



**I**NTERIM  
**E**UROPEAN  
**T**ELECOMMUNICATION  
**S**TANDARD

**I-ETS 300 309**

May 1995

---

Source: ETSI TC-SPS

Reference: DI/SPS-05008

ICS: 33.080

**Key words:** ISDN, DSS1, PIXIT, layer 2, basic, access, user

**Integrated Services Digital Network (ISDN);  
Digital Subscriber Signalling System No. one (DSS1);  
Partial Protocol Implementation eXtra Information for Testing  
(PIXIT) proforma specification for data link layer protocol  
for general application (basic access, user)**

**ETSI**

European Telecommunications Standards Institute

**ETSI Secretariat**

**Postal address:** F-06921 Sophia Antipolis CEDEX - FRANCE

**Office address:** 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

**X.400:** c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

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

---

**Copyright Notification:** No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1995. All rights reserved.



## Contents

Foreword .....	5
Introduction .....	5
1 Scope .....	7
2 Normative references .....	7
3 Definitions and abbreviations .....	7
3.1 Definitions .....	7
3.2 Abbreviations .....	8
4 Conformance .....	8
Annex A (normative): Partial PIXIT proforma .....	9
A.1 Identification summary .....	9
A.2 Abstract test suite summary .....	9
A.3 Test laboratory .....	9
A.4 Client (of the test laboratory) .....	10
A.5 System Under Test (SUT) .....	10
A.6 Protocol information .....	11
A.6.1 Protocol identification .....	11
A.6.2 Parameter values .....	11
A.6.3 Timer values .....	11
A.6.4 Sending of frames by IUT .....	12
A.6.5 Call states stability .....	12
History .....	13

Blank page

## Foreword

This Interim European Telecommunication Standard (I-ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI).

An ETSI standard may be given I-ETS status either because it is regarded as a provisional solution ahead of a more advanced standard, or because it is immature and requires a "trial period". The life of an I-ETS is limited to three years after which it can be converted into an ETS, have its life extended for a further two years, be replaced by a new version or, be withdrawn.

This I-ETS forms part of a set of I-ETSs completing the documentation of ETS 300 125 (ISDN data link layer protocol) as specified in ISO/IEC 9646-1 (e.g. conformance testing) as follows:

- I-ETS 300 305: "Protocol Implementation Conformance Statement (PICS) proforma specification (basic access, user)";
- I-ETS 300 306: "PICS proforma specification (primary rate access, user)";
- I-ETS 300 307: "PICS proforma specification (basic access, network)";
- I-ETS 300 308: "PICS proforma specification (primary rate access, network)";
- I-ETS 300 309: "Partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma specification (basic access, user)";**
- I-ETS 300 310: "Partial PIXIT proforma specification (primary rate access, user)";
- I-ETS 300 313: "Abstract test suite specification (user)".

Proposed announcement date	
Date of latest announcement of this I-ETS (doa):	31 August 1995

## 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 a Protocol Implementation Conformance Statement (PICS).

In addition to the PICS, it will be normal for the test laboratory to require a Protocol Implementation eXtra Information for Testing (PIXIT) 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 laboratory to the client with a request for its completion together with the PICS proforma.

The partial PIXIT proforma contained in annex A of this I-ETS is required to be augmented, as necessary, by the test realizer (who produces the executable test suite) and by the test laboratory in order to produce the (non-partial) PIXIT proforma.

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

Blank page

## 1 Scope

This Interim European Telecommunication Standard (I-ETS) provides the partial Protocol Implementation eXtra Information for Testing (PIXIT) proforma for the Integrated Services Digital Network (ISDN) data link layer protocol (basic access, user) as specified in ETS 300 125 [1] in compliance with the relevant requirements and in accordance with the relevant guidance given in ISO/IEC 9646-1 [4], ISO/IEC 9646-2 [5], ISO/IEC 9646-4 [6] and ISO/IEC 9646-5 [7].

## 2 Normative references

This I-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 I-ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 125 (1991): "Integrated Services Digital Network (ISDN); User-network interface data link layer specification; Application of CCITT Recommendations Q.920/I.440 and Q.921/I.441".
- [2] I-ETS 300 305 (1994): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1); Protocol Implementation Conformance Statement (PICS) proforma specification for data link layer protocol for general application (basic access, user)".
- [3] I-ETS 300 313 (1995): "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1); Abstract Test Suite (ATS) specification for data link layer protocol for general application (user)".
- [4] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [5] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification".
- [6] ISO/IEC 9646-4 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization".
- [7] ISO/IEC 9646-5 (1991): "Information processing systems - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process".

## 3 Definitions and abbreviations

### 3.1 Definitions

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

**client:** Refer to ISO/IEC 9646-1 [4].

**Implementation Under Test (IUT):** Refer to ISO/IEC 9646-1 [4].

**Protocol Implementation Conformance Statement (PICS):** Refer to ISO/IEC 9646-1 [4].

**PICS proforma:** Refer to ISO/IEC 9646-1 [4].

**Protocol Implementation eXtra Information for Testing (PIXIT):** Refer to ISO/IEC 9646-1 [4].

**PIXIT proforma:** Refer to ISO/IEC 9646-1 [4].

**System Under Test (SUT):** Refer to ISO/IEC 9646-1 [4].

**test laboratory:** Refer to ISO/IEC 9646-1 [4].

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

### 3.2 Abbreviations

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

ATS	Abstract Test Suite
DSS1	Digital Subscriber Signalling System No. one
IUT	Implementation Under Test
MOT	Means Of Testing
OSI	Open Systems Interconnection
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
SUT	System Under Test
TEI	Terminal Endpoint Identifier

## 4 Conformance

A test realizer, producing an executable test suite for the basic access Abstract Test Suite (ATS) specification contained in I-ETS 300 313 [3], is required, as specified in ISO/IEC 9646-4 [6], to produce an augmented partial PIXIT proforma conformant with this partial PIXIT proforma specification.

An augmented partial PIXIT proforma which conforms to this partial PIXIT proforma specification shall, as a minimum, have contents which are technically equivalent to annex A. The augmented partial PIXIT proforma may contain additional questions that need to be answered in order to prepare the Means Of Testing (MOT) for a particular Implementation Under Test (IUT).

A test laboratory, offering testing for the basic access ATS specification contained in I-ETS 300 313 [3], is required, as specified in ISO/IEC 9646-5 [7], to augment the augmented partial PIXIT proforma to produce a PIXIT proforma conformant with this partial PIXIT proforma specification.

A PIXIT proforma which conforms to this partial PIXIT proforma specification shall, as a minimum, have contents which are technically equivalent to annex A. The PIXIT proforma may contain additional questions that need to be answered in order to prepare the test laboratory for a particular IUT.



**Annex A (normative): Partial PIXIT proforma**

Notwithstanding the provisions of the copyright clause related to the text of this I-ETS, ETSI grants that users of this I-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.

**A.1 Identification summary**

PIXIT number:

.....

Test laboratory name:

.....

Date of issue:

.....

Issued to:

.....

**A.2 Abstract test suite summary**

Protocol specification: ETS 300 125 [1]  
ATS specification: I-ETS 300 313 [3]  
Abstract test method: remote test method (see ISO/IEC 9646-2 [5])

**A.3 Test laboratory**

Test laboratory identification:

.....

Accreditation status of the test service:

.....

Accreditation reference:

.....

Test laboratory manager:

.....

Test laboratory contact:

.....

Means of testing:

.....

Test laboratory instructions for completion:

.....

#### A.4 Client (of the test laboratory)

Client identification:

.....

Client test manager:

.....

Client contact:

.....

Test facilities required:

.....

#### A.5 System Under Test (SUT)

Name:

.....

Version:

.....

SCS reference:

.....

Machine configuration:

.....

Operating system identification:

.....

IUT identification:

.....

PICS (all layers):

.....

.....

Limitations of the SUT:

.....

Environmental conditions:

.....

## A.6 Protocol information

PICS items referenced in the tables in the remaining parts of this proforma are those contained in I-ETS 300 305 [2].

### A.6.1 Protocol identification

Specification reference: ETS 300 125 [1]

Protocol version: basic access, user

PICS reference:

NOTE: The PICS reference should reference a completed PICS which is conformant with the PICS proforma contained in I-ETS 300 305 [2].

### A.6.2 Parameter values

Table A.1: Parameter values

Item	Provide, if possible, ...	PICS reference	Supported (Y/N)	Value/Action
1.1	the TEI value(s) to be used in the case of non-automatic assignment and the action(s) necessary to perform the assignment	PC 1.1		
1.2	coding of an information field containing a compatible SETUP message without Channel identification information element (for insertion in UI frame)			

### A.6.3 Timer values

Table A.2: Timer values

Item	Timer	Provide, if possible, the maximum time...	Supported (Y/N)	Value implemented (s)
2.1	Identity Request timer	from receiving a stimulus which may result in the sending of an Identity Request to sending of the request		
2.2	Layer 3 response timer	from receipt of a frame (resulting in DL-DATA-INDICATION with information which requires response at layer 3) to when the IUT responds with a frame (as a result of DL-DATA-REQUEST with the layer 3 response)		

A.6.4 Sending of frames by IUT

Table A.3: Sending of frames by IUT

Item	Question	Supported (Y/N)
3.1	Does the layer 3 entity of the IUT issue a DL-RELEASE-REQUEST primitive after the call reference is released (i.e. send a DISC frame on ending a Layer 3 session)?	

A.6.5 Call states stability

Table A.4: Ability to remain in call states

Item	Is the IUT stable in ...	Supported (Y/N)
4.1	TEI unassigned state (State 1)? (see note)	
4.2	TEI assigned state (State 4) for at least 6 seconds?	
NOTE:	Where TEI is not automatically assigned, stability in state 1 relates to the ability to remove the assigned TEI. Where the TEI is automatically assigned, stability in state 1 relates to the ability to remain in state 1 after being unable to obtain a TEI.	

## History

Document history	
February 1993	Public Enquiry PE 39: 1993-03-01 to 1993-08-06
February 1995	Vote V 74: 1995-02-20 to 1995-04-14
May 1995	First Edition
October 1995	Converted into Adobe Acrobat Portable Document Format (PDF)