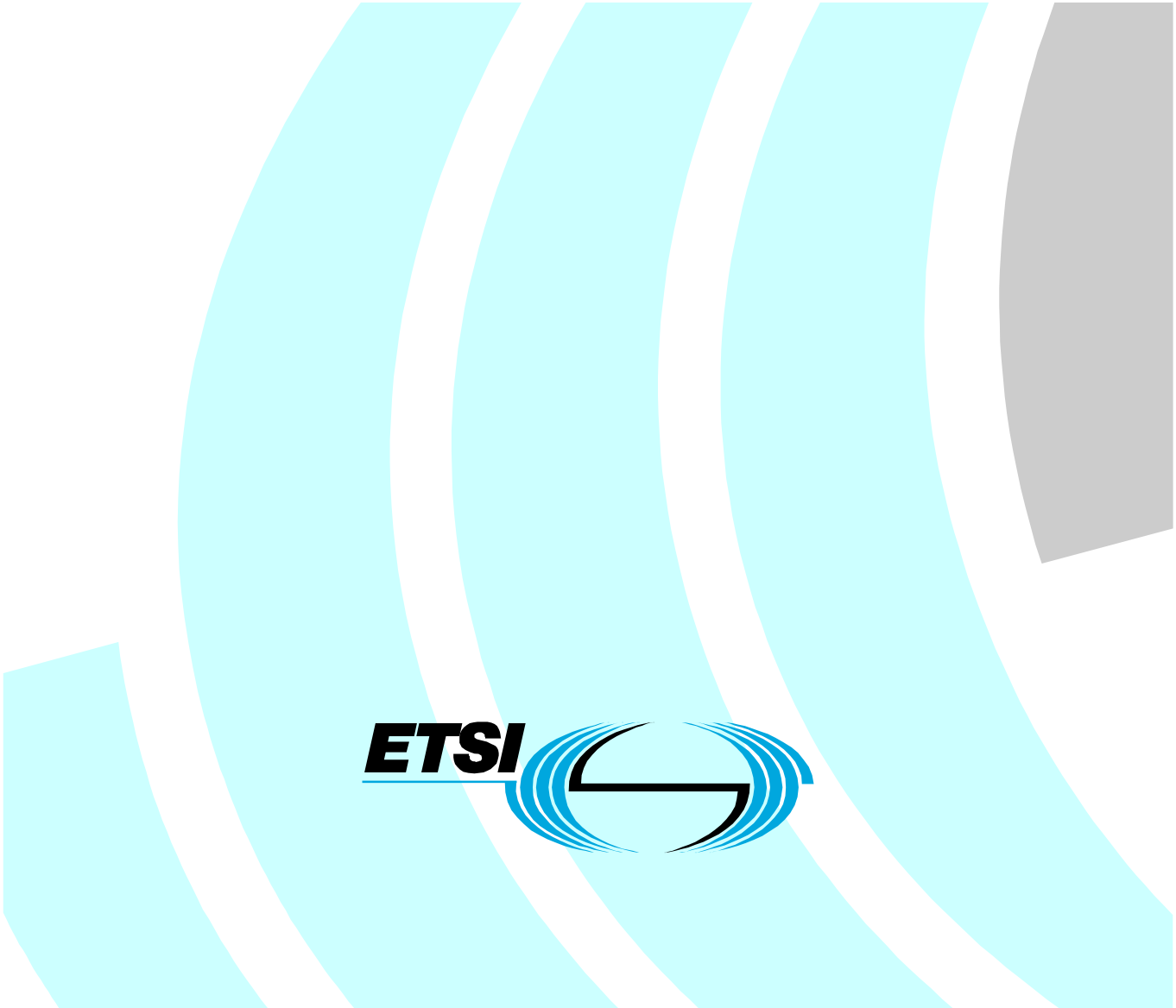
ETSI TS 101 811-1-3 V1.2.1 (2001-12)

Technical Specification

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



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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 part 1, sub-part 3 of a multi-part deliverable covering Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Conformance testing for the packet based convergence layer, as identified below:

Part 1: "Common part";

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".

Part 2: "Ethernet Service Specific Convergence Sublayer (SSCS)";

Part 3: "IEEE 1394 Service Specific Convergence Sublayer (SSCS)";

Part 4: "IEEE 1394 Bridge Layer".

1 Scope

The present document contains the Abstract Test Suite (ATS) to test the BRAN HIPERLAN Type 2; packet based convergence layer; Part 1: Common part [1].

The objective of this test specification is to provide a basis for conformance tests for BRAN HIPERLAN Type 2 equipment giving a high probability of air interface inter-operability between different manufacturer's BRAN HIPERLAN Type 2 equipment.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [4] and ISO/IEC 9646-2 [5]) as well as the ETSI rules for conformance testing (ETS 300 406 [3]) 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 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 101 493-1 (V1.1.1): "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Packet based Convergence Layer; Part 1: Common Part".

[2] 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) protocol; Part 2: Radio Link Control (RLC) sublayer; Sub-part 3: Abstract Test Suite (ATS) specification".

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

[4] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

NOTE 1: See also ITU-T Recommendation X.290 (1991).

[5] ISO/IEC 9646-2: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract Test Suite specification".

NOTE 2: See also ITU-T Recommendation X.291 (1991).

[6] ISO/IEC 9646-3: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The Tree and Tabular Combined Notation (TTCN)".

NOTE 3: See also ITU-T Recommendation X.292 (1992).

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

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

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ETSI TS 101 493-1 [1] and ISO/IEC 9646-7 [8] apply.

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ISO/IEC 9646-1 [4], ISO/IEC 9646-6 [7], ISO/IEC 9646-7 [8], TS 101 493-1 [1] and the following apply:

ACH	Access feedback CHannel
AP	Access Point
APT	Access Point Transceiver
ARQ	Automatic Repeat Request
ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
ATSP	Abstract Testing Service Primitives
BCH	Broadcast CHannel
BI	Invalid Behaviour
BO	Inopportune Behaviour
BV	Valid Behaviour
CA	Capability tests
CC	Central Controller
CL	Convergence Layer
CLU	Convergence Layer U-plane
CM	Centralized Mode modify
CPCS	Common Part Convergence Sublayer
CPP	Common Part Procedure
DFS	Dynamic Frequency Selection
DLC	Data Link Control
DM	Direct Mode
DUC	DLC User Connection
H/2	HIPERLAN Type 2
IEEE	Institute of Electrical and Electronics Engineers (USA)
INIT	INitialisation Information Element
IUT	Implementation Under Test
LCH	Long CHannel
LT	Lower Tester
MAC	Medium Access Control
MT	Mobile Terminal
PBCL	Packet Based Convergence Layer
PCL	Portable Channel List
PCO	Point of Control and Observation
PCTR	Protocol Conformance Test Report
PDU	Protocol Data Unit
PHY	Physical layer
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
RLC	Radio Link Control

RS	Receiver Side
RSS	Received Signal Strength
SAP	Service Access Point
SAR	Segmentation And Reassembly
SCH	Short CHannel
SCS	System Conformance Statement
SCTR	System Conformance Test Report (ISO 9646)
SDU	Service Data Unit
SS	Sender Side
SSCS	Service Specific Convergence Sublayer
SSK	Session Secret Key
SUT	System Under Test
TC	Test Cases
TP	Test Purposes
TSS	Test Suite Structure
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 Common part PBCL layer at the AP side and at the MT side.

4.1 Test architecture

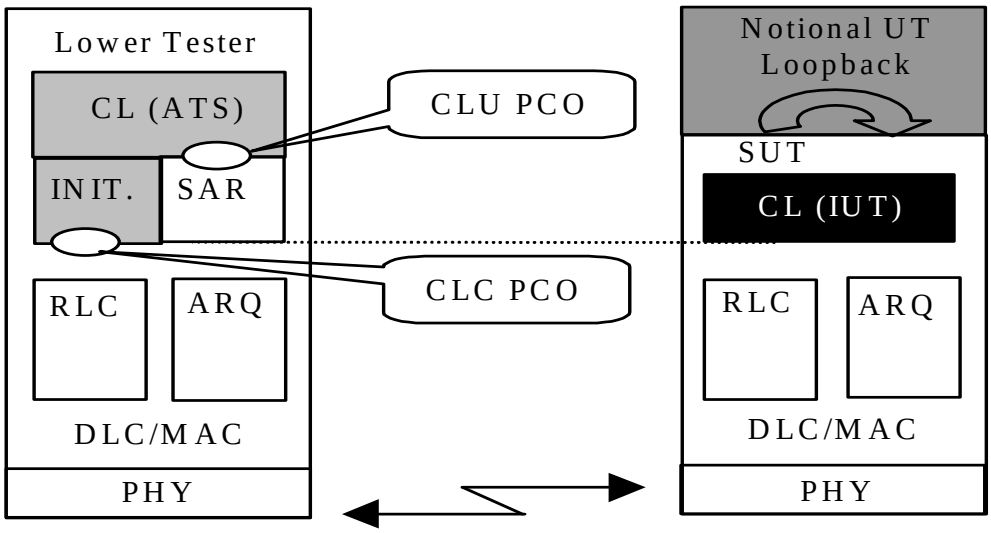

Figure 1: Test architecture for Packet CL – Common Part

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.

CL ATS: A Convergence Layer (CL) Abstract Test Suite (ATS) is located in the remote BRAN H/2 test system. Contains part of SSCS functionalities for establishing a U-plane connection needed for testing CL common part behaviour.

CLU PCO: U-plane. The first Point of Control and Observation (PCO) for Convergence Layer testing is located at a SAR_SAP between the Common Part Convergence Sublayer (CPCS) and the SAR sub-layer. All test events at the PCO are specified in terms of Abstract Testing Service Primitives (ATSP defined in clause 7) containing complete SAR SDU.

CLC PCO: C-plane. The second Point of Control and Observation (PCO) for Convergence Layer testing is located at a SAP between the Service Specific Convergence Sub-layer (SSCS) and the DLC layer. All test events at the PCO are specified in terms of Abstract Testing Service Primitives (ATSP defined in clause 7) containing complete DLC SDU. To avoid the complexity of data fragmentation and recombination testing, the SAP is defined below these functions.

SAR: The Segmentation and Reassembly sub-layer of the Convergence layer – Common Part is implemented in the test system outside the ATS. This allows implicit testing of the IUT's SAR entity without any internal requirement of its implementation.

INIT: Part of a generic SSCS has to be simulated as an initialization process by the ATS to provide the establishment of the U-plane needed for convergence layer testing.

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. This notional UT is part of the test system.

4.2 Test Configurations

4.2.1 Test Configurations for MT

Two configurations are defined for MT testing.

Figure 2: Normal configuration for MT

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

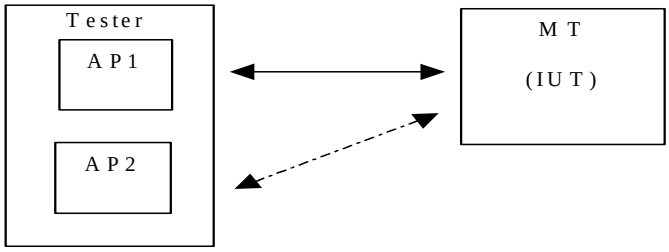

Figure 3: Handover configuration for MT

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

4.2.2 Test Configurations for AP

Only one configuration is defined for AP testing.

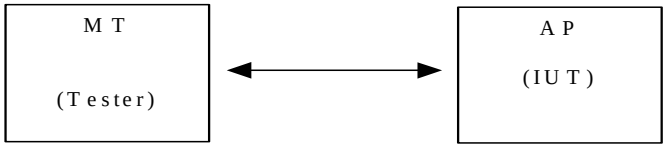

Figure 4: Normal configuration for AP

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 [3] was considered.

6.1 Naming conventions

6.1.1 Declarations part

This clause 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 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 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 are used.

6.1.1.8 Timer declarations

Two types of timers can be identified:

1) Standardized:

   - Those defined in the protocol standard, 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, 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 clause 6.1.1.1 apply.

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

6.1.1.10 PDU type definitions

The general conventions in clause 6.1.1.1 apply.

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

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 clause 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 clause 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 (TS 101 811-1-2 V1.2.1).

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 part 2 of the present document, 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	CPP	Common part procedures
	<fm> = functional module	SS	Sender side
		RS	Receiver side
	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/CPP/RS/BV-010
TC identifier: TC_MT_CPP_RS_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.

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 parametrized. 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.

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 [6], 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 clause 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 Tester primitives

PCL_Configuration {parameters}

7.2 C-plane primitives

DLC_Association_request {}

DLC_Association_indication {MAC_ID}

DUC_request {}

DUC_indication {DLCC_ID}

7.3 U-plane primitives

SAR_UNITDATA_request {DUC_ID, Length, SDU}

SAR_UNITDATA_indication {DUC_ID, Length, SDU}

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 [6].

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 representation of this ATS is contained in Adobe Portable Document Format™ file (hip2_v008.PDF contained in archive hip2_test.ZIP), which is provided together with the TS 101 823-2-3 [2] document. The PDF file contains also the TTCN.GR representations for all other parts of the HIPERLAN 2 Specifications testing.

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

The TTCN.MP representation corresponding to the ATS is contained in ASCII file (hip2_v008.MP contained in archive hip2_test.ZIP), which is provided together with the TS 101 823-2-3 [2] document. The MP file contains also the TTCN.MP representations for all other parts of the Hiperlan 2 Specifications testing.

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 Common part CL MT

The PIXIT Proforma is based on ISO/IEC 9646-6 [7], where any needed additional information can be found.

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:	TS 101 493-1
Protocol to be tested:	
ATS Specification:	TS 101 811-1-3
Abstract Test Method:	TS 101 811-1-3, 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 – Common part PBCL layer TS 101 493-1
Version:	
PICS References:	

B.6.2 IUT information

Table: B.7 Configuration parameters

Name / Type	Comments	Value
TSPX_net_id1 NET_ID	Value of the NET_ID parameter for the entity 1 of the tester	
TSPX_ap_id1 AP_ID	Value of the AP_ID parameter for the entity 1 of the tester	
TSPX_sector1 SECTOR_ID	Value of the SECTOR_ID parameter for the entity 1 of the tester	
TSPX_number1 SECTOR_ID	Value of the number of sector parameter for the entity 1 of the tester	
TSPX_tx1 AP_TX_LEVEL	Value of the AP_TX_LEVEL parameter for the entity 1 of the tester	
TSPX_rx1 AP_RX_UL_LEVEL	Value of the AP_RX_UL_LEVEL parameter for the entity 1 of the tester	
TSPX_vers1 VERSION	Value of the VERSION parameter for the entity 1 of the tester	
TSPX_load1 AP_TRAFFIC_LOAD	Value of the AP_TRAFFIC_LOAD parameter for the entity 1 of the tester	
TSPX_max1 MAXIMUM_POWER	Value of the MAXIMUM_POWER parameter for the entity 1 of the tester	
TSPX_net_id2 NET_ID	Value of the NET_ID parameter for the entity 2 of the tester	
TSPX_ap_id2 AP_ID	Value of the AP_ID parameter for the entity 2 of the tester	
TSPX_sector2 SECTOR_ID	Value of the SECTOR_ID parameter for the entity 2 of the tester	
TSPX_number2 SECTOR_ID	Value of the number of sector parameter for the entity 2 of the tester	
TSPX_tx2 AP_TX_LEVEL	Value of the AP_TX_LEVEL parameter for the entity 2 of the tester	
TSPX_rx2 AP_RX_UL_LEVEL	Value of the AP_RX_UL_LEVEL parameter for the entity 2 of the tester	
TSPX_vers2 VERSION	Value of the VERSION parameter for the entity 2 of the tester	
TSPX_load2 AP_TRAFFIC_LOAD	Value of the AP_TRAFFIC_LOAD parameter for the entity 2 of the tester	
TSPX_max2 MAXIMUM_POWER	Value of the MAXIMUM_POWER parameter for the entity 2 of the tester	

Table: B.8 General parameters

Name / Type	Comments	Value
TSPX_duc_descr DUC_DESCR	Content of the DUC_DESCR defining full duplex DUC.	
TSPX_mtu_value INTEGER	Value of the maximum transmission unit used by the Convergence Layer to be tested.	
TSPX_lch_phy_mode REPORTED_PHY_MODE	Content of the LCH phy mode for ARQ	
TSPX_sch_phy_mode REPORTED_PHY_MODE	Content of the SCH phy mode for ARQ.	
TSPX_magic MAGIC	Content of the MAGIC field.	
TSPX_opId BOOLEAN	Content of the BOOLEAN field.	
TSPX_macID MAC_ID	Content of the MAC_ID field.	
TSPX_unique_length UNIQUE_LENGTH	Content of the UNIQUE_LENGTH field.	
TSPX_cug C_U_G	Content of the C_U_G field.	
TSPX_op_id_local NETW_OP_ID_LOCAL	Content of the NETW_OP_ID_LOCAL field.	
TSPX_op_id_global NETW_OP_ID_GLOBAL	Content of the NETW_OP_ID_GLOBAL field.	
TSPX_cl_vid_list CL_VID_LIST	Content of the CL_VID_LIST field.	
TSPX_opid_lo_no_match NETW_OP_ID_LOCAL	Value of the Local Op_Id field that does not match with the allowed MT list.	
TSPX_opid_gl_no_match NETW_OP_ID_GLOBAL	Value of the Global Op_Id field that does not match with the allowed MT list.	
TSPX_cl_vid_no_match CL_VID_LIST	Value of the Cl_Vid_list field in which every Cl_Vid does not match with any of the allowed MT list.	

Table: B.9 Specific parameters for testing

Name / Type	Comments	Value
TSPX_apt_address_length1 APT_ADDRESS_LENGTH	Content of the APT_ADDRESS_LENGTH field.	
TSPX_dlc_vers1 DLC_VERSION	Content of the DLC_VERSION field.	
TSPX_rlc_vers1 RLC_VERSION	Content of the RLC_VERSION field.	
TSPX_cl_vid_list1 CL_VID_LIST	Content of the CL_VID_LIST field.	
TSPX_rss_value1 RSS_VALUE	Content of the RSS_VALUE field.	
TSPX_supported64QAM1 SUPPORTED64QAM	Content of the SUPPORTED64QAM field.	
TSPX_direct_mode_cap1 DIRECT_MODE_CAP	Content of the DIRECT_MODE_CAP field.	
TSPX_cyclic_prefix1 CYCLIC_PREFIX	Content of the CYCLIC_PREFIX field.	
TSPX_support_fca1 SUPPORTED_FCA	Content of the SUPPORTED_FCA field.	
TSPX_support_fsa1 SUPPORTED_FSA	Content of the SUPPORTED_FSA field.	
TSPX_ho_cap1 HO_CAP	Content of the HO_CAP field.	
TSPX_cc_ho_cap1 CC_HO_CAP	Content of the CC_HO_CAP field.	
TSPX_time_gap1 TIME_GAP_ACH_UPLINK	Content of the TIME_GAP_ACH_UPLINK field.	
TSPX_duty_cycle1 DUTY_CYCLE	Content of the DUTY_CYCLE field.	
TSPX_arq_delay_rx1 ARQ_DELAY	Content of the RX ARQ_DELAY field.	
TSPX_arq_delay_tx1 ARQ_DELAY	Content of the TX ARQ_DELAY field.	
TSPX_auth_encr_list1 AUTHENTICATION_ENCRYPTION_LIST	Content of the AUTHENTICATION_ENCRYPTION_LIST field.	
TSPX_dm_attributes1 DM_ATTIBUTES	Content of the DM_ATTIBUTES field.	

Table: B.10 Home extension authentication parameters

Name / Type	Comments	Value
TSPX_valid_key VALID_KEY	Content of the valid_key field for authentication.	
TSPX_auth_key_length AUTH_KEY_LENGTH	Content of the auth_key_length field for authentication.	
TSPX_pin_code_length PIN_CODE_LENGTH	Content of the pin_code_length field for authentication.	
TSPX_auth_key AUTH_KEY	Content of the auth_key field for authentication.	
TSPX_pin_code PIN_CODE	Content of the pin_code field for authentication.	
TSPX_mt_id_number_lgth MT_ID_NUMBER_LENGTH	Content of the Length of mt_id_number field for authentication.	
TSPX_mt_id_number MT_ID_NUMBER	Content of the mt_id_number field for authentication.	

Table: B.11 Authentication parameters

Name / Type	Comments	Value
TSPX_auth_content_ieee MT_AUTH_CONTENT	Authentication content for ieee.	
TSPX_auth_ct_ext_ieee MT_AUTH_CONTENT	Authentication content for ext. ieee.	
TSPX_auth_ct_net_acc_id MT_AUTH_CONTENT	Authentication content for net_acc_id. Short length (≤ 46 octets) first part.	
TSPX_auth_ct_net_acc_id_l1 MT_AUTH_CONTENT	Authentication content for net_acc_id. Long length (> 46 octets) first part.	
TSPX_auth_ct_net_acc_id_l2 MT_AUTH_CONTENT	Authentication content for net_acc_id. Long length (> 46 octets) second part.	
TSPX_auth_ct_compressed MT_AUTH_CONTENT	Authentication content for compressed.	
TSPX_auth_ct_generic MT_AUTH_CONTENT	Authentication content for generic. Short length (≤ 46 octets) first part.	
TSPX_auth_ct_generic_l1 MT_AUTH_CONTENT	Authentication content for generic. Long length (> 46 octets) first part.	
TSPX_auth_ct_generic_l2 MT_AUTH_CONTENT	Authentication content for generic. Long length (> 46 octets) second part.	
TSPX_auth_ct_x509_cert MT_AUTH_CONTENT	Authentication content for x509_cert Short length (≤ 46 octets) first part.	
TSPX_auth_ct_x509_cert_l1 MT_AUTH_CONTENT	Authentication content for x509_cert Long length (> 46 octets) first part.	
TSPX_auth_ct_x509_cert_l2 MT_AUTH_CONTENT	Authentication content for x509_cert Long length (> 46 octets) second part.	

Table: B.12 Encryption parameters

Name / Type	Comments	Value
TSPX_PresharedKey B_128	Value of the Pre Shared Key	
TSPX_Rsa512Key B_512	Value of the RSA 512 public Key	
TSPX_Rsa768Key B_768	Value of the RSA 768 public Key	
TSPX_Rsa1024Key B_1024	Value of the RSA 1024 public Key	
TSPX_ApprivateKey B_1_1024	Value of the AP private Key	
TSPX_MtprivateKey B_1_1024	Value of the MT private Key	

Table: B.13 DM COMMON KEY distribution message

Name / Type	Comments	Value
TSPX_ck_encr_info ENCR_INFO	Value of the encr_info field.	
TSPX_ck_key_id KEY_ID	Value of the Key_Id field.	
TSPX_common_key COMMON_KEY	Value of the common key field.	

Table: B.14 COMMON KEY REFRESH message

Name / Type	Comments	Value
TSPX_nonce NONCE	Value of the nonce field.	

Table: B.15 INFO message

Name / Type	Comments	Value
TSPX_cl_data CL_DATA	Value of the cl data field.	
TSPX_dlc_attributes DLC_ATTRIBUTES	Value of the dlc attributes field.	
TSPX_cl_atm_data CL_DATA	Content of the cl data field in case of atm uni SSCS.	
TSPX_cl_atm_hn_data CL_DATA	Content of the cl data field in case of network handover for atm uni SSCS.	
TSPX_cl_eth_data CL_DATA	Content of the cl data field in case of Ethernet SSCS.	
TSPX_cl_eth_hn_data CL_DATA	Content of the cl data field in case of network handover for Ethernet SSCS.	

Table: B.16 TRANS_CC_DATA message

Name / Type	Comments	Value
TSPX_ext_ind EXT_IND	Value of the ext_ind field for CC responsabilty handover testing in case of home extension.	
TSPX_data DATA	Value of the data field for CC responsibility handover testing in case of home extension.	

Table: B.17 DM Power Control message

Name / Type	Comments	Value
TSPX_dm_duc_type DM_DUC_TYPE	Content of dm_duc_type field.	
TSPX_wt_tx_level WT_TX_LEVEL	Content of wt_tx_level field.	
TSPX_adjust_tx ADJUST_TX	Content of adjust_tx field.	

Table: B.18 Setup message

Name / Type	Comments	Value
TSPX_cl_id CL_ID	Content of Cl_Id field.	
TSPX_duc_ext_ind DUC_EXT_IND	Content of duc_ext_ind field.	
TSPX_cl_attr_lgth INTEGER	Content of cl_attr_lgth field.	
TSPX_duc_descr_list DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: B.19 DM_Setup message

Name / Type	Comments	Value
TSPX_peer_mac_id MAC_ID	Content of perr_mac_id field.	
TSPX_cl_common_attr CL_COMMON_ATTR	Content of cl_common_attr field.	

Table: B.20 DM MC Setup message

Name / Type	Comments	Value
TSPX_extension_type EXTENSION_TYPE	Content of extension_type field.	
TSPX_min_req_receivers INTEGER	Content of min_req_receivers field.	

Table: B.21 Modify Req message

Name / Type	Comments	Value
TSPX_duc_ext_ind2 DUC_EXT_IND	Content of duc_descr_ind field.	
TSPX_cl_attr_lgth2 INTEGER	Content of cl_attr_lgth field.	
TSPX_duc_descr_list2 DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: B.22 DM Modify Req message

Name / Type	Comments	Value
TSPX_cl_attr_lgth3 INTEGER	Content of cl_attr_lgth field.	
TSPX_duc_descr_list3 DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: B.23 DM MC Modify Req message

Name / Type	Comments	Value
TSPX_cl_attr_lgth4 INTEGER	Content of cl_attr_lgth field.	
TSPX_start_mac_frame START_MAC_FRAME	Content of start_mac_frame field.	
TSPX_duc_descr_list4 DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: B.24 GROUP_JOIN message

Name / Type	Comments	Value
TSPX_encryption_proposal ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field.	
TSPX_cl_data2 CL_DATA	Value of the cl data field.	

Table: B.25 GROUP_JOIN message for home extension

Name / Type	Comments	Value
TSPX_encryption_prop_HE ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field for home extension testing.	
TSPX_cl_data_HE CL_DATA	Value of the cl data field for home extension testing.	

Table: B.26 GROUP_JOIN message for 1394 bridge

Name / Type	Comments	Value
TSPX_encryption_proposal_1394 ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field for 1394 bridge testing.	
TSPX_cl_data_1394 CL_DATA_1394	Value of cl data field for 1394 bridge testing.	

Table: B.27 GROUP_JOIN message for the forwarding clock mc group

Name / Type	Comments	Value
TSPX_encryption_proposal_1394_fw ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field for the forwarding clock mc group in case of 1394 testing.	
TSPX_cl_data_1394_fw CL_DATA_1394	Value of cl data field for the forwarding clock mc group in case of 1394 testing.	

Table: B.28 CL_BROADCAST_JOIN message

Name / Type	Comments	Value
TSPX_encryption_proposal2 ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field.	
TSPX_cl_data3 CL_DATA	Value of the cl data field.	

Table: B.29 DFS_MT_INIT_REPORT_REQUEST message

Name / Type	Comments	Value
TSPX_measurement_type MEASUREMENT_TYPE	Value of the measurement_type field.	
TSPX_frequency_index FREQUENCY_INDEX	Content of frequency_index field.	
TSPX_adjacent_ch_interference ADJACENT_CH_INTERFERENCE	Content of adjacent_ch_interference field.	

Table: B.30 DFS_MEASUREMENT_REQUEST message

Name / Type	Comments	Value
TSPX_frequency_index_2 FREQUENCY_INDEX	Value of the frequency_index field for message of type complete, percentiles or short.	
TSPX_use_omni_antenna USE_OMNI_ANTENNA	Value of the use_omni_antenna field for message of type complete, percentiles or short.	
TSPX_start_of_measurement START_OF_MEASUREMENT	Value of the start_of_measurement field for message of type complete, percentiles or short.	
TSPX_measurement_window MEASUREMENT_WINDOW	Value of the measurement_window field for message of type complete, percentiles or short.	
TSPX_maximum_age_of_bch_measurement MAXIMUM_AGE_OF_BCH_MEASUREMENT	Value of the maximum_age_of_bch_mea surement field for message of type complete or short.	
TSPX_rss_index_list RSS_INDEX_LIST	Value of the rss_index_list field for message of type complete.	
TSPX_length_of_measurement NUMBER_OF_SAMPLES	Value of the length_of_measurement field for message of type short.	

Table: B.31 Calibration_measurement_trigger message

Name / Type	Comments	Value
TSPX_trigger_type TRIGGER_TYPE	Value of the trigger_type field for message of type complete.	
TSPX_mac_ids MAC_IDS	Value of the mac_ids field for message of type complete.	

Table: B.32 Sleep message

Name / Type	Comments	Value
TSPX_sleep_group SLEEP_GROUP	Value of the sleep_group field.	
TSPX_care_of_broadcast CARE_OF_BROADCAST	Value of the care_of_broadcast field.	

Table: B.33 MT_ALIVE_REQUEST message

Name / Type	Comments	Value
TSPX_mt_alive_interval MT_ALIVE_INTERVAL	Value of the mt_alive_interval field.	

Table: B.34 HO INFO DISTRIBUTION message

Name / Type	Comments	Value
TSPX_ssk_token SSK_TOKEN	Content of SSK_TOKEN field.	

Table: B.35 BUS_SUSPEND information element

Name / Type	Comments	Value
TSPX_bs_length INTEGER	Content of length field in cl_attributes for IEEE 1394 SSCS.	
TSPX_bs_info OCTETSTRING	Content of informations field in cl_attributes for IEEE 1394 SSCS.	

Table: B.36 BUS_RESUME information element

Name / Type	Comments	Value
TSPX_br_length INTEGER	Content of length field in cl_attributes for IEEE 1394 SSCS.	
TSPX_br_info OCTETSTRING	Content of informations field in cl_attributes for IEEE 1394 SSCS.	
TSPX_br2_length INTEGER	Content of length field in cl_attributes for IEEE 1394 SSCS. The resulting information element shall be different from the first one.	
TSPX_br2_info OCTETSTRING	Content of informations field in cl_attributes for IEEE 1394 SSCS. The resulting information element shall be different from the first one.	

Table: B.37 Parameter for ARQ testing

Name / Type	Comments	Value
TSPX_window_size INTEGER	Value of the window size used for testing the DUC connection (shall be small, i.e 32).	

Table: B.38 Cell convergence layer configuration parameters

Name / Type	Comments	Value
TSPX_cl_tag B_8	CL_tag for Cell common part convergence layer	
TSPX_cl_tag_2 B_8	Second CL_tag for Cell common part convergence layer corresponding to the same DLCC_ID as TSPX_cl_tag (second VCI, VPI)	
TSPX_cl_tag_3 B_8	Third CL_tag for Cell common part convergence layer corresponding to the same DLCC_ID as TSPX_cl_tag (third VCI, VPI)	
TSPX_cl_tag_not B_8	CL_tag for Cell common part convergence layer in case of a non-configured mapping for the DUC_ID (MAC_ID, DLCC_ID) and the CL_Tag.	
TSPX_pt B_3	Payload type for Cell common part convergence layer	
TSPX_clp B_1	Cell loss priority bit for Cell common part convergence layer	

Table: B.39 Implementation options

Name / Type	Comments	Value
TSPX_IEEE BOOLEAN	TRUE if the IUT support the IEEE MT authentication.	
TSPX_ext_IEEE BOOLEAN	TRUE if the IUT support the Extended IEEE MT authentication.	
TSPX_net_acc_id BOOLEAN	TRUE if the IUT support the Net. Acc. Id. MT authentication.	
TSPX_compressed BOOLEAN	TRUE if the IUT support the Compressed MT authentication.	
TSPX_generic BOOLEAN	TRUE if the IUT support the Generic MT authentication.	
TSPX_X509_cert BOOLEAN	TRUE if the IUT support the X509 Cert. MT authentication.	
TSPX_pre_shared BOOLEAN	RUE if the IUT support the Pre. shared AP authentication.	
TSPX_RSH_64 BOOLEAN	TRUE if the IUT support the RSH_64 AP authentication.	
TSPX_RSH_96 BOOLEAN	TRUE if the IUT support the RSH_96 AP authentication.	
TSPX_RSH_128 BOOLEAN	TRUE if the IUT support the RSH_128 AP authentication.	
TSPX_direct_mode BOOLEAN	TRUE if the IUT support the Direct Mode Option.	
TSPX_disa_pwr_off BOOLEAN	TRUE if the IUT support the Disassociation process at power off.	

Annex C (normative): Partial PIXIT proforma for H/2 Common part CL AP

The PIXIT Proforma is based on ISO/IEC 9646-6 [7], where any needed additional information can be found.

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:	TS 101 493-1
Protocol to be tested:	
ATS Specification:	TS 101 811-1-3
Abstract Test Method:	TS 101 811-1-3, 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 – Common part PBCL layer TS 101 493-1
Version:	
PICS References:	

C.6.2 IUT information

Table: C.7 Configuration parameters

Name / Type	Comments	Value
TSPX_net_id1 NET_ID	Value of the NET_ID parameter for the entity 1 of the tester	
TSPX_ap_id1 AP_ID	Value of the AP_ID parameter for the entity 1 of the tester	
TSPX_sector1 SECTOR_ID	Value of the SECTOR_ID parameter for the entity 1 of the tester	
TSPX_number1 SECTOR_ID	Value of the number of sector parameter for the entity 1 of the tester	
TSPX_tx1 AP_TX_LEVEL	Value of the AP_TX_LEVEL parameter for the entity 1 of the tester	
TSPX_rx1 AP_RX_UL_LEVEL	Value of the AP_RX_UL_LEVEL parameter for the entity 1 of the tester	
TSPX_vers1 VERSION	Value of the VERSION parameter for the entity 1 of the tester	
TSPX_load1 AP_TRAFFIC_LOAD	Value of the AP_TRAFFIC_LOAD parameter for the entity 1 of the tester	
TSPX_max1 MAXIMUM_POWER	Value of the MAXIMUM_POWER parameter for the entity 1 of the tester	
TSPX_net_id2 NET_ID	Value of the NET_ID parameter for the entity 2 of the tester	
TSPX_ap_id2 AP_ID	Value of the AP_ID parameter for the entity 2 of the tester	
TSPX_sector2 SECTOR_ID	Value of the SECTOR_ID parameter for the entity 2 of the tester	
TSPX_number2 SECTOR_ID	Value of the number of sector parameter for the entity 2 of the tester	
TSPX_tx2 AP_TX_LEVEL	Value of the AP_TX_LEVEL parameter for the entity 2 of the tester	
TSPX_rx2 AP_RX_UL_LEVEL	Value of the AP_RX_UL_LEVEL parameter for the entity 2 of the tester	
TSPX_vers2 VERSION	Value of the VERSION parameter for the entity 2 of the tester	
TSPX_load2 AP_TRAFFIC_LOAD	Value of the AP_TRAFFIC_LOAD parameter for the entity 2 of the tester	
TSPX_max2 MAXIMUM_POWER	Value of the MAXIMUM_POWER parameter for the entity 2 of the tester	

Table: C.8 General parameters

Name / Type	Comments	Value
TSPX_duc_descr DUC_DESCR	Content of the DUC_DESCR defining full duplex DUC.	
TSPX_mtu_value INTEGER	Value of the maximum transmission unit used by the Convergence Layer to be tested.	
TSPX_lch_phy_mode REPORTED_PHY_MODE	Content of the LCH phy mode for ARQ	
TSPX_sch_phy_mode REPORTED_PHY_MODE	Content of the SCH phy mode for ARQ.	
TSPX_magic MAGIC	Content of the MAGIC field.	
TSPX_opId BOOLEAN	Content of the BOOLEAN field.	
TSPX_macID MAC_ID	Content of the MAC_ID field.	
TSPX_unique_length UNIQUE_LENGTH	Content of the UNIQUE_LENGTH field.	
TSPX_cug C_U_G	Content of the C_U_G field.	
TSPX_op_id_local NETW_OP_ID_LOCAL	Content of the NETW_OP_ID_LOCAL field.	
TSPX_op_id_global NETW_OP_ID_GLOBAL	Content of the NETW_OP_ID_GLOBAL field.	
TSPX_cl_vid_list CL_VID_LIST	Content of the CL_VID_LIST field.	
TSPX_opid_lo_no_match NETW_OP_ID_LOCAL	Value of the Local Op_Id field that does not match with the allowed MT list.	
TSPX_opid_gl_no_match NETW_OP_ID_GLOBAL	Value of the Global Op_Id field that does not match with the allowed MT list.	
TSPX_cl_vid_no_match CL_VID_LIST	Value of the Cl_Vid_list field in which every Cl_Vid does not match with any of the allowed MT list.	

Table: C.9 Specific parameters for testing

Name / Type	Comments	Value
TSPX_apt_address_length1 APT_ADDRESS_LENGTH	Content of the APT_ADDRESS_LENGTH field.	
TSPX_dlc_vers1 DLC_VERSION	Content of the DLC_VERSION field.	
TSPX_rlc_vers1 RLC_VERSION	Content of the RLC_VERSION field.	
TSPX_cl_vid_list1 CL_VID_LIST	Content of the CL_VID_LIST field.	
TSPX_rss_value1 RSS_VALUE	Content of the RSS_VALUE field.	
TSPX_supported64QAM1 SUPPORTED64QAM	Content of the SUPPORTED64QAM field.	
TSPX_direct_mode_cap1 DIRECT_MODE_CAP	Content of the DIRECT_MODE_CAP field.	
TSPX_cyclic_prefix1 CYCLIC_PREFIX	Content of the CYCLIC_PREFIX field.	
TSPX_support_fca1 SUPPORTED_FCA	Content of the SUPPORTED_FCA field.	
TSPX_support_fsa1 SUPPORTED_FSA	Content of the SUPPORTED_FSA field.	
TSPX_ho_cap1 HO_CAP	Content of the HO_CAP field.	
TSPX_cc_ho_cap1 CC_HO_CAP	Content of the CC_HO_CAP field.	
TSPX_time_gap1 TIME_GAP_ACH_UPLINK	Content of the TIME_GAP_ACH_UPLINK field.	
TSPX_duty_cycle1 DUTY_CYCLE	Content of the DUTY_CYCLE field.	
TSPX_arq_delay_rx1 ARQ_DELAY	Content of the RX ARQ_DELAY field.	
TSPX_arq_delay_tx1 ARQ_DELAY	Content of the TX ARQ_DELAY field.	
TSPX_auth_encr_list1 AUTHENTICATION_ENCRYPTION_LIST	Content of the AUTHENTICATION_ENCRYPTION_LIST field.	
TSPX_dm_attributes1 DM_ATTIBUTES	Content of the DM_ATTIBUTES field.	

Table: C.10 Home extension authentication parameters

Name / Type	Comments	Value
TSPX_valid_key VALID_KEY	Content of the valid_key field for authentication.	
TSPX_auth_key_length AUTH_KEY_LENGTH	Content of the auth_key_length field for authentication.	
TSPX_pin_code_length PIN_CODE_LENGTH	Content of the pin_code_length field for authentication.	
TSPX_auth_key AUTH_KEY	Content of the auth_key field for authentication.	
TSPX_pin_code PIN_CODE	Content of the pin_code field for authentication.	
TSPX_mt_id_number_lgth MT_ID_NUMBER_LENGTH	Content of the Length of mt_id_number field for authentication.	
TSPX_mt_id_number MT_ID_NUMBER	Content of the mt_id_number field for authentication.	

Table: C.11 Authentication parameters

Name / Type	Comments	Value
TSPX_auth_content_ieee MT_AUTH_CONTENT	Authentication content for ieee.	
TSPX_auth_ct_ext_ieee MT_AUTH_CONTENT	Authentication content for ext. ieee.	
TSPX_auth_ct_net_acc_id MT_AUTH_CONTENT	Authentication content for net_acc_id. Short length (≤ 46 octets) first part.	
TSPX_auth_ct_net_acc_id_l1 MT_AUTH_CONTENT	Authentication content for net_acc_id. Long length (> 46 octets) first part.	
TSPX_auth_ct_net_acc_id_l2 MT_AUTH_CONTENT	Authentication content for net_acc_id. Long length (> 46 octets) second part.	
TSPX_auth_ct_compressed MT_AUTH_CONTENT	Authentication content for compressed.	
TSPX_auth_ct_generic MT_AUTH_CONTENT	Authentication content for generic. Short length (≤ 46 octets) first part.	
TSPX_auth_ct_generic_l1 MT_AUTH_CONTENT	Authentication content for generic. Long length (> 46 octets) first part.	
TSPX_auth_ct_generic_l2 MT_AUTH_CONTENT	Authentication content for generic. Long length (> 46 octets) second part.	
TSPX_auth_ct_x509_cert MT_AUTH_CONTENT	Authentication content for x509_cert Short length (≤ 46 octets) first part.	
TSPX_auth_ct_x509_cert_l1 MT_AUTH_CONTENT	Authentication content for x509_cert Long length (> 46 octets) first part.	
TSPX_auth_ct_x509_cert_l2 MT_AUTH_CONTENT	Authentication content for x509_cert Long length (> 46 octets) second part.	

Table: C.12 Encryption parameters

Name / Type	Comments	Value
TSPX_PresharedKey B_128	Value of the Pre Shared Key	
TSPX_Rsa512Key B_512	Value of the RSA 512 public Key	
TSPX_Rsa768Key B_768	Value of the RSA 768 public Key	
TSPX_Rsa1024Key B_1024	Value of the RSA 1024 public Key	
TSPX_ApprivateKey B_1_1024	Value of the AP private Key	
TSPX_MtprivateKey B_1_1024	Value of the MT private Key	

Table: C.13 DM COMMON KEY distribution message

Name / Type	Comments	Value
TSPX_ck_encr_info ENCR_INFO	Value of the encr_info field.	
TSPX_ck_key_id KEY_ID	Value of the Key_Id field.	
TSPX_common_key COMMON_KEY	Value of the common key field.	

Table: C.14 COMMON KEY REFRESH message

Name / Type	Comments	Value
TSPX_nonce NONCE	Value of the nonce field.	

Table: C.15 INFO message

Name / Type	Comments	Value
TSPX_cl_data CL_DATA	Value of the cl data field.	
TSPX_dlc_attributes DLC_ATTRIBUTES	Value of the dlc attributes field.	
TSPX_cl_atm_data CL_DATA	Content of the cl data field in case of atm uni SSCS.	
TSPX_cl_atm_hn_data CL_DATA	Content of the cl data field in case of network handover for atm uni SSCS.	
TSPX_cl_eth_data CL_DATA	Content of the cl data field in case of Ethernet SSCS.	
TSPX_cl_eth_hn_data CL_DATA	Content of the cl data field in case of network handover for Ethernet SSCS.	

Table: C.16 TRANS_CC_DATA message

Name / Type	Comments	Value
TSPX_ext_ind EXT_IND	Value of the ext_ind field for CC responsibility handover testing in case of home extension.	
TSPX_data DATA	Value of the data field for CC responsibility handover testing in case of home extension.	

Table: C.17 DM Power Control message

Name / Type	Comments	Value
TSPX_dm_duc_type DM_DUC_TYPE	Content of dm_duc_type field.	
TSPX_wt_tx_level WT_TX_LEVEL	Content of wt_tx_level field.	
TSPX_adjust_tx ADJUST_TX	Content of adjust_tx field.	

Table: C.18 Setup message

Name / Type	Comments	Value
TSPX_cl_id CL_ID	Content of Cl_Id field.	
TSPX_duc_ext_ind DUC_EXT_IND	Content of duc_ext_ind field.	
TSPX_cl_attr_lgth INTEGER	Content of cl_attr_lgth field.	
TSPX_duc_descr_list DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: C.19 DM_Setup message

Name / Type	Comments	Value
TSPX_peer_mac_id MAC_ID	Content of perr_mac_id field.	
TSPX_cl_common_attr CL_COMMON_ATTR	Content of cl_common_attr field.	

Table: C.20 DM MC Setup message

Name / Type	Comments	Value
TSPX_extension_type EXTENSION_TYPE	Content of extension_type field.	
TSPX_min_req_receivers INTEGER	Content of min_req_receivers field.	

Table: C.21 Modify Req message

Name / Type	Comments	Value
TSPX_duc_ext_ind2 DUC_EXT_IND	Content of duc_descr_ind field.	
TSPX_cl_attr_lgth2 INTEGER	Content of cl_attr_lgth field.	
TSPX_duc_descr_list2 DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: C.22 DM Modify Req message

Name / Type	Comments	Value
TSPX_cl_attr_lgth3 INTEGER	Content of cl_attr_lgth field.	
TSPX_duc_descr_list3 DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: C.23 DM MC Modify Req message

Name / Type	Comments	Value
TSPX_cl_attr_lgth4 INTEGER	Content of cl_attr_lgth field.	
TSPX_start_mac_frame START_MAC_FRAME	Content of start_mac_frame field.	
TSPX_duc_descr_list4 DUC_DESCR_LIST	Content of duc_descr_list field.	

Table: C.24 GROUP_JOIN message

Name / Type	Comments	Value
TSPX_encryption_proposal ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field.	
TSPX_cl_data2 CL_DATA	Value of the cl data field.	

Table: C.25 GROUP_JOIN message for home extension

Name / Type	Comments	Value
TSPX_encryption_prop_HE ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field for home extension testing.	
TSPX_cl_data_HE CL_DATA	Value of the cl data field for home extension testing.	

Table: C.26 GROUP_JOIN message for 1394 bridge

Name / Type	Comments	Value
TSPX_encryption_proposal_1394 ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field for 1394 bridge testing.	
TSPX_cl_data_1394 CL_DATA_1394	Value of cl data field for 1394 bridge testing.	

Table: C.27 GROUP_JOIN message for the forwarding clock mc group

Name / Type	Comments	Value
TSPX_encryption_proposal_1394_fw ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field for the forwarding clock mc group in case of 1394 testing.	
TSPX_cl_data_1394_fw CL_DATA_1394	Value of cl data field for the forwarding clock mc group in case of 1394 testing.	

Table: C.28 CL_BROADCAST_JOIN message

Name / Type	Comments	Value
TSPX_encryption_proposal2 ENCRYPTION_ALGORITHM_PROPOSAL	Value of the encryption algorithm proposal field.	
TSPX_cl_data3 CL_DATA	Value of the cl data field.	

Table: C.29 DFS_MT_INIT_REPORT_REQUEST message

Name / Type	Comments	Value
TSPX_measurement_type MEASUREMENT_TYPE	Value of the measurement_type field.	
TSPX_frequency_index FREQUENCY_INDEX	Content of frequency_index field.	
TSPX_adjacent_ch_interference ADJACENT_CH_INTERFERENCE	Content of adjacent_ch_interference field.	

Table: C.30 DFS_MEASUREMENT_REQUEST message

Name / Type	Comments	Value
TSPX_frequency_index_2 FREQUENCY_INDEX	Value of the frequency_index field for message of type complete, percentiles or short.	
TSPX_use_omni_antenna USE_OMNI_ANTENNA	Value of the use_omni_antenna field for message of type complete, percentiles or short.	
TSPX_start_of_measurement START_OF_MEASUREMENT	Value of the start_of_measurement field for message of type complete, percentiles or short.	
TSPX_measurement_window MEASUREMENT_WINDOW	Value of the measurement_window field for message of type complete, percentiles or short.	
TSPX_maximum_age_of_bch_measurement MAXIMUM_AGE_OF_BCH_MEASUREMENT	Value of the maximum_age_of_bch_measurement field for message of type complete or short.	
TSPX_rss_index_list RSS_INDEX_LIST	Value of the rss_index_list field for message of type complete.	
TSPX_length_of_measurement NUMBER_OF_SAMPLES	Value of the length_of_measurement field for message of type short.	

Table: C.31 Calibration_measurement_trigger message

Name / Type	Comments	Value
TSPX_trigger_type TRIGGER_TYPE	Value of the trigger_type field for message of type complete.	
TSPX_mac_ids MAC_IDS	Value of the mac_ids field for message of type complete.	

Table: C.32 Sleep message

Name / Type	Comments	Value
TSPX_sleep_group SLEEP_GROUP	Value of the sleep_group field.	
TSPX_care_of_broadcast CARE_OF_BROADCAST	Value of the care_of_broadcast field.	

Table: C.33 MT_ALIVE_REQUEST message

Name / Type	Comments	Value
TSPX_mt_alive_interval MT_ALIVE_INTERVAL	Value of the mt_alive_interval field.	

Table: C.34 HO INFO DISTRIBUTION message

Name / Type	Comments	Value
TSPX_ssk_token SSK_TOKEN	Content of SSK_TOKEN field.	

Table: C.35 BUS_SUSPEND information element

Name / Type	Comments	Value
TSPX_bs_length INTEGER	Content of length field in cl_attributes for IEEE 1394 SSCS.	
TSPX_bs_info OCTETSTRING	Content of informations field in cl_attributes for IEEE 1394 SSCS.	

Table: C.36 BUS_RESUME information element

Name / Type	Comments	Value
TSPX_br_length INTEGER	Content of length field in cl_attributes for IEEE 1394 SSCS.	
TSPX_br_info OCTETSTRING	Content of informations field in cl_attributes for IEEE 1394 SSCS.	
TSPX_br2_length INTEGER	Content of length field in cl_attributes for IEEE 1394 SSCS. The resulting information element shall be different from the first one.	
TSPX_br2_info OCTETSTRING	Content of informations field in cl_attributes for IEEE 1394 SSCS. The resulting information element shall be different from the first one.	

Table: C.37 Parameter for ARQ testing

Name / Type	Comments	Value
TSPX_window_size INTEGER	Value of the window size used for testing the DUC connection (shall be small, i.e 32).	

Table: C.38 Cell convergence layer configuration parameters

Name / Type	Comments	Value
TSPX_cl_tag B_8	CL_tag for Cell common part convergence layer	
TSPX_cl_tag_2 B_8	Second CL_tag for Cell common part convergence layer corresponding to the same DLCC_ID as TSPX_cl_tag (second VCI, VPI)	
TSPX_cl_tag_3 B_8	Third CL_tag for Cell common part convergence layer corresponding to the same DLCC_ID as TSPX_cl_tag (third VCI, VPI)	
TSPX_cl_tag_not B_8	CL_tag for Cell common part convergence layer in case of a non-configured mapping for the DUC_ID (MAC_ID, DLCC_ID) and the CL_Tag.	
TSPX_pt B_3	Payload type for Cell common part convergence layer	
TSPX_clp B_1	Cell loss priority bit for Cell common part convergence layer	

Table: C.39 Implementation options

Name / Type	Comments	Value
TSPX_IEEE BOOLEAN	TRUE if the IUT support the IEEE MT authentication.	
TSPX_ext_IEEE BOOLEAN	TRUE if the IUT support the Extended IEEE MT authentication.	
TSPX_net_acc_id BOOLEAN	TRUE if the IUT support the Net. Acc. Id. MT authentication.	
TSPX_compressed BOOLEAN	TRUE if the IUT support the Compressed MT authentication.	
TSPX_generic BOOLEAN	TRUE if the IUT support the Generic MT authentication.	
TSPX_X509_cert BOOLEAN	TRUE if the IUT support the X509 Cert. MT authentication.	
TSPX_pre_shared BOOLEAN	RUE if the IUT support the Pre. shared AP authentication.	
TSPX_RSH_64 BOOLEAN	TRUE if the IUT support the RSH_64 AP authentication.	
TSPX_RSH_96 BOOLEAN	TRUE if the IUT support the RSH_96 AP authentication.	
TSPX_RSH_128 BOOLEAN	TRUE if the IUT support the RSH_128 AP authentication.	
TSPX_direct_mode BOOLEAN	TRUE if the IUT support the Direct Mode Option.	
TSPX_disa_pwr_off BOOLEAN	TRUE if the IUT support the Disassociation process at power off.	

Annex D (normative): PCTR Proforma for H/2 Common part CL MT

The PCTR proforma is based on ISO/IEC 9646-6 [7], where any needed additional information can be found.

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 in the present document) and there are no "FAIL" verdicts to be recorded (in clause D.6 in 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 clause 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-CPP-SS-CA-000	Yes/No	Yes/No		
TC-MT-CPP-SS-CA-001	Yes/No	Yes/No		
TC-MT-CPP-SS-CA-002	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-000	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-001	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-002	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-003	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-004	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-005	Yes/No	Yes/No		
TC-MT-CPP-RS-CA-006	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 Common part CL AP

The PCTR proforma is based on ISO/IEC 9646-6 [7], where any needed additional information can be found.

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 in the present document) and there are no "FAIL" verdicts to be recorded (in clause D.6 in 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 clause 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-CPP-SS-CA-000	Yes/No	Yes/No		
TC-AP-CPP-SS-CA-001	Yes/No	Yes/No		
TC-AP-CPP-SS-CA-002	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-000	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-001	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-002	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-003	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-004	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-005	Yes/No	Yes/No		
TC-AP-CPP-RS-CA-006	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
V1.1.1	January 2001	Publication as EN 301 811-1-3
V1.2.1	December 2001	Publication