capability: Does the implementation ...	Conditions for status	Status	Reference	Support
MCu1	support the separated bearer establishment/release ?		M	9, 10	[ ] Yes [ ] No
Comments:					

A.6.2   Subsidiary capabilities

No items requiring response.

A.6.3   PDUs

No items requiring response.

A.6.4   PDU parameters received by the user

Table A.3: Information elements in the SETUP message received by the user

Item	SETUP message received by the user: Does the implementation ...	Conditions for status	Status	Reference	Support
IERu1	support the Call association information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
IERu2	support the Bearer identifier information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
NOTE: Not applicable for the basic point-to-point combined call/bearer control protocol defined in EN 300 443-1.					
Comments:					

A.6.5   PDU parameters sent by the user

Table A.4: Information elements in the SETUP message received by the user

Item	SETUP message received by the user: Does the implementation ...	Conditions for status	Status	Reference	Support
IETu1	support the Call association information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
IETu2	support the Bearer identifier information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
NOTE: Not applicable for the basic point-to-point combined call/bearer control protocol defined in EN 300 443-1.					
Comments:					

A.6.6   Timers

No items requiring response.

A.6.7   Call states

No items requiring response.

A.7   Network role

This subclause contains the PICS proforma tables related to the network role. They are needed to be completed only for network implementations:

Prerequisite: R1.2   network role

A.7.1   Major capabilities

Table A.5: Major capabilities

Item	Major capability: Does the implementation ...	Conditions for status	Status	Reference	Support
MCn1	support the separated bearer establishment/release ?		M	9, 10	[ ] Yes [ ] No
Comments:					

A.7.2   Subsidiary capabilities

No items requiring response.

A.7.3   PDUs

No items requiring response.

A.7.4   PDU parameters received by the network

Table A.6: Information elements in the SETUP message received by the network

Item	SETUP message received by the network: Does the implementation ...	Conditions for status	Status	Reference	Support
IERn1	support the Call association information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
IERn	support the Bearer identifier information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
NOTE: Not applicable for the basic point-to-point combined call/bearer control protocol defined in EN 300 443-1.					
Comments:					

A.7.5   PDU parameters sent by the network

Table A.7: Information elements in the SETUP message sent by the network

Item	SETUP message sent by the network: Does the implementation ...	Conditions for status	Status	Reference	Support
IERn1	support the Call association information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
IERn	support the Bearer identifier information element (note) ?		M	8.1.1.1	[ ] Yes [ ] No
NOTE: Not applicable for the basic point-to-point combined call/bearer control protocol defined in EN 300 443-1.					
Comments:					

A.7.6   Timers

No items requiring response.

A.7.7   Call states

No items requiring response.

History

Document history				
V1.1.1	December 1998	Public Enquiry	PE 9917:	1998-12-25 to 1999-04-23
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