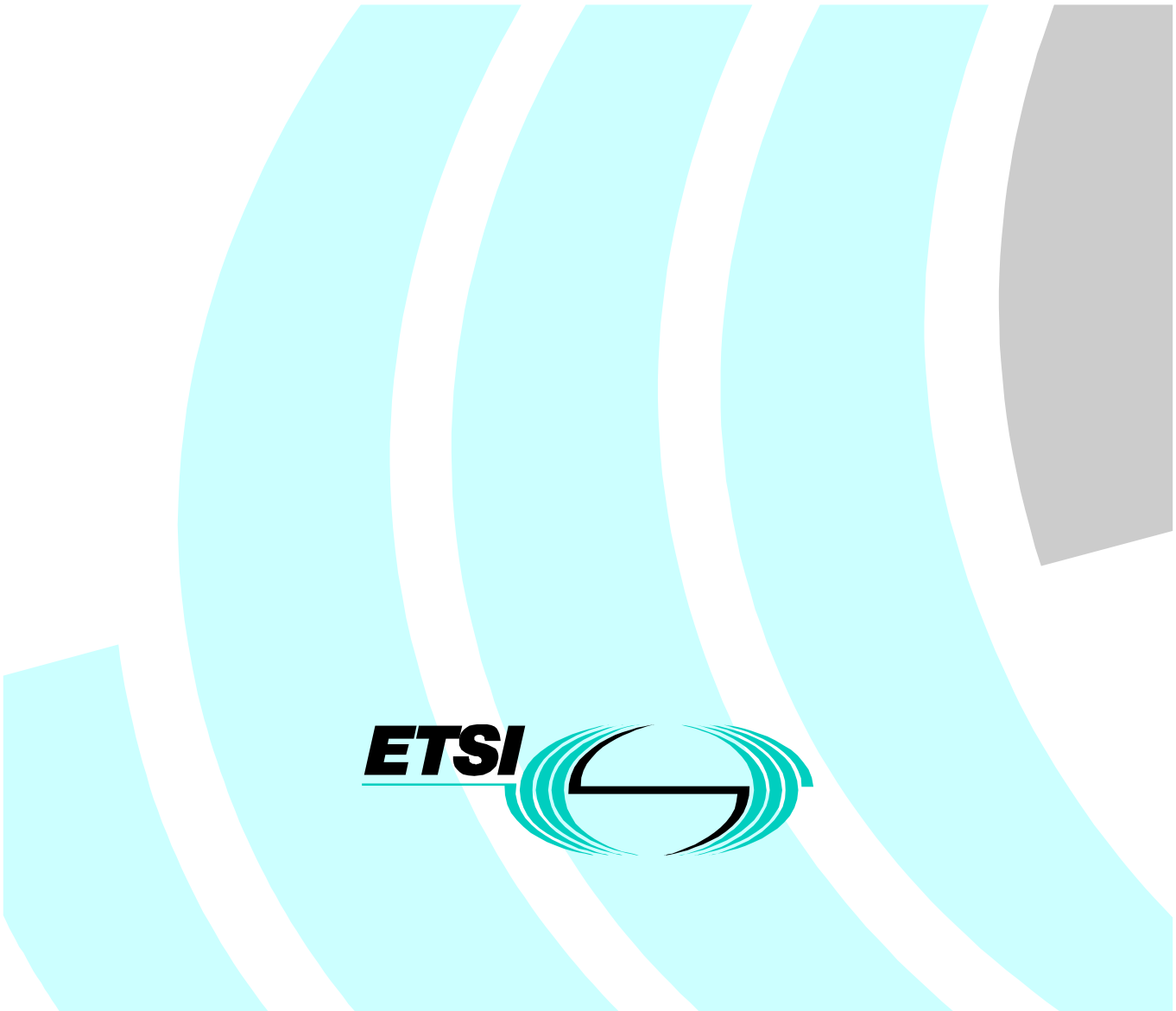
ETSI TS 101 823-1-3 V1.1.1 (2000-09)

Technical Specification

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



Reference
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Keywords
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Contents

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Foreword

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

The present document is sub-part 3 of a multi-part deliverable covering Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the Data Link Control (DLC) protocol; Part 1: Basic data transport function, as identified below:

Sub-part 1: "Protocol Implementation Conformance Statement (PICS) proforma";

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

Sub-part 3: "Abstract Test Suite (ATS) specification".

1 Scope

The present document contains the Abstract Test Suite (ATS) to test the BRAN HIPERLAN Type 2; Data Link Control (DLC) protocol; Part 1: Basic data transport functions [1].

The objective of the present document is to provide a basis for conformance tests for HIPERLAN Type 2 equipment giving a high probability of air interface inter-operability between different manufacturers' HIPERLAN Type 2 equipment.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [3] and ISO/IEC 9646-2 [4]) as well as the ETSI rules for conformance testing (ETS 300 406 [2]) are used as a basis for the test methodology.

Annex A provides the Tree and Tabular Combined Notation (TTCN) part of the ATS.

Annex B provides the Partial Protocol Implementation Extra Information for Testing (PIXIT) Proforma of the MT side ATS.

Annex C provides the Partial Protocol Implementation Extra Information for Testing (PIXIT) Proforma of the AP side ATS.

Annex D provides the Protocol Conformance Test Report (PCTR) Proforma of the MT side ATS.

Annex E provides the Protocol Conformance Test Report (PCTR) Proforma of the AP side ATS.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.
- A non-specific reference to an ETS shall also be taken to refer to later versions published as an EN with the same number.

[1] ETSI 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".

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

[3] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts". (See also CCITT Recommendation X.290 (1991)).

[4] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification". (See also CCITT Recommendation X.291 (1991)).

[5] ISO/IEC 9646-3 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)". (See also CCITT Recommendation X.292 (1992)).

[6] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[7] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

[8] ETSI TS 101 823-1-2 (V1.1.1): "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".

3 Definitions and abbreviations

3.1 Definitions

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

a) The terms defined in ISO/IEC 9646-7 [7]; and

b) the definitions in TS 101 761-1 [1].

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ISO/IEC 9646-1 [3], ISO/IEC 9646-6 [6], ISO/IEC 9646-7 [7], the abbreviations defined in TS 101 761-1 [1] apply. In particular, the following abbreviations apply:

AP	Access Point
ARQ	Automatic Repeat Request
ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
BCH	Broadcast CHannel
BI	Invalid Behaviour
BO	inOpportune Behaviour
BV	Valid Behaviour
CA	CApability tests
CC	Central Controller
CL	Convergence Layer
DLC	Data Link Control
DUC	DLC User Connection
DCC	DLC user Connection Control
DM	Direct Mode
EC	Error Control
IUT	Implementation Under Test
LT	Lower Tester
MAC	Medium Access Control
MAC-ID	MAC IDentifier
MT	Mobile Terminal
MTC	Main Test Component
PCO	Point of Control and Observation
PCTR	Protocol Conformance Test Report
PDU	Protocol Data Unit
PHY	PHYsical layer
PICS	Protocol Implementation Conformance Statement
RLC	Radio Link Control
SAP	Service Access Point
SCH	Short CHannel
SUT	System Under Test
TC	Test Cases
TSS	Test Suite Structure
TP	Test Purposes
TTCN	Tree and Tabular Combined Notation

UT Upper Tester

4 Abstract Test Method (ATM)

This clause describes the ATM used to test the HIPERLAN 2 U-plane layer at the AP side and at the MT side.

4.1 Test architecture

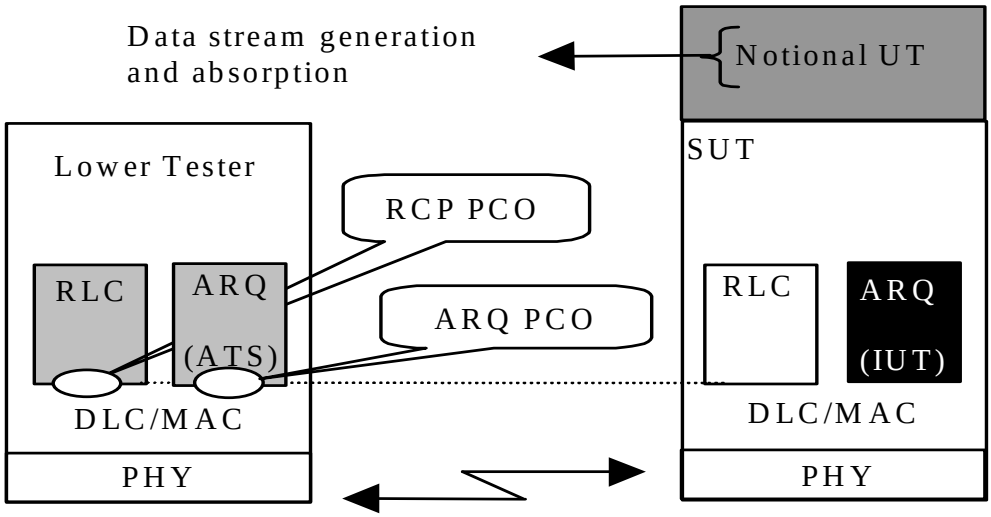

Figure 1: Test architecture for Error Control (RLC needed for association, etc.)

A single-party testing concept is used, which consists of the following abstract testing functions:

Lower Tester: A Lower Tester (LT) is located in the remote BRAN H/2 test system. It controls and observes the behaviour of the IUT.

ARQ ATS: An ARQ Abstract Test Suite (ATS) is located in the remote BRAN H/2 test system.

ARQ PCO: The Point of Control and Observation (PCO) for ARQ testing is located at a SAP between the Error Control layer and the MAC layer. All test events at the PCO are specified in terms of Abstract Testing Service Primitives defined in Clause 7 and containing complete PDU. To avoid the complexity of data fragmentation and recombination testing, the SAP is defined below these functions.

RCP PCO: The Point of Control and Observation (PCO) for RLC testing is located at a SAP between the RLC layer and the MAC layer. All test events at the PCO are specified in terms of Abstract Testing Service Primitives defined in Clause 7 and containing complete PDU. To avoid the complexity of data fragmentation and recombination testing, the SAP is defined below these functions.

Notional UT: No explicit upper tester (UT) exists in the system under test. Nevertheless, some specific actions to cover implicit send events and to obtain feedback information are necessary for the need of the test procedures. A black box covering these requirements is used in the SUT as a notional UT as defined in ISO 9646 ([3] to [7]). This notional UT is part of the test system.

4.2 Error control service model for testing

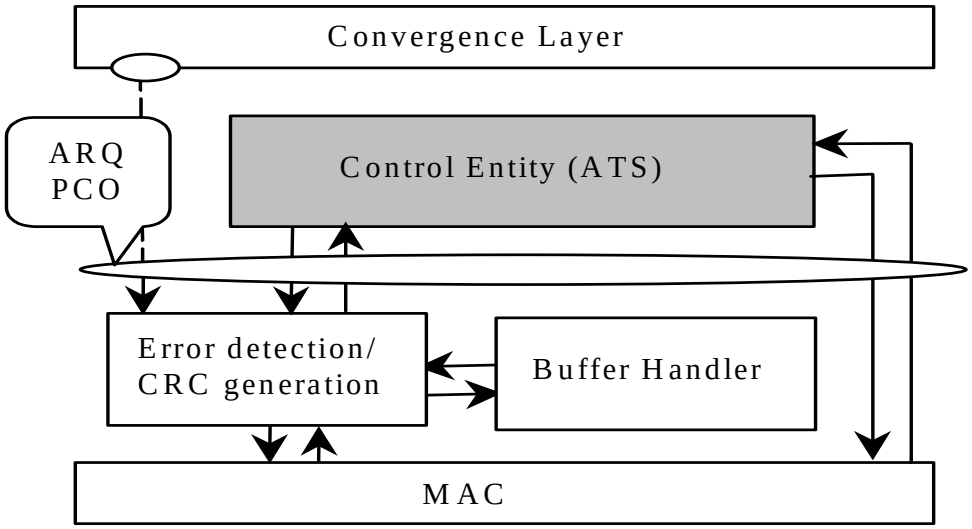

Figure 2: Error control service model for testing

Message Handler: Evaluate or generate CRC; Indicate erroneous PDU; Control read and write to or from buffer handler; Add or Evaluate Sequence Number; Transmit or Receive PDU to or from MAC and Convergence Layers controlled by the Control Entity.

Buffer Handler: Provide management of receive and transmit buffer.

Convergence Layer: Provide traffic generation and absorption capabilities.

Control Entity: Transmission: Handle the transmit window on a basis of sequence number; Evaluate ARQ feedback messages (integrity check); Initiate re-transmission; Release correctly received message from buffer; Handle errors (e.g. Initiation of Reset).
Reception: Handle the receive window including the knowledge of the buffer status; Generate ARQ feedback messages; Trigger the message handler to pass correct in-sequence PDU to the Convergence layer and to release buffer from the buffer handler; Handle errors (e.g. Discarding).

4.3 Test Configurations

4.3.1 Test Configurations for MT

Tree configurations are defined for MT testing.

Figure 3: Normal configuration for MT

The normal configuration is defined and used for functionality that requires only interaction between the tested MT and one AP.

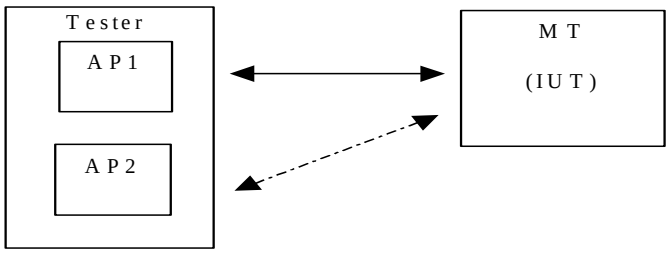

Figure 4: Handover configuration for MT

The handover configuration is used when the MT has to interact with two APs. In that case, the two simulated APs are configurable to be either a multi-sector AP or two separate APs. The concurrent TTCN facilities are used in this configuration.

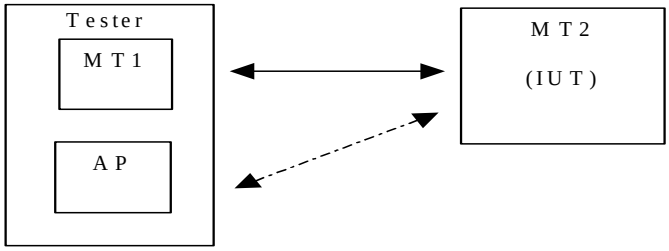

Figure 5: Direct mode configuration for MT

The direct mode configuration is used for direct mode testing. The test system simulates one AP and one MT. The AP part of the test system is used to initialize the direct mode with the tested MT. The MT part of the system is used to verify the communication of the tested MT when the direct mode is active. The concurrent TTCN facilities are used in this configuration.

4.3.2 Test Configurations for AP

Only one configuration is defined for AP testing.

Figure 6: Normal configuration for AP

The normal configuration is defined and used for functionality that requires only interaction between the tested AP and one MT.

5 Untestable Test Purposes (TP)

This clause gives a list of TP, which are not implemented in the ATS due to the chosen ATM or other restrictions.

Table 1: Untestable TP

Test purpose	Reason

6 ATS conventions

The ATS conventions are intended to give a better understanding of the ATS but they also describe the conventions made for the development of the ATS. These conventions shall be considered during any later maintenance or further development of the ATS.

The ATS conventions contain two clauses, the naming conventions and the implementation conventions. The naming conventions describe the structure of the naming of all ATS elements. The implementation conventions describe the functional structure of the ATS.

To define the ATS, the guidelines of the document ETS 300 406 [2] were considered.

6.1 Naming conventions

6.1.1 Declarations part

This subclause describes the naming conventions chosen for the elements of the ATS declarations part.

6.1.1.1 General

The following general rules apply for the name giving in the declarations part. All type definitions (simple type definitions, structured type definitions, ASP type definitions and PDU type definitions) shall be written in uppercase.

All element names (structured type definition), parameter names (ASP type definition) and field names (PDU type definition) shall be written in lowercase.

Predefined types (e.g. BITSTRING[8]) are never used in structured type definitions, ASP type definitions or PDU type definitions. Simple types are used instead.

6.1.1.2 Test suite operations definition

The test suite operation identifiers are composed of substrings in lowercase letters, except for standard prefix "TSO_". An underscore character ("_") separates each substring.

EXAMPLE: TSO_substring

6.1.1.3 Test suite parameter declarations

The test suite parameter identifiers are composed of substrings in lowercase letters, except for the standard prefix "TSP_". An underscore character ("_") separates each substring.

EXAMPLE 1: TSP_t_wait

If the test suite parameter references a Protocol Implementation Conformance Statement (PICS) item, the letter "C" is added to the standard prefix.

EXAMPLE 2: TSPC_encryption_support

If the test suite parameter references a PIXIT item, the letter "X" is added to the standard prefix.

EXAMPLE 3: TSPX_pid

6.1.1.4 Test case selection expression definition

The test case selection expression identifiers are composed of substrings in lowercase letters, beginning with the prefix "TCS_". An underscore character ("_") separates each substring.

6.1.1.5 Test suite constant declarations

The test suite constant identifiers are composed of substrings in lowercase letters, except for the prefix "TSC_". An underscore character ("_") separates each substring.

If the test suite constant represents a system parameter, the complete name defined in the protocol standard [1] is used.

6.1.1.6 Test suite variable declarations

The test suite variable identifiers are composed of substrings in lowercase letters, except for the prefix "TSV_". An underscore character ("_") separates each substring.

Complete names as defined in the protocol standard [1] are used.

6.1.1.7 Test case variable declarations

The test case variable identifiers are composed of substrings in lowercase letters, except for the prefix "TCV_". An underscore character ("_") separates each substring.

Complete names as defined in the protocol standard [1] are used.

6.1.1.8 Timer declarations

Two types of timers can be identified:

1) Standardized:

   - Those defined in the protocol standard [1], e.g. T201. They use exactly the same name as in the standard.

   As there is a tolerance margin accepted for these timers, three values are needed:

   - The maximum value allowed, which will use the suffix "_max";
   - The minimum value allowed, which will use the suffix "_min";
   - The value actually implemented, with no suffix.

EXAMPLE 1: T201_max, T201_min, and T201.

2) Not standardized:

   - Those not defined in the protocol standard [1], i.e. for execution use, e.g. a timer waiting for a response. These timers begin with the prefix "T_", followed by a string in lowercase letters.

EXAMPLE 2: T_resp represents a timer for controlling the response time of the IUT.

6.1.1.9 ASP type definitions

The general conventions in Subclause 6.1.1.1 apply.

The identifier of an ASP type uses the same name as the name defined in the protocol standard [1].

6.1.1.10 PDU type definitions

The general conventions in Subclause 6.1.1.1 apply.

The PDU type identifier shall identify the related structure or type as defined in the protocol standard [1].

6.1.1.11 CM type definitions

The CM types are defined as the ASP types without sub-fields.

6.1.1.12 Alias definitions

Alias definitions are not used.

6.1.2 Constraints part

This subclause describes the naming conventions chosen for the elements of the ATS constraints part.

6.1.2.1 General

Constraints shall be written with the first letter in uppercase, and the rest in lowercase.

The first part of the constraint declaration identifier name is equivalent to the corresponding type identifier used in the declaration part. The second part of the name describes the content of this constraint.

EXAMPLE: Declaration part: HEADER_FIELD
Constraint part: Header_field_paging

6.1.3 Dynamic part

This subclause describes the naming conventions used for the elements of the ATS dynamic part.

6.1.3.1 General

All test cases shall be listed in the order in which they appear in the Test Suite Structure (TSS) and TP document.

6.1.3.2 Test Case (TC) identifier

The identifier of the test case is built in the same way as for the test purpose described in TS 101 823-1-2 [8], with the exception that "TP" is replaced by "TC". The identifier of a TC is built according to Table 2.

Table 2: TC naming convention

Identifier:	**TC_<st>_<pg>_<fm>_<x>_<nnn>**		
	<st> = side type	AP	Access Point
		MT	Mobile Terminal
	<pg> = protocol group	ECM	DLC Error Control service
	<fm> = functional module	AM	Acknowledge mode
		RM	Repetition mode
		UM	Unacknowledge mode
	x = Type of testing	CA	Capability Tests
		BV	Valid Behaviour Tests
		BI	Invalid Behaviour Tests
		BO	Inopportune Behaviour Tests
	<nnn> = sequential number	(000-999)	Test Purpose Number

EXAMPLE: TP identifier: TP/MT/ECM/AM/BV-010
TC identifier: TC_MT_ECM_AM_BV_010

6.1.3.3 Test step identifier

The test step identifier is built of substrings in lowercase letters, preceded by a string of uppercase letters. Underscore characters join the substrings. The first substring indicates the main function of the test step; e.g. PR for preamble, PO for postamble, LTS for local tree and STP for general test step. The second substring indicates the purpose of the step.

EXAMPLE: PO_release_duc

6.1.3.4 Default identifier

The default identifiers begin with the prefix "DF_", followed by a string in lowercase letters.

6.1.3.5 Label identifier

The identifiers in the label column is built according to Table 3:

Table 3: Naming convention for verdict assignment identifier

Identifier:	**<Table><nn>**		
	<Table> = type of table	TB	Test Body
		CS	Check State test step
		DF	DeFault
		PO	POstamble
		PR	PReamble
		TS	TestStep
	<nn> = sequential number	(00-99)	Label number

6.1.3.6 ATS abbreviations

These abbreviations are used to shorten identifier names:

addr	address
ack	acknowledgement
bear	bearer
cap	capability
cfm	confirm
chn	channel
con	connection
ctrl	control
est	establish
ext	extension
id	identification
ind	indication
info	information
max	maximum
min	minimum
par	parameter
prop	proprietary
rel	release
req	request
rsp	response
std	standard
sys	system

6.2 Implementation conventions

6.2.1 Declaration part

The comment line of single element TTCN tables (e.g. test suite constants) is used to give a reference where the format and content of the element is described in the relevant protocol standards. Any particularity of the element format or content is described in the comment line.

The comment line in the header of multi element TTCN tables (e.g. ASP) is used to reference to the protocol standard [1].

The detailed comments are used to describe any particularity of the table.

In the ASP and PDU declarations the comment column is further used to give information about the parameter/field value, in particular if the parameter/field contains a fixed spare value.

6.2.2 Constraint part

The ASPs and PDUs are defined in a way that all relevant parameters/fields are parameterized. That improves the transparency of the constraints in the dynamic part, as all values, which are relevant for the test, are always present.

Generally no modified constraints are used. This allows an easier reuse and adaptation of constraints if they are reused in other test specifications.

The Comment line of a constraint always contains a reference to the relevant protocol standard [1].

The detailed comment footer is used to describe any particularity of the table.

6.2.3 Dynamic part

All events which are defined as a conformance requirement by the TP, causes a preliminary verdict PASS if the requirement is met.

All invalid events are handled in the default tree. Only FAIL or INCONC verdicts are assigned in the default tree.

The preamble, the test body and the postamble have different defaults, which allows a specific verdict handling, e.g. only INCONC verdicts are assigned in the preamble.

All verdict assignments are labelled. According to ISO 9646-3 [5], Annex E, Clause E.2, labels should be written to the conformance log. This allows, for example, to identify were the test failed. To allow an exact identification of the table, in which the verdict was assigned, the convention described in Subclause 6.1.3.5 is applied.

TP which are listed in the untestable TP list in Clause 5 are not considered in the ATS, thus these TC identifiers are missing in the ATS and the numbering of the TC is not always continuous.

7 Abstract testing service primitives

7.1 RLC PCO

7.1.1 Tester primitives

RLC_Configuration {parameters}

7.1.2 Centralized mode primitives

RLC_CM_request {MAC_ID, Length, SDU}

RLC_CM_indication {MAC_ID, Length, SDU}

7.1.3 Direct mode primitives

RLC_DM_request {Src_MAC_ID, Dst_MAC_ID, Length, SDU}

RLC_DM_indication {Src_MAC_ID, Dst_MAC_ID, Length, SDU}

7.2 Error control service PCO

7.2.1 Tester primitives

ERC_Configuration {Windowsize, etc}

PCL_StartDataGeneration {DUC_ID, Transfer_rate, Type (default: streaming)}

PCL_StopDataGeneration {DUC_ID}

PCL_StartErrorGeneration {DUC_ID}

PCL_StopErrorGeneration {DUC_ID}

7.2.2 Acknowledge mode primitives

SCH_ARQfeedback_request {DUC_ID, SDU}

SCH_ARQfeedback_indication {DUC_ID, SDU}

SCH_Discard_message_request {DUC_ID, SDU}

SCH_Discard_message_indication {DUC_ID, SDU}

ACM_ResetSN {DUC_ID, NewSN}

7.2.3 U-plane exchange primitives

UPM_Reception_indication {DUC_ID, Correct_Indication, SN, Number_of_available_stores}

UPM_Transmission_indication {DUC_ID, Correct_Indication, SN, Number_of_available_stores}

UPM_Transmission_request {DUC_ID}

UPM_Discard_request {DUC_ID, SN} (discard PDUs up to and excluding SN)

UPM_Release_request {DUC_ID, SN} (release PDUs up to and excluding SN)

7.3 Coordination between RLC and Error control

CM_Reset_request {DUC_ID} to RLC

CM_Reset_indication {DUC_ID} from RLC

Annex A (normative): Abstract Test Suite (ATS)

This ATS has been produced using the Tree and Tabular Combined Notation (TTCN) according to ISO/IEC 9646-3 [5].

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

A.1 The TTCN Graphical form (TTCN.GR)

The TTCN.GR representations of this ATS is contained in an Adobe Portable Document Format™ file (HIP2_TEST.PDF contained in archive ts_1018230103v010101p0.ZIP) which accompanies the present document.

A.2 The TTCN Machine Processable form (TTCN.MP)

The TTCN.MP representations corresponding to this ATS is contained in an ASCII file (HIP2_TEST.PDF contained in archive ts_1018230103v010101p0.ZIP) which accompanies the present document.

NOTE: Where an ETSI Abstract Test Suite (in TTCN) is published in both .GR and .MP format these two forms shall be considered equivalent. In the event that there appears to be syntactical or semantic differences between the two then the problem shall be resolved and the erroneous format (whichever it is) shall be corrected.

Annex B (normative): Partial PIXIT proforma for H/2 DLC Error Control MT

The PIXIT Proforma is based on ISO/IEC 9646-6. Any needed additional information can be found in this international standard document.

B.1 Identification summary

Table B.1

PIXIT Number:	
Test Laboratory Name:	
Date of Issue:	
Issued to:	

B.2 ATS summary

Table B.2

Protocol Specification:	ETSI TS 101 761-1 V1.1.1
Protocol to be tested:	
ATS Specification:	ETSI TS 101 823-1-3 V1.1.1
Abstract Test Method:	ETSI TS 101 823-1-3 V1.1.1, Clause 4

B.3 Test laboratory

Table B.3

Test Laboratory Identification:	
Test Laboratory Manager:	
Means of Testing:	
SAP Address:	

B.4 Client identification

Table B.4

Client Identification:	
Client Test manager:	
Test Facilities required:	

B.5 SUT

Table B.5

Name:	
Version:	
SCS Number:	
Machine configuration:	
Operating System Identification:	
IUT Identification:	
PICS Reference for IUT:	
Limitations of the SUT:	
Environmental Conditions:	

B.6 Protocol layer information

B.6.1 Protocol identification

Table B.6

Name:	BRAN H/2 - DLC layer ETSI TS 101 761-1 V1.1.1
Version:	
PICS References:	

B.6.2 IUT information

Annex C (normative): Partial PIXIT proforma for H/2 DLC Error Control AP

The PIXIT Proforma is based on ISO/IEC 9646-6. Any needed additional information can be found in this international standard document.

C.1 Identification summary

Table C.1

PIXIT Number:	
Test Laboratory Name:	
Date of Issue:	
Issued to:	

C.2 ATS summary

Table C.2

Protocol Specification:	ETSI TS 101 761-1 V1.1.1
Protocol to be tested:	
ATS Specification:	ETSI TS 101 823-1-3 V1.1.1
Abstract Test Method:	ETSI TS 101 823-1-3 V1.1.1, Clause 4

C.3 Test laboratory

Table C.3

Test Laboratory Identification:	
Test Laboratory Manager:	
Means of Testing:	
SAP Address:	

C.4 Client identification

Table C.4

Client Identification:	
Client Test manager:	
Test Facilities required:	

C.5 SUT

Table C.5

Name:	
Version:	
SCS Number:	
Machine configuration:	
Operating System Identification:	
IUT Identification:	
PICS Reference for IUT:	
Limitations of the SUT:	
Environmental Conditions:	

C.6 Protocol layer information

C.6.1 Protocol identification

Table C.6

Name:	BRAN H/2 - DLC layer ETSI TS 101 761-1 V1.1.1
Version:	
PICS References:	

C.6.2 IUT information

Annex D (normative): PCTR Proforma for H/2 DLC Error Control MT

The PCTR proforma is based on ISO/IEC 9646-6. Any needed additional information can be found in the present document.

D.1 Identification summary

D.1.1 Protocol conformance test report

Table D.1

PCTR Number:	
PCTR Date:	
Corresponding SCTR Number:	
Corresponding SCTR Date:	
Test Laboratory Identification:	
Test Laboratory Manager:	
Signature:	

D.1.2 IUT identification

Table D.2

Name:	
Version:	
Protocol specification:	
PICS:	
Previous PCTR if any:	

D.1.3 Testing environment

Table D.3

PIXIT Number:	
ATS Specification:	
Abstract Test Method:	Remote test method, Embedded variant with notional UT
Means of Testing identification:	
Date of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	

D.1.4 Limits and reservation

Additional information relevant to the technical contents or further use of the test report, or 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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D.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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D.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 D.3 of the present document) and there are no "FAIL" verdicts to be recorded (in Clause D.6 of the present document) strike the words "has or", otherwise strike the words "or has not".

D.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.

D.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 D.6 of the present document) strike the words "did or" otherwise strike the words "or did not".

Summary of the results of groups of test:

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D.5 Static conformance review report

If Clause D.3 indicates non-conformance, this subclause itemizes the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

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D.6 Test campaign report

Table D.4

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in Clause 7)
TC-MT-ECM-AM-CA-000	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-001	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-002	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-003	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-004	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-005	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-006	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-007	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-008	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-009	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-010	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-011	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-012	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-013	Yes/No	Yes/No		
TC-MT-ECM-AM-CA-014	Yes/No	Yes/No		

D.7 Observations

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

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Annex E (normative): PCTR Proforma for H/2 DLC Error Control AP

The PCTR proforma is based on ISO/IEC 9646-6. Any needed additional information can be found in the present document.

E.1 Identification summary

E.1.1 Protocol conformance test report

Table E.1

PCTR Number:	
PCTR Date:	
Corresponding SCTR Number:	
Corresponding SCTR Date:	
Test Laboratory Identification:	
Test Laboratory Manager:	
Signature:	

E.1.2 IUT identification

Table E.2

Name:	
Version:	
Protocol specification:	
PICS:	
Previous PCTR if any:	

E.1.3 Testing environment

Table E.3

PIXIT Number:	
ATS Specification:	
Abstract Test Method:	Remote test method, Embedded variant with notional UT
Means of Testing identification:	
Date of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	

E.1.4 Limits and reservation

Additional information relevant to the technical contents or further use of the test report, or 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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E.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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E.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 D.3 of the present document) and there are no "FAIL" verdicts to be recorded (in Clause D.6 of the present document) strike the words "has or", otherwise strike the words "or has not".

E.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.

E.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 D.6 of the present document) strike the words "did or" otherwise strike the words "or did not".

Summary of the results of groups of test:

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E.5 Static conformance review report

If Clause D.3 indicates non-conformance, this subclause itemizes the mismatches between the PICS and the static conformance requirements of the specified protocol specification.

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E.6 Test campaign report

Table E.4

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in Clause 7)
TC-AP-ECM-AM-CA-000	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-001	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-002	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-003	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-004	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-005	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-006	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-007	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-008	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-009	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-010	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-011	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-012	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-013	Yes/No	Yes/No		
TC-AP-ECM-AM-CA-014	Yes/No	Yes/No		

E.7 Observations

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

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History

Document history		
V1.1.1	September 2000	Publication