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**Broadband Integrated Services Digital Network (B-ISDN);  
Digital Subscriber Signalling System No. two (DSS2) protocol;  
B-ISDN user-network interface layer 3  
specification for the point-to-multipoint call/bearer control;  
Part 4: Abstract Test Suite (ATS) and partial Protocol  
Implementation eXtra Information for Testing (PIXIT) proforma  
specification for the 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

**Internet:** secretariat@etsi.fr - <http://www.etsi.fr> - <http://www.etsi.org>

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

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## Contents

Foreword .....	5
1 Scope .....	7
2 Normative references .....	7
3 Definitions and abbreviations .....	8
3.1 Definitions .....	8
3.2 Abbreviations .....	8
4 Abstract Test Method (ATM) .....	8
5 Untestable test purposes.....	9
6 ATS to TP map.....	9
7 PCTR conformance.....	9
8 PIXIT conformance .....	9
9 ATS Conformance.....	10
Annex A (normative): Protocol Conformance Test Report (PCTR) proforma.....	11
A.1 Identification summary .....	11
A.1.1 Protocol conformance test report.....	11
A.1.2 IUT identification .....	11
A.1.3 Testing environment .....	11
A.1.4 Limits and reservations.....	12
A.1.5 Comments .....	12
A.2 IUT Conformance status .....	12
A.3 Static conformance summary.....	12
A.4 Dynamic conformance summary.....	13
A.5 Static conformance review report.....	13
A.6 Test campaign report .....	14
A.7 Observations .....	27
Annex B (normative): Partial PIXIT proforma.....	28
B.1 Identification summary .....	28
B.2 Abstract test suite summary .....	29
B.3 Test laboratory .....	29
B.4 Client (of the Test Laboratory).....	29
B.5 SUT .....	30
B.6 Protocol information .....	30

B.6.1	Protocol identification .....	30
B.6.2	Configuration to be tested .....	31
B.6.3	Stimuli for the IUT .....	31
B.6.4	Test management timers .....	31
B.6.5	Parameter Values .....	32
Annex C (normative): Abstract Test Suite (ATS) .....		33
C.1	The TTCN Graphical form (TTCN.GR) .....	33
C.2	The TTCN Machine Processable form (TTCN.MP) .....	33
Annex D (informative): Bibliography .....		34
History .....		35

## Foreword

This final draft European Telecommunication Standard (ETS) has been produced by the Signalling Protocols and Switching (SPS) Technical Committee of the European Telecommunications Standards Institute (ETSI), and is now submitted for the Voting phase of the ETSI standards approval procedure.

This ETS is part 4 of a multi-part standard covering the Digital Subscriber Signalling System No. two (DSS2) protocol specification for the Broadband Integrated Services Digital Network (B-ISDN); User-network layer 3 specification for point-to-multipoint call/bearer control; as described below:

- Part 1: "Protocol specification [ITU-T Recommendation Q.2971 (1995), modified]";
- 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".**
- Part 5: "Test Suite Structure and Test Purposes (TSS&TP) specification for the network";
- Part 6: "Abstract Test Suite (ATS) and partial Protocol Implementation Extra Information for Testing (PIXIT) proforma specification for the network".

<b>Proposed transposition dates</b>	
Date of latest announcement of this ETS (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	6 months after doa

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## 1 Scope

This fourth part of ETS 300 771 specifies the user Abstract Test Suite (ATS) for the  $T_B$  reference point or coincident  $S_B$  and  $T_B$  reference point (as defined in ITU-T Recommendation I.413 [10]) of implementations conforming to the standards for the signalling user-network layer 3 specification for point-to-multipoint call/connection control of the Digital Subscriber Signalling System No. two (DSS2) protocol for the pan-European Broadband Integrated Services Digital Network (B-ISDN), ETS 300 771-1 [1].

A further part of the present document specifies the Test Suite Structure and Test Purposes (TSS&TP) related to this ATS and partial PIXIT proforma. Other parts specify the TSS&TP and the ATS and partial PIXIT proforma for the Network side of the  $T_B$  reference point or coincident  $S_B$  and  $T_B$  reference point of implementations conforming to ETS 300 771-1 [1].

## 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 300 771-1 (1995): "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; B-ISDN user-network interface layer 3 specification for point-to-multipoint call/bearer control; Part 1: Protocol specification [ITU-T Recommendation Q.2971 (1995), modified]".
- [2] Void.
- [3] ETS 300 771-3 (1997): "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; B-ISDN user-network interface layer 3 specification for point-to-multipoint call/bearer control; Part 3: Test Suite Structure and Test Purposes (TSS&TP) specification for the user".
- [4] ETS 300 443-1 (1996): "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]".
- [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 9646-3 (1992): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)".
- [8] ISO/IEC 9646-4 (1996): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization".
- [9] ISO/IEC 9646-5 (1996): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process".

- [10] ITU-T Recommendation I.413 (1993): "B-ISDN user-network interface".
- [11] ETS 300 443-2 (1996): "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 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

### 3 Definitions and abbreviations

#### 3.1 Definitions

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

**Implementation Under Test (IUT):** See ISO/IEC 9646-1 [5].

**System Under Test (SUT):** See ISO/IEC 9646-1 [5].

**Abstract Test Suite (ATS):** See ISO/IEC 9646-1 [5].

**Protocol Implementation Conformance Statement (PICS):** See ISO/IEC 9646-17 [5].

**PICS proforma:** See ISO/IEC 9646-1 [5].

**Protocol Implementation eXtra Information for Testing (PIXIT):** See ISO/IEC 9646-1 [5].

**PIXIT proforma:** See ISO/IEC 9646-1 [5].

**Lower Tester (LT):** See ISO/IEC 9646-1 [5].

**Upper Tester (UT):** See ISO/IEC 9646-1 [5].

**Point of Control and Observation (PCO):** See ISO/IEC 9646-1 [5].

#### 3.2 Abbreviations

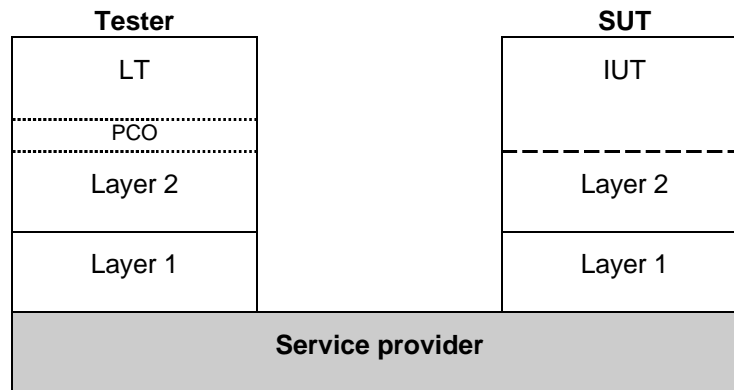
For the purposes of this ETS, the following abbreviations apply:

ATM	Abstract Test Method
ATS	Abstract Test Suite
ExTS	Executable Test Suite
IUT	Implementation Under Test
LT	Lower Tester
MOT	Means Of Testing
PCO	Point of Control and Observation
PCTR	Protocol Conformance Test Report
PDU	Protocol Data Unit
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
SUT	System Under Test
TCP	Test Co-ordination Procedures
TP	Test Purpose
TTCN	Tree and Tabular Combined Notation
UT	Upper Tester

### 4 Abstract Test Method (ATM)

The remote test method is applied for the user ATS. The Point of Control and Observation (PCO) resides at the service access point between layers 2 and 3. This PCO is named "L0" (for Lower). The L0 PCO is used to control and observe the behaviour of the Implementation Under Test (IUT) and test case verdicts are assigned depending on the behaviour observed at this PCO.





**Figure 1: Remote test method**

ISO/IEC 9646-2 [6] allows the informal expression of Test Co-ordination Procedures (TCP) between the SUT upper layer(s) and the LT. In the ATS contained in annex C, TCP is achieved by use of a second "informal" PCO, called "O" (for Operator). This PCO is used to specify control but not observation above the IUT and consequently, events at this PCO are never used to generate test case verdicts. The use of this O PCO is regarded as a preferred alternative to the use of the implicit send event, in that it allows the ATS to specify in a clear and meaningful way what actions are required to be performed on the IUT.

## 5 Untestable test purposes

There are no untestable test purposes associated with this ATS.

## 6 ATS to TP map

The identifiers used for the Test Purposes (TPs) are reused as test case names. Thus there is a straightforward one-to-one mapping.

## 7 PCTR conformance

A test laboratory, when requested by a client to produce a PCTR, is required, as specified in ISO/IEC 9646-5 [9], to produce a PCTR conformant with the PCTR template given in annex B of ISO/IEC 9646-5 [9].

Furthermore, a test laboratory, offering testing for the ATS specification contained in annex C, when requested by a client to produce a PCTR, is required to produce a PCTR conformant with the PCTR proforma contained in annex A of this ETS.

A PCTR which conforms to this PCTR proforma specification shall preserve the content and ordering of the clauses contained in annex A. Clause A.6 of the PCTR may contain additional columns. If included, these shall be placed to the right of the existing columns. Text in italics may be retained by the test laboratory.

## 8 PIXIT conformance

A test realizer, producing an executable test suite for the Abstract Test Suite (ATS) specification contained in annex C, is required, as specified in ISO/IEC 9646-4 [8], 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 B. 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 IUT.

A test laboratory, offering testing for the ATS specification contained in annex C, is required, as specified in ISO/IEC 9646-5 [9], to further 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 B. The PIXIT proforma may contain additional questions that need to be answered in order to prepare the test laboratory for a particular IUT.

## **9      ATS Conformance**

The test realizer, producing a MOT and Executable Test Suite (ExTS) for this Abstract Test Suite (ATS) specification, shall comply with the requirements of ISO/IEC 9646-4 [8]. In particular, these concern the realization of an ExTS based on each ATS. The test realizer shall provide a statement of conformance of the MOT to this ATS specification.

An ExTS which conforms to this ATS specification shall contain test groups and test cases which are technically equivalent to those contained in the ATS in annex C. All sequences of test events comprising an abstract test case shall be capable of being realized in the executable test case. Any further checking which the test system might be capable of performing is outside the scope of this ATS specification and shall not contribute to the verdict assignment for each test case.

Test laboratories running conformance test services using this ATS shall comply with ISO/IEC 9646-5 [9].

A test laboratory which claims to conform to this ATS specification shall use an MOT which conforms to this ATS.

## Annex A (normative): Protocol Conformance Test Report (PCTR) 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 PCTR proforma in this annex so that it can be used for its intended purposes and may further publish the completed PCTR.

### A.1 Identification summary

#### A.1.1 Protocol conformance test report

PCTR number:	
PCTR Date:	
Corresponding SCTR number:	
Corresponding SCTR date:	
Test Laboratory identification:	
Test Laboratory Manager:	
Signature:	

#### A.1.2 IUT identification

Name:	
Version:	
Protocol specification:	ETS 300 771-1
PICS:	
Previous PCTRs (if any)	

#### A.1.3 Testing environment

PIXIT Reference number:	
ATS Specification:	ETS 300 771-4
Abstract Test Method:	Remote test method (see ISO/IEC 9646-2)
Means of Testing identification:	
Dates of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	

**A.1.4 Limits and reservations**

*Additional information relevant to the technical contents or further use of the test report, or to the rights and obligations of the test laboratory and the client, may be given here. Such information may include restriction on the publication of the report.*

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**A.1.5 Comments**

*Additional comments may be given by either the client or the test laboratory on any of the contents of the PCTR, for example, to note disagreement between the two parties.*

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**A.2 IUT Conformance status**

This IUT has or has not been shown by conformance assessment to be non-conforming to the specified protocol specification.

*Strike the appropriate words in this sentence. If the PICS for this IUT is consistent with the static conformance requirements (as specified in clause A.3 of this report) and there are no "FAIL" verdicts to be recorded (in clause A.6) strike the words "has or", otherwise strike the words "or has not".*

**A.3 Static conformance summary**

The PICS for this IUT is or is not consistent with the static conformance requirements in the specified protocol.

*Strike the appropriate words in this sentence.*

#### **A.4 Dynamic conformance summary**

The test campaign did or did not reveal errors in the IUT.

*Strike the appropriate words in this sentence. If there are no "FAIL" verdicts to be recorded (in clause A.6 of this report) strike the words "did or", otherwise strike the words "or did not".*

Summary of the results of groups of tests:

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#### **A.5 Static conformance review report**

*If clause A.3 indicates non-conformance, this clause itemizes the mismatches between the PICS and the static conformance requirements of the specified protocol specification.*

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**A.6 Test campaign report**

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_01_01				
L3MU_01_02				
L3MU_01_03				
L3MU_01_04				
L3MU_01_05				
L3MU_01_06				
L3MU_01_07				
L3MU_01_08				
L3MU_01_09				
L3MU_01_10				
L3MU_01_11				
L3MU_01_12				
L3MU_02_01				
L3MU_02_02				
L3MU_03_01				
L3MU_03_02				
L3MU_04_01				
L3MU_04_02				
L3MU_04_03				
L3MU_04_04				
L3MU_05_01				
L3MU_05_02				
L3MU_05_03				
L3MU_05_04				
L3MU_05_05				
L3MU_05_06				
L3MU_05_07				
L3MU_05_08				
L3MU_06_01				
L3MU_06_02				
L3MU_06_03				
L3MU_06_04				
L3MU_06_05				
L3MU_06_06				
L3MU_06_07				
L3MU_06_08				
L3MU_06_09				
L3MU_06_10				
L3MU_07_01				
L3MU_07_02				
L3MU_08_01				
L3MU_08_02				
L3MU_08_03				
L3MU_08_04				
L3MU_08_05				
L3MU_08_06				
L3MU_08_07				
L3MU_08_08				
L3MU_08_09				
L3MU_08_10				
L3MU_08_11				
L3MU_08_12				
L3MU_09_01				
L3MU_09_02				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_09_03				
L3MU_09_04				
L3MU_09_05				
L3MU_09_06				
L3MU_09_07				
L3MU_09_08				
L3MU_10_01				
L3MU_10_02				
L3MU_10_03				
L3MU_10_04				
L3MU_10_05				
L3MU_10_06				
L3MU_10_07				
L3MU_10_08				
L3MU_10_09				
L3MU_10_10				
L3MU_10_11				
L3MU_10_12				
L3MU_10_13				
L3MU_11_01				
L3MU_11_02				
L3MU_11_03				
L3MU_12_01				
L3MU_12_02				
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L3MU_14_02				
L3MU_14_03				
L3MU_14_04				
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L3MU_14_08				
L3MU_14_09				
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L3MU_14_11				
L3MU_14_12				
L3MU_14_13				
L3MU_14_14				
L3MU_14_15				
L3MU_14_16				
L3MU_14_17				
L3MU_14_18				
L3MU_14_19				
L3MU_14_20				
L3MU_14_21				
L3MU_14_22				
L3MU_14_23				
L3MU_14_24				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_14_25				
L3MU_14_26				
L3MU_14_27				
L3MU_14_28				
L3MU_14_29				
L3MU_14_30				
L3MU_14_31				
L3MU_14_32				
L3MU_14_33				
L3MU_14_34				
L3MU_14_35				
L3MU_14_36				
L3MU_14_37				
L3MU_14_38				
L3MU_14_39				
L3MU_14_40				
L3MU_14_41				
L3MU_14_42				
L3MU_14_43				
L3MU_14_44				
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L3MU_14_57				
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L3MU_14_59				
L3MU_15_01				
L3MU_15_02				
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L3MU_15_11				
L3MU_15_12				
L3MU_15_13				
L3MU_15_14				
L3MU_15_15				
L3MU_15_16				
L3MU_15_17				
L3MU_15_18				
L3MU_15_19				
L3MU_15_20				
L3MU_15_21				
L3MU_15_22				



ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_15_23				
L3MU_15_24				
L3MU_15_25				
L3MU_15_26				
L3MU_15_27				
L3MU_15_28				
L3MU_15_29				
L3MU_15_30				
L3MU_15_31				
L3MU_15_32				
L3MU_15_33				
L3MU_15_34				
L3MU_15_35				
L3MU_15_36				
L3MU_15_37				
L3MU_15_38				
L3MU_15_39				
L3MU_15_40				
L3MU_15_41				
L3MU_15_42				
L3MU_15_43				
L3MU_15_44				
L3MU_15_45				
L3MU_15_46				
L3MU_15_47				
L3MU_15_48				
L3MU_15_49				
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L3MU_15_66				
L3MU_15_67				
L3MU_15_68				
L3MU_15_69				
L3MU_15_70				
L3MU_15_71				
L3MU_15_72				
L3MU_15_73				
L3MU_15_74				
L3MU_15_75				
L3MU_15_76				
L3MU_15_77				
L3MU_15_78				
L3MU_15_79				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_16_01				
L3MU_16_02				
L3MU_16_03				
L3MU_16_04				
L3MU_16_05				
L3MU_16_06				
L3MU_16_07				
L3MU_16_08				
L3MU_16_09				
L3MU_16_10				
L3MU_16_11				
L3MU_16_12				
L3MU_16_13				
L3MU_16_14				
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L3MU_16_28				
L3MU_17_01				
L3MU_17_02				
L3MU_17_03				
L3MU_17_04				
L3MU_17_05				
L3MU_17_06				
L3MU_17_07				
L3MU_17_08				
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L3MU_17_26				
L3MU_17_27				
L3MU_17_28				
L3MU_17_29				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_17_30				
L3MU_17_31				
L3MU_17_32				
L3MU_17_33				
L3MU_17_34				
L3MU_17_35				
L3MU_17_36				
L3MU_17_37				
L3MU_17_38				
L3MU_17_39				
L3MU_17_40				
L3MU_17_41				
L3MU_18_00				
L3MU_18_01				
L3MU_18_02				
L3MU_18_03				
L3MU_18_04				
L3MU_18_05				
L3MU_18_06				
L3MU_18_07				
L3MU_18_08				
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L3MU_19_01				
L3MU_19_02				
L3MU_19_03				
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L3MU_19_08				
L3MU_19_09				
L3MU_19_10				
L3MU_19_11				
L3MU_19_12				
L3MU_20_01				
L3MU_20_02				
L3MU_20_03				
L3MU_20_04				
L3MU_20_05				
L3MU_20_06				
L3MU_20_07				
L3MU_20_08				
L3MU_20_09				
L3MU_20_10				
L3MU_20_11				
L3MU_20_12				
L3MU_21_01				
L3MU_21_02				
L3MU_21_03				
L3MU_21_04				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_21_05				
L3MU_21_06				
L3MU_21_07				
L3MU_21_08				
L3MU_21_09				
L3MU_21_10				
L3MU_21_11				
L3MU_21_12				
L3MU_21_13				
L3MU_21_14				
L3MU_21_15				
L3MU_21_16				
L3MU_21_17				
L3MU_21_18				
L3MU_21_19				
L3MU_21_20				
L3MU_21_21				
L3MU_21_22				
L3MU_21_23				
L3MU_21_24				
L3MU_21_25				
L3MU_21_26				
L3MU_21_27				
L3MU_21_28				
L3MU_21_29				
L3MU_21_30				
L3MU_21_31				
L3MU_21_32				
L3MU_21_33				
L3MU_21_34				
L3MU_21_35				
L3MU_21_36				
L3MU_21_37				
L3MU_21_38				
L3MU_21_39				
L3MU_21_40				
L3MU_21_41				
L3MU_21_42				
L3MU_21_43				
L3MU_21_44				
L3MU_21_45				
L3MU_21_46				
L3MU_21_47				
L3MU_21_48				
L3MU_21_49				
L3MU_21_50				
L3MU_21_51				
L3MU_21_52				
L3MU_21_53				
L3MU_22_01				
L3MU_22_02				
L3MU_22_03				
L3MU_22_04				
L3MU_22_05				
L3MU_22_06				
L3MU_22_07				
L3MU_22_08				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Signalling procedures at the coincident $S_B/T_B$ and at the $T_B$ reference points				
L3MU_22_09				
L3MU_22_10				
L3MU_22_11				
L3MU_22_12				
L3MU_22_13				
L3MU_22_14				
L3MU_22_15				
L3MU_22_16				
L3MU_22_17				
L3MU_22_18				
L3MU_23_01				
L3MU_23_02				
L3MU_24_01				
L3MU_24_02				
L3MU_24_03				
L3MU_24_04				
L3MU_25_01				
L3MU_25_02				
L3MU_25_03				
L3MU_25_04				
L3MU_25_05				
L3MU_25_06				
L3MU_25_07				
L3MU_25_08				
L3MU_26_01				
L3MU_26_02				
L3MU_26_03				
L3MU_26_04				
L3MU_26_05				
L3MU_26_06				
L3MU_26_07				
L3MU_26_08				
L3MU_26_09				
L3MU_26_10				
L3MU_26_11				
L3MU_26_12				
L3MU_27_01				
L3MU_27_02				
L3MU_27_03				
L3MU_27_04				
L3MU_27_05				
L3MU_27_06				
L3MU_27_07				
L3MU_27_08				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Procedures at the T <sub>R</sub> reference point for interworking with private B-ISDNs				
L3MU_28_01				
L3MU_28_02				
L3MU_29_01				
L3MU_29_02				
L3MU_29_03				
L3MU_29_04				
L3MU_29_05				
L3MU_29_06				
L3MU_29_07				
L3MU_29_08				
L3MU_30_01				
L3MU_30_02				
L3MU_31_01				
L3MU_31_02				
L3MU_31_03				
L3MU_31_04				
L3MU_31_05				
L3MU_31_06				
L3MU_31_07				
L3MU_31_08				
L3MU_31_09				
L3MU_32_01				
L3MU_32_02				
L3MU_32_03				
L3MU_32_04				
L3MU_32_05				
L3MU_32_06				
L3MU_32_07				
L3MU_32_08				
L3MU_32_09				
L3MU_33_01				
L3MU_33_02				
L3MU_33_03				
L3MU_33_04				
L3MU_33_05				
L3MU_33_06				
L3MU_33_07				
L3MU_33_08				
L3MU_34_01				
L3MU_34_02				
L3MU_34_03				
L3MU_35_01				
L3MU_35_02				
L3MU_35_03				
L3MU_35_04				
L3MU_36_01				
L3MU_36_02				
L3MU_36_03				
L3MU_36_04				
L3MU_36_05				
L3MU_36_06				
L3MU_36_07				
L3MU_36_08				
L3MU_36_09				
L3MU_36_10				
L3MU_36_11				
L3MU_36_12				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Procedures at the T <sub>B</sub> reference point for interworking with private B-ISDNs				
L3MU_36_13				
L3MU_36_14				
L3MU_36_15				
L3MU_36_16				
L3MU_36_17				
L3MU_36_18				
L3MU_36_19				
L3MU_36_20				
L3MU_36_21				
L3MU_36_22				
L3MU_36_23				
L3MU_36_24				
L3MU_36_25				
L3MU_36_26				
L3MU_36_27				
L3MU_36_28				
L3MU_36_29				
L3MU_36_30				
L3MU_36_31				
L3MU_37_01				
L3MU_37_02				
L3MU_37_03				
L3MU_37_04				
L3MU_37_05				
L3MU_37_06				
L3MU_37_07				
L3MU_37_08				
L3MU_37_09				
L3MU_37_10				
L3MU_37_11				
L3MU_37_12				
L3MU_37_13				
L3MU_37_14				
L3MU_37_15				
L3MU_37_16				
L3MU_37_17				
L3MU_37_18				
L3MU_37_19				
L3MU_37_20				
L3MU_37_21				
L3MU_37_22				
L3MU_37_23				
L3MU_37_24				
L3MU_37_25				
L3MU_37_26				
L3MU_37_27				
L3MU_37_28				
L3MU_37_29				
L3MU_37_30				
L3MU_37_31				
L3MU_37_32				
L3MU_37_33				
L3MU_37_34				
L3MU_37_35				
L3MU_37_36				
L3MU_37_37				
L3MU_37_38				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Procedures at the T <sub>R</sub> reference point for interworking with private B-ISDNs				
L3MU_37_39				
L3MU_37_40				
L3MU_37_41				
L3MU_38_01				
L3MU_38_02				
L3MU_38_03				
L3MU_38_04				
L3MU_38_05				
L3MU_38_06				
L3MU_38_07				
L3MU_38_08				
L3MU_38_09				
L3MU_38_10				
L3MU_38_11				
L3MU_38_12				
L3MU_38_13				
L3MU_38_14				
L3MU_38_15				
L3MU_38_16				
L3MU_38_17				
L3MU_39_01				
L3MU_39_02				
L3MU_39_03				
L3MU_39_04				
L3MU_39_05				
L3MU_39_06				
L3MU_39_07				
L3MU_39_08				
L3MU_39_09				
L3MU_39_10				
L3MU_39_11				
L3MU_39_12				
L3MU_39_13				
L3MU_39_14				
L3MU_39_15				
L3MU_39_16				
L3MU_39_17				
L3MU_39_18				
L3MU_39_19				
L3MU_39_20				
L3MU_39_21				
L3MU_40_01				
L3MU_40_02				
L3MU_40_03				
L3MU_40_04				
L3MU_40_05				
L3MU_40_06				
L3MU_40_07				
L3MU_40_08				
L3MU_40_09				
L3MU_40_10				
L3MU_40_11				
L3MU_40_12				
L3MU_40_13				
L3MU_40_14				
L3MU_40_15				
L3MU_40_16				



ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Procedures at the T <sub>B</sub> reference point for interworking with private B-ISDNs				
L3MU_41_01				
L3MU_41_02				
L3MU_41_03				
L3MU_41_04				
L3MU_41_05				
L3MU_41_06				
L3MU_41_07				
L3MU_41_08				
L3MU_41_09				
L3MU_41_10				
L3MU_41_11				
L3MU_41_12				
L3MU_42_01				
L3MU_42_02				
L3MU_42_03				
L3MU_42_04				
L3MU_42_05				
L3MU_42_06				
L3MU_42_07				
L3MU_42_08				
L3MU_42_09				
L3MU_42_10				
L3MU_42_11				
L3MU_42_12				
L3MU_43_01				
L3MU_43_02				
L3MU_43_03				
L3MU_43_04				
L3MU_43_05				
L3MU_43_06				
L3MU_43_07				
L3MU_43_08				
L3MU_43_09				
L3MU_43_10				
L3MU_43_11				
L3MU_43_12				
L3MU_43_13				
L3MU_43_14				
L3MU_43_15				
L3MU_43_16				
L3MU_43_17				
L3MU_43_18				
L3MU_43_19				
L3MU_43_20				
L3MU_43_21				
L3MU_43_22				
L3MU_43_23				
L3MU_43_24				
L3MU_43_25				
L3MU_43_26				
L3MU_43_27				
L3MU_43_28				
L3MU_43_29				
L3MU_43_30				
L3MU_43_31				
L3MU_43_32				
L3MU_43_33				

ATS Reference	Selected ? (Y/N)	Run ? (Y/N)	Verdict	Observations
Procedures at the T <sub>R</sub> reference point for interworking with private B-ISDNs				
L3MU_43_34				
L3MU_43_35				
L3MU_43_36				
L3MU_43_37				
L3MU_44_01				
L3MU_44_02				
L3MU_44_03				
L3MU_44_04				
L3MU_44_05				
L3MU_44_06				
L3MU_44_07				
L3MU_44_08				
L3MU_44_09				
L3MU_44_10				
L3MU_44_11				
L3MU_44_12				
L3MU_44_13				
L3MU_44_14				
L3MU_45_01				
L3MU_45_02				
L3MU_46_01				
L3MU_46_02				
L3MU_46_03				
L3MU_47_01				
L3MU_47_02				
L3MU_47_03				
L3MU_47_04				
L3MU_47_05				
L3MU_48_01				
L3MU_48_02				
L3MU_48_03				
L3MU_48_04				
L3MU_48_05				
L3MU_48_06				
L3MU_48_07				
L3MU_48_08				
L3MU_48_09				
L3MU_49_01				
L3MU_49_02				
L3MU_49_03				
L3MU_49_04				
L3MU_49_05				
L3MU_49_06				
L3MU_49_07				
L3MU_49_08				

## A.7 Observations

*Additional information relevant to the technical content of the PCTR are given here.*

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**Annex B (normative):      Partial 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 purpose and may further publish the completed PIXIT.

**B.1 Identification summary**

PIXIT Number:

---

Test Laboratory Name:

---

Date of Issue:

---

Issued to:

---

## **B.2 Abstract test suite summary**

Protocol Specification: ETS 300 771-1

ATS Specification: ETS 300 771-4

Abstract Test Method: Remote test method (see ISO/IEC 9646-2)

## **B.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:

---

## **B.4 Client (of the Test Laboratory)**

Client Identification:

---

Client Test manager:

---

Client contact:

---

Test Facilities required:

---

## B.5 SUT

Name:

---

Version:

---

SCS Reference:

---

Machine configuration:

---

Operating System Identification:

---

IUT Identification:

---

PICS (all layers):

---

---

Limitations of the SUT:

---

Environmental Conditions:

---

## B.6 Protocol information

### B.6.1 Protocol identification

Specification reference: ETS 300 771-1

Protocol Version:

PICS Reference:

---

NOTE: The PICS Reference should reference a completed PICS which is conformant with the PICS proforma contained in ETS 300 443-2 and ETS 300 771-2.

### B.6.2 Configuration to be tested

Table B.1: Configuration to be tested

Item	Configuration	Supported
	Is the access to be tested ...	Y/N
1.1	of the T <sub>B</sub> reference point type?	
1.2	releasing layer 2 after entering the Null link state U0?	
1.3	stable in Call Received link state U7 and the Party Alerting Delivered party state P3 (i.e. CONNECT and ADD PARTY ACKNOWLEDGE messages are not sent automatically)?	

### B.6.3 Stimuli for the IUT

Table B.2: Actions required to stimulate the IUT

Item	Action	Supported	Stimulus (action taken)
	What actions, if possible, have to be taken to cause the IUT to ...	Y/N	
2.1	drop all parties, the IUT being the root user?		
2.2	drop all parties, the IUT being a private B-ISDN? (only, if PIXIT item 1.1 is supported)		
2.3	send a NOTIFY message related to a specific ATM endpoint within the private B-ISDN towards the tester? (only, if PIXIT item 1.1 is supported)		

### B.6.4 Test management timers

Table B.3: Timer values

Item	Timer	Value
	Give a value for the timer that is used ...	(in seconds)
3.1	as network side value for T310 (default value 10 seconds).	
3.2	as network side value for T399 (no default value).	
3.3	to wait for the IUT to respond to a stimulus sent by the tester (TAC).	
3.4	to control that the IUT does not respond to a stimulus sent by the tester (TNOAC).	
3.5	to wait for the test operator to perform an implicit send action (TWAIT).	
NOTE:	The IUT provider may fill in a value range rather than a fixed value for the test management timers. During test execution the test laboratory will choose specific values for the timers dependant on the means of testing used. These specific values may even be beyond the range given by the IUT provider, if this is necessary for achieving satisfactory test results.	

## B.6.5 Parameter Values

Table B.4: Parameter values

Item	Parameter values Give ...	Value
4.1	a coding of a Bearer capability information element, which the IUT is compatible with, for the purpose of accepting incoming calls.	
4.2	a coding of the Type of number and the Addressing/Numbering plan identification fields of the Called party number information elements to be sent to the IUT.	
4.3	a coding of the number digits for the first party of a point-to-multipoint call to be sent to the IUT.	
4.4	a coding of the number digits for the second party of a point-to-multipoint call to be sent to the IUT. (only, if PIXIT item 1.1 is supported)	
4.5	a coding of the forward peak cell rate (CLP = 0) to be sent to the IUT.	
4.6	a coding of the forward peak cell rate (CLP = 0 + 1) to be sent to the IUT.	
4.7	a coding for a cumulative transit delay value that is unacceptable for the IUT. This value will be sent in the End-to-end transit delay information element of an ADD PARTY message to the IUT for the purpose of rejecting the add-on of the particular party. (note)	
4.8	a coding of a Notification indicator information element to be sent to the IUT.	
4.9	an invalid coding of a Notification indicator information element to be sent to the IUT for the purpose of testing the IUT's reaction on the receipt of a non-mandatory information element with content error. (note)	
4.10	a value for the preferred VPCI.	
4.11	a value for the preferred VCI.	
4.12	a value for an unrecognized message type.	
4.13	a value for an unrecognized information element identifier.	
NOTE: This fields need only be completed, if the relevant coding exists.		



## **Annex C (normative): Abstract Test Suite (ATS)**

This ATS has been produced using the Tree and Tabular Combined Notation (TTCN) according to ISO/IEC 9646-3 [7].

The ATS was developed on a separate TTCN software tool and therefore the TTCN tables are not completely referenced in the contents table. The ATS itself contains a test suite overview part which provides additional information and references.

### **C.1 The TTCN Graphical form (TTCN.GR)**

The TTCN.GR representation of this ATS is contained in an Adobe Portable Document Format™ file 771\_4\_1.PDF contained in archive 7714\_ev.LZH which accompanies the present document.

### **C.2 The TTCN Machine Processable form (TTCN.MP)**

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file 771\_4\_1.MP contained in archive 7714\_ev.LZH which accompanies the present document.

NOTE: According to ISO/IEC 9646-3 [7], in case of a conflict in interpretation of the operational semantics of TTCN.GR and TTCN.MP, the operational semantics of the TTCN.GR representation takes precedence.

**Annex D (informative): Bibliography**

- ETS 300 771-2: "Broadband Integrated Services Digital Network (B-ISDN); Digital Subscriber Signalling System No. two (DSS2) protocol; B-ISDN user-network interface layer 3 specification for point-to-multipoint call/bearer control; Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification".

## History

Document history	
February 1998	Public Enquiry PE 9824: 1998-02-13 to 1998-06-12
July 1998	Vote V 9837: 1998-07-14 to 1998-09-11