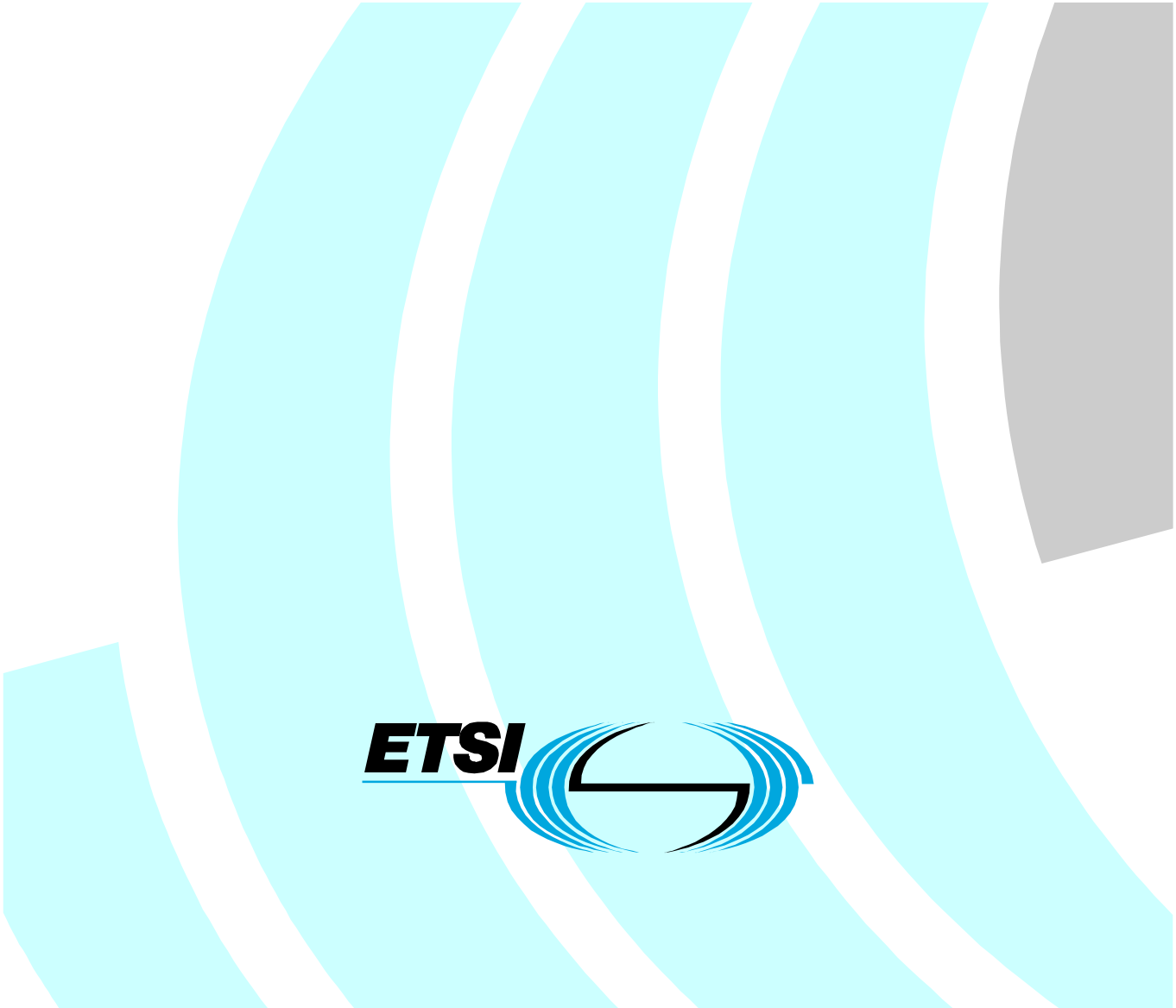
ETSI TS 101 823-3-2 V1.1.1 (2001-12)

Technical Specification

Broadband Radio Access Networks (BRAN);
HIPERLAN Type 2;
Conformance testing for the
Data Link Control (DLC) layer;
Part 3: Profile for Business Environment;
Sub-part 2: Test Suite Structure and
Test Purposes (TSS&TP) specification



Reference
DTS/BRAN-002T004-3-2

Keywords
access, HIPERLAN, TSS&TP, testing

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

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

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://webapp.etsi.org/IPR/home.asp).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This Technical Specification (TS) has been produced by ETSI Project Broadband Radio Access Networks (BRAN).

The present document is part 3 sub-part 2 of a multi-part deliverable covering Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer, as identified below:

Part 1: "Basic data transport function";

Part 2: "Radio Link Control (RLC) sublayer";

Part 3: "Profile for Business Environment";

Sub-part 1: "Profile Requirement List (PRL) proforma";

Sub-part 2: "Test Suite Structure and Test Purposes (TSS&TP) specification";

Sub-part 3: "Profile Test Specification (PTS) - Profile Specific Test Specification (PSTS)".

Part 4: "Extension for Home Environment";

Part 5: "Profile for Home Environment".

1 Scope

The present document specifies the Profile Test Specification (PTS) summary referencing all the ENs or TSs necessary for the conformance testing of the Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) layer; Part 3: Profile for business environments [4].

This PTS summary together with the ENs and TSs it references constitute the BE PTS.

The present document has the following structure:

- clause 4 contains general information relative to the profile including references to the related ENs or TSs;
- clause 5 contains a summary and references to the ENs or TSs relevant for each of BRAN protocol layers to be tested.

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

[1] ETSI TS 101 475 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Physical (PHY) layer".

[2] ETSI TS 101 761-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 1: Basic Data Transport Functions".

[3] ETSI TS 101 761-2 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) layer; Part 2: Radio Link Control (RLC) Sublayer".

[4] ETSI TS 101 761-3 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 3: Profile for Business Environment".

[5] ETSI TS 101 493-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Packet based Convergence Layer; Part 1: Common part".

[6] ETSI TS 101 493-2 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Packet based Convergence Layer; Part 2: Ethernet Service Specific Convergence Sublayer (SSCS)".

[7] ETSI TS 101 762 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Network Management".

[8] ETSI TS 101 811-1-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Packet based Convergence Layer; Part 1: Common Part; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[9] ETSI TS 101 811-1-2 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Packet based Convergence Layer; Part 1: Common Part; Sub-part 2: Test Suite Structure and Test Purposes (TSS&TP) specification".

[10] ETSI TS 101 811-1-3 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Packet based Convergence Layer; Part 1: Common Part; Sub-part 3: Abstract Test Suite (ATS) specification".

[11] ETSI TS 101 811-2-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Packet based Convergence Layer; Part 2: Ethernet Service Specific Convergence Sublayer (SSCS); Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma ".

[12] ETSI TS 101 811-2-2 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Packet based Convergence Layer; Part 2: Ethernet Service Specific Convergence Sublayer (SSCS); Sub-part 2: Test Suite Structure and Test Purposes (TSS&TP) specification".

[13] ETSI TS 101 811-2-3 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Packet based Convergence Layer; Part 2: Ethernet Service Specific Convergence Sublayer (SSCS); Sub-part 3: Abstract Test Suite (ATS) specification".

[14] ETSI TS 101 823-1-1 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Data Link Control (DLC) Protocol; Part 1: Basic Data Transport Function; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[15] ETSI TS 101 823-1-2 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Data Link Control (DLC) Protocol; Part 1: Basic Data Transport Function; Sub-part 2: Test Suite Structure and Test Purposes (TSS&TP) specification".

[16] ETSI TS 101 823-1-3 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance Testing for the Data Link Control (DLC) Protocol; Part 1: Basic Data Transport Function; Sub-part 3: Abstract Test Suite (ATS) specification ".

[17] ETSI TS 101 823-2-1 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 2: Radio Link Control (RLC) sublayer; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[18] ETSI TS 101 823-2-2 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 2: Radio Link Control (RLC) sublayer; Sub-part 2: Test Suite Structure and Test Purposes (TSS&TP) specification".

[19] ETSI TS 101 823-2-3 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 2: Radio Link Control (RLC) Protocol; Sub-part 3: Abstract Test Suite (ATS) specification".

[20] ETSI TS 101 823-3-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 3: Profile for Business Environment; Sub-part 1: Protocol Implementation Conformance Statement (PICS) proforma".

[21] ETSI TS 101 823-3-3 (V1.2.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) layer; Part 3: Profile for Business Environment; Sub-part 3: Abstract Test Suite (ATS) specification".

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

[23] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts". (See also ITU-T Recommendation X.290).

[24] ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification". (See also ITU-T Recommendation X.291).

[25] ISO/IEC 9646-3: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The tree and tabular combined notation". (See also ITU-T Recommendation X.292).

[26] ISO/IEC 9646-4: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization".

[27] ISO/IEC 9646-5: "Information technology; Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the Conformance Assessment process".

[28] ISO/IEC 9646-6: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[29] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statement".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-7 [29], in TS 101 761-2 [3] and in TS 101 761-3 [4] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ISO/IEC 9646-1 [23], ISO/IEC 9646-6 [28], ISO/IEC 9646-7 [29], TS 101 761-2 [3], TS 101 761-3 [4] and the following apply:

ACF	Association Control Function
ACH	Access feedback CHannel
AP	Access Point
APC	Access Point Controller
APT	Access Point Transceiver
ARQ	Automatic Repeat Request
ASP	Abstract Service Primitive
BCH	Broadcast CHannel
BI	Invalid Behaviour
BO	Inopportune Behaviour
BV	Valid Behaviour
CA	Capability tests
CC	Central Controller
CL	Convergence Layer
DCCH	Dedicated Control CHannel
DES	Data Encryption Standard
DFS	Dynamic Frequency Selection
DLC	Data Link Control
DM	Direct Mode
DUC	DLC User Connection
EC	Error Control
IUT	Implementation Under Test
LCCH	Link Control CHannel
LCH	Long CHannel
MAC	Medium Access Control
MAC-ID	MAC IDentifier
MT	Mobile Terminal
NET-ID	NETwork-IDentifier
PDU	Protocol Data Unit
PHY	PHYsical layer
PICS	Protocol Implementation Conformance Statement
RLC	Radio Link Control
RRC	Radio Resource Control
RSS	Received Signal Strength
SAP	Service Access Point
SBCH	Slow Broadcast CHannel

SCH Short CHannel
SSK Session Secret Key
TP Test Purposes
TSS Test Suite Structure

4 Profile identification

Table 1

No.	Profile identification	
1	Profile identifier	BRAN H/2 DLC layer - BE (Business Extension)
2	Profile specification	TS 101 761-3 [4]
3	Profile ICS proforma	TS 101-823-3-1 [20]
4	PSTS	TS 101-823-3-3 [21]
5	Profile IXIT proforma	TS 101-823-3-3 [21]
6	SCS proforma	TS 101-823-3-3 [21]
Comments:		

5 Elements of the PTS

5.1 Conformance testing for Physical Layer

Table 2

No.	Protocol	
1	Protocol identification	TS 101 475 [1]
2	PICS proforma	No
3	TSS and TP	No
4	ATS	No
5	Applicability of ATS	No
6	ATM	No
7	Partial PIXIT	No

Table 3

No.	Profile	
1	Profile ICS proforma	No
2	Additional TSS and TP	No
3	ATM	No
4	Additional test cases	No
5	Partial Profile IXIT proforma	No
6	Modified selection expressions	No

5.2 Conformance testing for DLC layer protocol

5.2.1 Basic Data Transport Function

Table 4

No.	Protocol	
1	Protocol identification	TS 101 761-1 [2]
2	PICS proforma	TS 101 823-1-1 [14]
3	TSS and TP	TS 101 823-1-2 [15]
4	ATS	TS 101 823-1-3 [16], annex A.
5	Applicability of ATS	Yes
6	ATM	TS 101 823-1-3 [16], clause 4.
7	Partial PIXIT	TS 101 823-1-3 [16], annex B.

Table 5

No	Profile	
1	Profile ICS proforma	No
2	Additional TSS and TP	No
3	ATM	No changes.
4	Additional test cases	No
5	Partial Profile IXIT proforma	No
6	Modified selection expressions	No changes.

5.2.2 Radio Link Control (RLC) Sub-layer

Table 6

No.	Protocol	
1	Protocol identification	TS 101 761-2 [3]
2	PICS proforma	TS 101 823-2-1 [17]
3	TSS and TP	TS 101 823-2-2 [18]
4	ATS	TS 101 823-2-3 [19], annex A.
5	Applicability of ATS	Yes.
6	ATM	TS 101 823-2-3 [19], clause 4.
7	Partial PIXIT	TS 101 823-2-3 [19], annex B.

Table 7

No.	Profile	
1	Profile ICS proforma	No
2	Additional TSS and TP	No
3	ATM	No changes.
4	Additional test cases	No
5	Partial Profile IXIT proforma	No
6	Modified selection expressions	No changes.

5.3 Conformance testing for Packet based Convergence Layer

5.3.1 Common part functions

Table 8

No.	Protocol	
1	Protocol identification	TS 101 493-1 [5]
2	PICS proforma	TS 101 811-1-1 [8]
3	TSS and TP	TS 101 811-1-2 [9]
4	ATS	TS 101 811-1-3 [10], annex A.
5	Applicability of ATS	Yes.
6	ATM	TS 101 811-1-3 [10], clause 4.
7	Partial PIXIT	TS 101 811-1-3 [10], annex B.

Table 9

No.	Profile	
1	Profile ICS proforma	No
2	Additional TSS and TP	No
3	ATM	No changes.
4	Additional test cases	No
5	Partial Profile IXIT proforma	No
6	Modified selection expressions	No changes.

5.3.2 Ethernet Service Specific Convergence Sublayer

Table 10

No.	Protocol	
1	Protocol identification	TS 101 493-2 [6]
2	PICS proforma	TS 101 811-2-1 [11]
3	TSS and TP	TS 101 811-2-2 [12]
4	ATS	TS 101 811-2-3 [13], annex A.
5	Applicability of ATS	Yes
6	ATM	TS 101 811-2-3 [13], clause 4.
7	Partial PIXIT	TS 101 811-2-3 [13], annex B.

Table 11

No.	Profile	
1	Profile ICS proforma	No
2	Additional TSS and TP	No
3	ATM	No changes.
4	Additional test cases	No
5	Partial Profile IXIT proforma	No
6	Modified selection expressions	No changes.

5.4 Conformance testing for Network Management

Table 12

No.	Protocol	
1	Protocol identification	TS 101 762 [7]
2	PICS proforma	No
3	TSS and TP	No
4	ATS	No
5	Applicability of ATS	No
6	ATM	No
7	Partial PIXIT	No

Table 13

No.	Profile	
1	Profile ICS proforma	No
2	Additional TSS and TP	No
3	ATM	No
4	Additional test cases	No
5	Partial Profile IXIT proforma	No
6	Modified selection expressions	No

6 Conformance

The test realizer of a Means Of Testing (MOT) for this PTS summary shall comply with the requirements of ISO/IEC 9646-4 [26].

In particular, the realization of each referenced ATS shall conform to the ATS specification consistent with the modifications made by the PSTS referenced by this PTS summary. The realization of the ATS within the PSTS shall conform to the PSTS.

The laboratories running conformance test services according to this PTS summary shall comply with ISO/IEC 9646-5 [27].

History

Document history		
V1.1.1	December 2001	Publication