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**Integrated Services Digital Network (ISDN);
Basic User Network Interface (UNI);
Part 3: Implementation Conformance Statement (ICS)
and Implementation eXtra Information for Testing (IXIT)
specification for interface I_B**

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Foreword

This second edition European Telecommunication Standard (ETS) has been produced by the ETSI Technical Committee Transmission and Multiplexing (TM).

This ETS concerns the basic User Network Interface (UNI) for the Integrated Services Digital Network (ISDN) and consists of 7 parts as follows:

Part 1: "Layer 1 specification";

Part 2: "Implementation Conformance Statement (ICS) and Implementation Extra Information for Testing (IXIT) for interface I_A";

Part 3: "Implementation Conformance Statement (ICS) and Implementation Extra Information for Testing (IXIT) for interface I_B";

Part 4: "Conformance test specification for interface I_A";

Part 5: "Conformance test specification for interface I_B";

Part 6: "Abstract Test Suite (ATS) specification for interface I_A";

Part 7: "Abstract Test Suite (ATS) specification for interface I_B";

and is based on ITU-T Recommendation I.430 [9].

| Transposition dates | |
|---|-------------------|
| Date of adoption of this ETS: | 18 September 1998 |
| Date of latest announcement of this ETS (doa): | 31 January 1999 |
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| Date of withdrawal of any conflicting National Standard (dow): | 31 July 1999 |

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 telecommunication specification. Such a statement is called an Implementation Conformance Statement (ICS).

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1 Scope

This part 3 of ETS 300 012 provides the Protocol Implementation Conformance Statement (PICS) and the Protocol Implementation eXtra Information for Testing (PIXIT) proformas for the ISDN basic rate UNI I_B, layer 1 specification defined in ETS 300 012-1 [1] in compliance with the relevant requirements, and in accordance with the relevant guidance given in ISO/IEC 9646-2 [6], ISO/IEC 9646-7 [8] and ETS 300 406 [4].

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 300 012-1 (1998): "Integrated Services Digital Network (ISDN); Basic User Network Interface (UNI); Part 1: Layer 1 specification".
- [2] ETS 300 012-4 (1998): "Integrated Services Digital Network (ISDN); Basic User Network Interface (UNI); Part 4: Conformance test specification for interface I_A".
- [3] ETS 300 012-6 (1998): "Integrated Services Digital Network (ISDN); Basic User Network Interface (UNI); Part 6: Abstract Test Suite (ATS) specification for interface I_A".
- [4] ETS 300 406 (1995): "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; Standardization methodology".
- [5] ISO/IEC 9646-1 (1994): "Information technology; Open Systems Interconnection; Conformance Testing Methodology and Framework; Part 1: General concepts".
- [6] ISO/IEC 9646-2 (1994): "Information technology; Open Systems Interconnection; Conformance Testing Methodology and Framework; Part 2: Abstract test suite specification".
- [7] ISO/IEC 9646-5 (1994): "Information technology; Open Systems Interconnection; Conformance Testing Methodology and Framework; Part 5: Requirements on test laboratories and clients for the conformance assessment process".
- [8] ISO/IEC 9646-7 (1995): "Information technology; Open Systems Interconnection; Conformance Testing Methodology and Framework; Part 7: Implementation Conformance Statements".
- [9] ITU-T Recommendation I.430 (1995): "Basic user-network interface; layer 1 specification".

3 Definitions and abbreviations

3.1 Definitions

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

- terms defined in ETS 300 012-1 [1];
- terms defined in ISO/IEC 9646-1 [5] and in ISO/IEC 9646-7 [8].

In particular, the following terms defined in ISO/IEC 9646-1 [5] apply:

Protocol Implementation Conformance Statement (PICS): A statement made by the supplier of an Open Systems Interconnection (OSI) implementation or system, stating which capabilities have been implemented for a given OSI protocol.

PICS proforma: A document, in the form of a questionnaire, designed by the protocol specifier or the conformance test suite specifier, which when completed for an OSI implementation or system becomes the PICS.

static conformance review: A review of the extent to which the static conformance requirements are met by the IUT, accomplished by comparing the PICS with the static conformance requirements expressed in the relevant standard(s).

3.2 Abbreviations

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

| | |
|----------------|---|
| I _A | Interface point A |
| I _B | Interface point B |
| ICS | Implementation Conformance Statement |
| IUT | Implementation Under Test |
| IXIT | Implementation eXtra Information for Testing |
| OSI | Open Systems Interconnection |
| PICS | Protocol Implementation Conformance Statement |
| PIXIT | Protocol Implementation eXtra Information for Testing |
| SCS | System Conformance Statement |
| SUT | System Under Test |

4 Conformance to this PICS proforma specification

If it is claimed to conform to this ETS, the actual PICS proforma to be filled in by a supplier shall be technically equivalent to the text of the PICS proforma in annex A, and shall preserve the numbering/naming of the proforma items.

A PICS which conforms to this ETS shall be a conforming PICS proforma completed in accordance with the instructions for completion given in clause A.1.

Annex A (normative): PICS proforma for ETS 300 012-1

Notwithstanding the provisions of the copyright clause related to the text of this ETS, ETSI grants that users of this ETS 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 Purpose and structure

The purpose of this PICS proforma is to provide a mechanism whereby a supplier of an implementation defined in ETS 300 012-1 [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 reference ETS;
- PICS proforma tables:
 - global statement of conformance;
 - tables.

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 [8].

The reference column contained in the tables gives reference to the appropriate part(s) of ETS 300 012-1 [1] describing the particular item.

NOTE: However, a reference merely indicates the place the core of a description of an item can be found. Any additional information contained in ETS 300 012-1 [1] has to be taken into account when making a statement about the conformance of that particular item.

The following common notations, defined in ISO/IEC 9646-7 [8], are used for the status column:

- m** mandatory.
- o** optional.
- n/a** not applicable - in a given context, it is impossible to use the capability.
- o.i** qualified optional - for mutually exclusive or selectable options from a set. "i" is the integer which identifies a unique group of related optional items and the logic of their selection which is defined immediately following the table, in "Optional Status Notes" area.
- 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.
- x** prohibited (excluded) - there is a requirement not to use this capability in the given context.

The following common notations, defined in ISO/IEC 9646-7 [8], are used for the support column:

- y** for supported/implemented.
- n** for not supported/not implemented.
- x** prohibited (excluded) - there is a requirement not to use this capability in the given context.

A.2 Table/item identification

The PICS table is provided with a table/item identification label pre-printed to the left in the table headers. The labels are composed as follows:

- one capital letter, being the first letter of the layer name;
- a serial number.

Each item in a PICS table is provided with a serial number in the left-hand table column, called "Item No."

To identify an item unambiguously, the table label and the item number are combined by use of a slash character, "/", e.g. in the 2nd table of the physical layer PICS, the 3rd item is identified by "A.2/3".

A.3 Filling in guidance

The filling in is done in the rows of the right table column named "**Support**" as follows:

- for implemented items a Y, y, Yes, yes or YES is entered;
- for not implemented items a N, n, No, no or NO is entered.

For each not implemented mandatory item, the client shall give a justification e.g. as an added note associated with the item.

A.4 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 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.4.1 Date of the statement

Date:

.....

A.4.2 Implementation Under Test (IUT) identification

IUT name:

.....

.....

IUT version:

.....

A.4.3 System Under Test (SUT) identification

SUT name:

.....
.....

Hardware configuration:

.....
.....
.....

Operating system:

.....

A.4.4 Product supplier

Name:

.....

Address:

.....
.....
.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....
.....
.....

A.4.5 Client (if different from product supplier)

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

A.4.6 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.5 Identification of the protocol

This PICS proforma applies to the following standard:

ETS 300 012-1 (1998): "Integrated Services Digital Network (ISDN); Basic User Network Interface (UNI); Part 1: Layer 1 specification".

A.6 PICS proforma tables

An explicit answer shall be entered, in each of the supported column boxes provided, using the notation described in subclause A.1.2.

A.6.1 Global statement of conformance

Are all mandatory capabilities implemented? (Yes/No)

NOTE: Answering "No" to this question indicates non-conformance to the protocol specification. Non-supported mandatory capabilities are to be identified in the PICS, with an explanation of why the implementation is non-conforming. Explanations may be entered in the comment field at the bottom of each table ("Answer notes" areas) or on pages attached to the PICS proforma.

A.6.2 Tables

Table A.1: Optional capabilities

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|-------------|--|-----------------------------------|--------|-----------|---------|
| 1 | NT can be connected to user premises wiring: - at reference point T or S/T: NT type is "NT1"; | clauses 1 and 3, 5.1.3, 5.2.2 | o.1 | | |
| 2 | | | o | | |
| 3 | | | o | | |
| 4 | | | o | | |
| 5 | | | o | | |
| 6 | | | o | | |
| 7 | Timer T2 value is: - 0 (if NT recognizes INFO 1 unambiguously); | 7.5 (table 8) | o | not A.1/8 | |
| 8 | - 25 ms to 100 ms. | | o | not A.1/7 | |
| (continued) | | | | | |

Table A.1 (concluded): Optional capabilities

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|----------|---|-----------------------------|--------|---------------------------------|---------|
| 9 | NT configuration is designed for: - short passive bus (fixed timing); | 9.6.2.2 | o | | |
| 10 | - both point-to-point and short passive bus (adaptive timing); | 9.6.2.3 | o | | |
| 11 | - extended bus; | 9.6.2.4 | o | | |
| 12 | - point-to-point only. | 9.6.2.5 | o | | |
| 13 | Power source 1 (PS1) is provided: | 10.1, 10.1.2, | o | | |
| 14 | - as an integral part of NT; | 10.2.1 | o | | |
| 15 | - physically separated from NT (Auxiliary Power Source (APS)); | 10.8 | o.1 | | |
| 16 | - for normal power mode, fall back characteristics; | 10.6.5.2. a) | c | A.1/14 or A.1/15 and not A.1/17 | |
| 17 | - for normal power mode, switch-off/switch-on characteristics; | 10.6.5.2. b) | c | A.1/14 or A.1/15 and not A.1/16 | |
| 18 | - for restricted power mode; | 10.2.1 iii) | o | | |
| 19 | - for power feeding of more than one TE. | 10.6.5.4.2 | o.2 | | |
| 20 | Power source 2 (PS2) is provided: | 10.1, 10.1.2, | o | | |
| 21 | - as an integral part of NT; | 10.2.1 | o | | |
| 22 | - physically separated from NT; | | o | | |
| 23 | - for normal power mode; | 10.3.2.1 | c | A.1/20 | |
| 24 | - for restricted power mode. | 10.3.2.2 | o | | |
| 25 | If items A.1/1 and A.1/15 are supported: - NT1 associated with the APS contains normal mode voltage detector for switching-off the restricted mode power source. | 10.9.3 10.9.1 | m | A.1/1 and A.1/15 | |
| 26 | If item A.1/2 is supported: - NT2 provides multiframing. | 8.3, D.5 | o.3 | A.1/2 | |
| o.1 | If items A.1/1 and A.1/15 are supported, the NT1 associated with APS shall not have a PS1 normal mode source. | | | | |
| o.2 | If supported, state the maximum number of TEs to be fed from PS1. | | | | |
| o.3 | If supported, state in the PIXIT whether there is a difference to subclause 8.3 of ETS 300 012-1 [1]. | | | | |

Table A.2: Major functional characteristics

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Support |
|----------|---|-----------------------------------|---------------|---------|
| 1 | Two bi-directional 64 kbit/s B-channels are provided. | 6.1.1 | m | |
| 2 | Bit timing takes place at 192 kbit/s. | 6.1.2 | m | |
| 3 | Octet timing takes place at 8 kHz. | 6.1.3 | m | |
| 4 | Frame alignment. | 6.1.4 | see table A.3 | |
| 5 | One D-channel for each direction is provided at 16 kbit/s. | 6.1.5 | m | |
| 6 | D-channel access. | 6.1.6 | see table A.4 | |
| 7 | Power transfer across the interface is possible. | 6.1.7 | m | |
| 8 | Deactivation/activation. | 6.1.8, 6.1.9 | see table A.5 | |
| 9 | Two interchange circuits, one for each direction, are provided. | 6.2 | m | |
| 10 | Each transmitted frame contains 49 bits for all configurations. | 6.4 | m | |
| 11 | Nominal transmitted bit rate is 192 kbit/s. | 6.4.1 | m | |
| 12 | Binary organization of the transmitted frame meets the requirements. | 6.4.2 | m | |
| 13 | Contents and grouping of the transmitted frame meets the requirements | 6.4.2.2 | m | |
| 14 | Pseudo-ternary line code is used. | 6.5 | m | |
| 15 | NT timing is derived from the network clock. | 6.6 | m | |

Table A.3: Frame alignment

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Support |
|----------|--|-----------------------------------|--------|---------|
| 1 | Frame alignment procedure, based on line code violation, is used. | 8 | m | |
| 2 | Frame alignment, on initial activation of NT, meets the requirements. | 8.2 | m | |
| 3 | Loss of frame alignment is assumed on the required criterion. | 8.2.1 | m | |
| 4 | Frame alignment is assumed on the required criterion. | 8.2.2 | m | |
| 5 | NT1 multiframing is not provided (F _A bit is set to binary ZERO). | 8.3 | c1 | |
| c1 | Predicate: A.1/1. | | | |

Table A.4: D-channel access

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|----------|--|-----------------------------------|--------|-----------|---------|
| 1 | Interframe (layer 2) time fill is provided using: - binary ONES; - HDLC flags. | 7.1.1 | c | not A.4/2 | |
| 2 | | | c | not A.4/1 | |
| 3 | D-echo channel is provided. | 7.1.2 | m | | |

Table A.5: Deactivation/activation

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Support |
|----------|--|-----------------------------|--------|---------|
| 1 | NT uses the following states as required: - G1 (deactive); | 3.1.5.2.1 | m | |
| 2 | - G2 (pending activation); | 3.1.5.2.2 | m | |
| 3 | - G3 (active); | 3.1.5.2.3 | m | |
| 4 | - G4 (pending deactivation). | 3.1.5.2.4 | m | |
| 5 | Activate primitives correspond to the specification. | 7.2.1 | m | |
| 6 | Deactivate primitives correspond to the specification. | 7.2.2 | m | |
| 7 | Management primitives correspond to the specification. | 7.2.3 | m | |
| 8 | Signals INFO 0, INFO 2, INFO 4 can be sent. | 7.3 | m | |
| 9 | Signals INFO 0, INFO 1, INFO 3 can be received. | | m | |
| 10 | Activation/deactivation of activating/deactivating NT meets the requirements. | 7.5 | m | |
| 11 | Timer T1 is present. | 7.6 | m | |
| 12 | Activation time in state G1 (deactive) meets the requirements (respond to INFO 1 by sending of INFO 2 normally within 1 s, abnormally within 30 s). | 7.7.2 | m | |
| 13 | Activation time in state G2 (pending activation) meets the requirements (respond to INFO 3 by sending of INFO 4 normally within 100 ms, abnormally within 15 s if "Da"+"Db" is not greater than 30 s). | | m | |
| 14 | Deactivation time meets the requirements (respond to INFO 0 or loss of synchronization by sending of INFO 2 within 25 ms). | 7.8 | m | |

Table A.6: Electrical characteristics

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|----------|--|-----------------------------|--------|-----------|---------|
| 1 | Nominal bit rate is 192 kbit/s. | 9.1.1 | m | | |
| 2 | Bit rate tolerance is ± 100 ppm. | 9.1.2 | m | | |
| 3 | Maximum output jitter is 5 % of a bit period. | 9.3 | m | | |
| 4 | Transmitter output impedance is: - at all times, except when transmitting a binary ZERO, from 2 kHz to 1 MHz: Exceeding the impedance indicated by the template in figure 11; | 9.5.1, | m | | |
| 5 | - when transmitting a binary ZERO: ≥ 20 Ω. | 9.5.1.2 b) | | | m |
| 6 | Pulse shape is within the mask of figure 13. | 9.5.3.1 | m | | |
| 7 | Nominal pulse amplitude is 750 mV, zero to peak. | 9.5.3.2 | m | | |
| 8 | Pulse amplitude when transmitting a high density pattern meets the requirements. | 9.5.4.1 | m | | |
| 9 | Pulse unbalance of an isolated couple of pulses meets the requirements. | 9.5.4.2 | m | | |
| 10 | Longitudinal conversion loss of transmitter output is: - 10 kHz ≤ f ≤ 300 kHz: ≥ 54 dB; | 9.5.6, | m | | |
| 11 | - 300 kHz < f ≤ 1 MHz: minimum value decreasing from 54 dB at 20 dB/decade. | 9.5.6.1 | | | m |

(continued)

Table A.6 (concluded): Electrical characteristics

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|----------|---|-----------------------------|--------|-----------|---------|
| 12 | Receiver input impedance at all times is: - from 2 kHz to 1 MHz: exceeding the impedance indicated by the template in figure 11; | 9.6.1.2 | m | | |
| 13 | - at 96 kHz: peak current resulting from applied 1,2 V does not exceed 0,5 mA. | | m | | |
| 14 | Receiver sensitivity - noise and distortion immunity: NT operates over the specified full waveform mask range for NT designed for: - short passive bus (fixed timing); | 9.6.2, 9.6.2.2 | c | A.1/9 | |
| 15 | - both point-to-point and short passive bus (adaptive timing); | 9.6.2.3 | c | A.1/10 | |
| 16 | - extended passive bus; | 9.6.2.4 | c | A.1/11 | |
| 17 | - point to-point only. | 9.6.2.5 | c | A.1/12 | |
| 18 | Receiver input delay: The receiver accommodates the specified round trip delays for NT designed for: - short passive bus: 10 µs to 14 µs; | 9.6.3, 9.6.3.1 | c | A.1/9 | |
| 19 | - both point-to-point: 10 µs to 13 µs; and passive bus: 10 µs to 42 µs; | 9.6.3.2 | c | A.1/10 | |
| 20 | - extended passive bus: 10 µs to 42 µs; | 9.6.3.3 | c | A.1/11 | |
| 21 | - point to-point only: 10 µs to 42 µs; | 9.6.3.4 | c | A.1/12 | |
| 22 | Longitudinal conversion loss of receiver input is: - 10 kHz ≤ f ≤ 300 kHz: ≥ 54 dB; | 9.6.4 | m | | |
| 23 | - 300 kHz < f ≤ 1 MHz: minimum value decreasing from 54 dB at 20 dB/decade. | | m | | |

Table A.7: "Static" power feeding

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|----------|---|-----------------------------|--------|---------------------|---------|
| 1 | PS1 restricted operation is indicated by polarity reversion. | 10.2.1 ii) | c | A.1/18 | |
| 2 | Change from normal to restricted power mode takes place at the specified criteria. | 10.2.1 iii) | c | A.1/16-17 or A.1/18 | |
| 3 | NT provided power from: - PS1 normal mode is: 40 V +/-15 % up to the maximum available power (at least 1 W); | 10.2.2.1 | c | A.1/16 or 17 | |
| 4 | - PS1 restricted mode is: 40 V +/-15 % up to 420 mW; | 10.2.2.2 | c | A.1/18 | |
| 5 | - PS2 normal mode is: 40 V +/-20 % at TE when TE draws up to the min. available power of 7 W; | 10.2.3, 10.3.2.1 | c | A.1/23 | |
| 6 | - PS2 restricted mode is: 40 V +/-20 % at TE when TE draws up to the min. available power of 2 W. | 10.2.3, 10.3.2.2 | c | A.1/24 | |

Table A.8: "Dynamic" power feeding

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Predicate | Support |
|----------|---|-----------------------------|--------|-----------------------------------|---------|
| 1 | Power source switch-over time is < 5 ms. | 10.6.3.1 | c | A.1/16-17 and 18 or A.1/23 and 24 | |
| 2 | Restricted mode power source meets the requirements under overload conditions. | 10.6.3.2 | c | A.1/18 or 24 | |
| 3 | Increase of output voltage after removal of short circuit meets the requirements for: - PS1 restricted mode; | 10.6.5, 10.6.5.1 | c | A.1/18 | |
| 4 | - PS1 normal mode, limiting the output current. | 10.6.5.3 | c | A.1/16 | |
| 5 | Switch-on surge capability meets the requirements. | 10.6.5.4.1 | c | A.1/16 or 17 or A.1/23 | |
| 6 | PS1 operates as required for TE connection surge current. | 10.6.5.4.2 | c | | |
| 7 | dc unbalance of PS1 is < 3 %. | 7.2.1.1 | c | A.1/13 | |
| 8 | NT meets the requirements when 3 % external dc unbalance is adjusted and maximum power is drawn from PS1. | 10.7.2 | c | A.1/13 | |

Table A.9: Additional capabilities for APS

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Support |
|----------|---|-----------------------------|--------|---------|
| 1 | Power available from APS is 1 W per terminal multiplied by loading factor (minimum 1,1 or 1,5 if Ia on a short passive bus is used for connection). | 10.8.1 | c1 | |
| 2 | APS switch-on time is < 2,5 ms. | 10.8.2 | c1 | |
| 3 | APS switch-off time is < 2,5 ms. | 10.8.3 | c1 | |
| 4 | APS power consumption from PS1 restricted mode when off is ≤ 3 mW. | 10.8.4 | c1 | |
| 5 | APS meets the requirements when the number of connected terminals is one more than supported nominally. | 10.8.5 | c1 | |
| 6 | NT1 associated/compatible with the APS: - does not have a PS1 normal mode source; | 10.9 | c1 | |
| 7 | - backs-off to restricted mode: from 5 μs to 100 ms: < 45 mA, then: ≤ 3 mW/< 45 mA; | 10.9.1 | c1 | |
| 8 | - powers-up to restricted mode: rise time from 2-5 V to ≥ 34 ≤ 42 V: < 2,5 ms, in the range 34-42 V after further < 2,5 ms; | 10.9.2 | c1 | |
| 9 | - consumes ≤ 3 mW from APS in normal mode when I _B voltage is 24 V to 42 V. | 10.9.3 | c1 | |
| c1 | Predicate: A.1/1 and A.1/15. | | | |

Table A.10: Interface connector and contact assignments

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Support |
|----------|---|-----------------------------|--------|---------|
| 1 | Functions at access leads meet the requirements. | 10.1, 10.1.1 | m | |
| 2 | Leads or/and contact assignments meet the requirements. | 11 | m | |

Table A.11: Maintenance

| Item No. | Item | Reference ETS 300 012-1 [1] | Status | Support |
|----------|---|-----------------------------|--------|---------|
| 1 | A transparent loopback of B1 and B2 channels is provided (for conformance test purposes). | Annex C | o | |

Annex B (normative): PIXIT proforma for interface point I_B (NT) in ETS 300 012-1

B.1 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 telecommunication specification. Such a statement is called an Implementation Conformance Statement (ICS).

In addition to the PICS it will be normal for the test house to require a PIXIT (Protocol Implementation eXtra Information for Testing) statement based on a proforma, related to a specific abstract test suite and to the relevant means of testing. This PIXIT proforma will normally be provided by the test house to the client with a request for its completion together with the PICS proforma.

The PIXIT proforma contained in this ETS is proposed to be provided to the client for completion, when the related abstract test suite is to be used against client's Implementation Under Test (IUT).

The completed PIXIT will normally be used in conjunction with the completed PICS, as it adds precision to the information given in the PICS.

B.2 PIXIT proforma

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

B.2.1 Identification summary

PIXIT number:

.....

Means of testing:

.....

Test laboratory name:

.....

Date of issue:

.....

Issued of:

.....

B.2.2 Abstract Test Suite (ATS) summary

Protocol specification: ETS 300 012-1 [1]

ATS specification: ETS 300 012-6 [3]

Recommendation:

Abstract test method:

B.2.3 Test laboratory

Test laboratory identification:

.....

Test laboratory manager:

.....

Network address(es):

.....

Instructions for completion:

.....

B.2.4 Client

Client identification:

.....

Client test manager:

.....

Test facilities required:

.....

B.2.5 IUT

Name:

.....

Version:

.....

Machine configuration:

.....

Operating system identification:

.....

Upper tester identification (if any):

.....

Upper tester identification date (if appropriate):

.....

IUT identification:

.....

PICS reference for the IUT:

.....

Limitations of the IUT:

.....

B.3 Proforma structure and contents

The PIXIT proformas are tables containing pre-printed guide text and empty table space intended to be used by the client for explanations, specification of details, etc.

The proforma of table B.1 is intended for client indication of the environmental conditions to be used during testing, and test limitations, if any.

NOTE: In case no environmental value or range is indicated by the client, the test laboratory will use a value within the ranges pre-printed in the proforma.

B.4 Table/item identification

Corresponding to the PICS tables, each PIXIT table is provided with an identification label pre-printed to the left in the tables headers. In order to distinguish between PICS and PIXIT identifications, an X is added to the prefix letter. The PIXIT labels are composed as follows:

- two capital letters being the first letter of the layer name and the additional X;
- a serial number.

Each pre-printed item in a PIXIT table is provided with a serial number in the left hand tables column called "Item No.".

To identify a PIXIT item unambiguously, the table label and item number are combined using a slash character, "/", e.g. in the 1st table of the physical layer PIXIT, the 3rd item is identified by "B.1/3".

B.5 Filling in guidance

The PIXIT proformas shall be filled in by the client. The filling in is done according to the pre-printed guide test in the tables.

In order to reduce the test time, it is essential not only that the required explanations, specifications etc. are detailed but also that conditions which cannot be predetermined are explained/specified in details (using empty table space, additional pages or giving references to manuals etc.).

The information provided in a PIXIT shall not conflict with information provided in the corresponding PICS or with the requirements of the standards.

Table B.1: Environmental test conditions and test limitations

| | | | | |
|--|-------------------------|--------------------|---|---|
| IUT REFERENCE (short identification) | | | | |
| ENVIRONMENTAL TEST CONDITIONS (indicate the conditions to be used during testing): | | | | |
| Ambient temperature range | Relative humidity range | Air pressure range | Power supply | |
| | | | Voltage | Frequency |
| ° C | % | kPa | V ± % | Hz ± % |
| If no values / ranges are indicated above by the client, the IUT will be tested under the following conditions | | | | |
| 19 C to 25°C | 5 % to 75 % | 86 kPa to 106 kPa | within ± 5 % of nominal operating voltage | within ± 4 % of nominal operating frequency |
| OTHER TEST CONDITIONS (indicate any other condition that may be needed / useful during testing): | | | | |
| TEST LIMITATIONS (explain if any of the abstract tests cannot be executed because of non implementation of abstract layer primitives etc.): | | | | |

Table B.2: Means of control and observation and test co-ordination procedures etc.

| Item No. | Reference to PICS | Item | Answer below if relevant or make reference to table B.3 |
|-----------------|--------------------------|--|--|
| 1 | A.1/9 to A.1/12 | How to select the different wiring configurations. | |
| 2 | A.11/1 | Explain how specific patterns can be transmitted in looped back B-channels | |

Table B.3: Clients additional information

| |
|------------|
| PX2 |
| |

History

| Document history | | | |
|------------------|----------------|---------|--------------------------|
| April 1992 | First Edition | | |
| November 1996 | Public Enquiry | PE 118: | 1996-11-18 to 1997-03-14 |
| July 1998 | Vote | V 9837: | 1998-07-14 to 1998-09-11 |
| October 1998 | Second Edition | | |
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