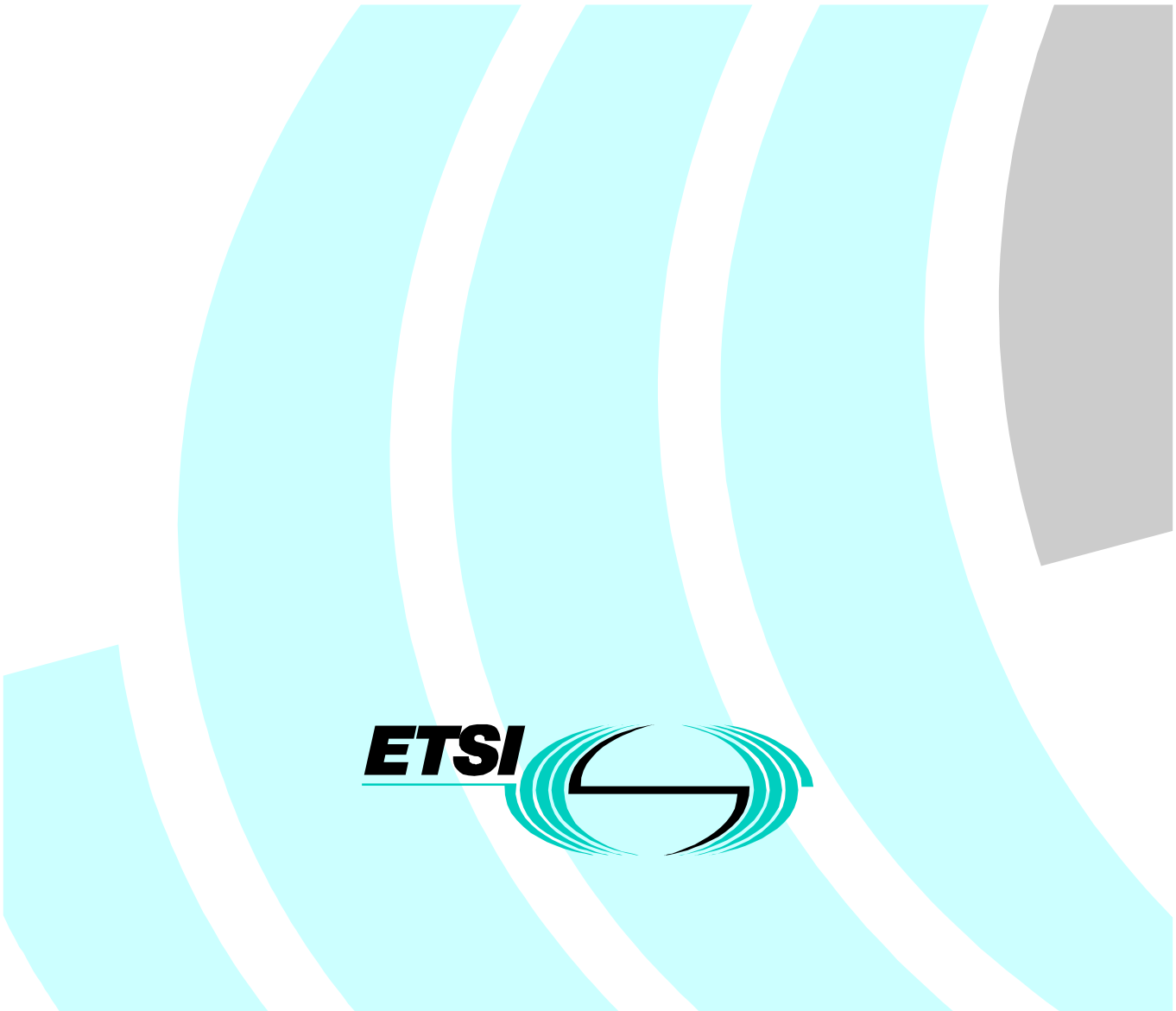
ETSI TS 101 808-9 V1.1.1 (2000-09)

Technical Specification

Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)



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Contents

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Foreword

This Technical Specification (TS) has been produced by ETSI Project Digital Enhanced Cordless Telecommunications (DECT).

The present document is part 9 of a multi-part deliverable covering the Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS); Test Case Library (TCL), as identified below:

Part 1: "Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer";

Part 2: "Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Cordless Radio Fixed Part Portable radio Termination (CRFP_PT)";

Part 3: "Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)";

Part 4: "Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer";

Part 5: "Abstract Test Suite (ATS) - Data Link Control (DLC) layer; Cordless Radio Fixed Part Portable radio Termination (CRFP_PT)";

Part 6: "Abstract Test Suite (ATS) - Data Link Control (DLC) layer; Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)";

Part 7: "Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer";

Part 8: "Abstract Test Suite (ATS) for Network (NWK) layer - Cordless Radio Fixed Part Portable radio Termination (CRFP_PT)";

Part 9: "Abstract Test Suite (ATS) for Network (NWK) layer - Cordless Radio Fixed Part Fixed radio Termination (CRFP_FT)".

1 Scope

The present document contains the Abstract Test Suite (ATS) specification to test the DECT Wireless Relay Station (WRS) Network (NWK) layer at the Fixed radio Termination (FT).

The objective of the present document is to provide a basis for conformance tests for DECT equipment giving a high probability of air interface inter-operability between different manufacturer's DECT equipment.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [7] and ISO/IEC 9646-2 [8]) as well as the ETSI rules for conformance testing (ETS 300 406 [5]) are used as a basis for the test methodology.

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

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

Annex C provides the Protocol Conformance Test Report (PCTR) Proforma of this 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 EN 300 175-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) Layer".

[2] ETSI EN 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) Layer".

[3] ETSI EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) Layer".

[4] ETSI EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and Addressing".

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

[6] ETSI EN 300 700 (1999): "Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)".

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

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

[9] ISO/IEC 9646-3 (1998): "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)).

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

[11] 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 following terms and definitions apply:

a) the terms given in ISO/IEC 9646-1 [7];

b) the definitions given in EN 300 175-3 [1]; and

c) the PT side of the WRS is called WRS_PT side. The FT side of the WRS is called WRS_FT side.

3.2 Abbreviations

For the purposes of the present document, the abbreviations given in ISO/IEC 9646-1 [7], ISO/IEC 9646-6 [10], ISO/IEC 9646-7 [11] and given in EN 300 175-3 [1] apply. In particular, the following abbreviations apply:

ASP	Abstract Service Primitive
ATM	Abstract Test Method
ATS	Abstract Test Suite
BI	Invalid Behaviour
BO	Inopportune Behaviour
BV	Valid Behaviour
CA	Capability tests
CP	Co-ordination Point
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control
FP	Fixed Part
FT	Fixed radio Termination
IUT	Implementation Under Test
LT	Lower Tester
MAC	Medium Access Control
PCO	Point of Control and Observation
PDU	Protocol Data Unit
PHL	Physical Layer
PICS	Protocol Implementation Conformance Statement
PT	Portable radio Termination
RF	Radio Frequency
RFP	Radio Fixed Part
SAP	Service Access Point
SUT	System Under Test
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 DECT NWK layer protocol at the Fixed radio Termination (FT).

4.1 Description of ATM

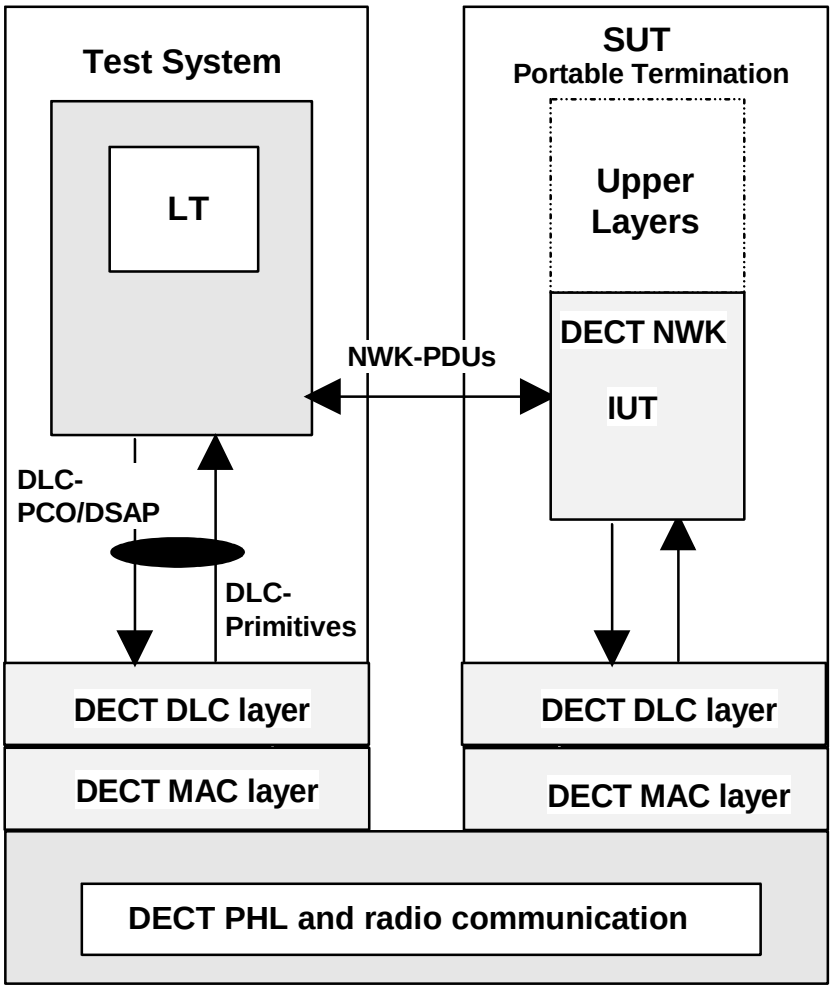

Figure 1: Remote single layer test method embedded variant

LT: a lower tester (LT) is located in a remote DECT test system. It controls and observes the behaviour of the Implementation Under Test (IUT).

DSAP: a unique Data Link Control (DLC) SAP is defined at the DECT interface and used to exchange service data of the NWK protocol.

PCO: the PCO for Network Layer testing is located on the DSAP. All test events at the PCO are specified in terms of DLC Abstract Service Primitives (ASPs) and NWK Protocol Data Units (PDUs).

Upper layers / tester: no explicit Upper Tester (UT) exists in the test system. However, the System Under Test (SUT) needs to carry out some UL functions to achieve some effects of test co-ordination procedures. Designing ATS, the capability of the Interworking Unit (IWU), such as PSTN, ISDN or GSM IWUs might be taken into account. An example of such controls could be to provoke restarting of the IUT through the Q interface.

The DLC primitives are defined according to EN 300 175-4 [2] associated clauses and subclauses.

5 Untestable Test Purposes (TP)

Due to the ATM chosen for this ATS or other restrictions, the test purposes in table 1 have been identified as being in the untestable category, and therefore have not been derived into final test case:

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 describe also the conventions made for the development of the ATS. Thus for any later maintenance purposes or further development of the ATS the conventions described in this clause shall be considered.

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 guideline of the documents ETS 300 406 [5] was considered.

6.1 Naming conventions

6.1.1 Declarations part

Subclause 6.1.1 describes the naming conventions chosen for the elements of the ATS declarations part. The following general rules apply:

- identifiers shall be written in lowercase;
- type declarations shall be written in uppercase;
- constraints shall be written with the first letter in uppercase, and the rest in lowercase.

Information elements are coded in the order from top to bottom and from right to left, in order to make the encoding and decoding easier.

6.1.1.1 Test suite type, ASP and PDU type definitions

The test suite type-definitions, the ASP type definitions and the PDU type definitions shall be written in uppercase. Identifier names of structured type definitions and of the ASP and PDU type definitions, shall be written in lowercase.

Types related to a certain higher layer entity shall commence with a protocol identifier to define which entity they belong to.

EXAMPLE 1: Call Control: cc e.g. CC_SETUP.

Id names of Structured Types, which are used for invalid tests, commence with "bi".

EXAMPLE 2: Bi_cc_setup_tx01.

The following ASP primitives are not defined in the present document:

- DL_UNIT_DATA;
- DL_SUSPEND;
- DL_RESUME;
- DL_EXPEDITED.

The following primitives are defined, but not used in this test suite:

- DL_BROADCAST_IND;
- DL_ESTABLISH_CFM;
- DL_ESTABLISH_RES.

6.1.1.2 Test Suite Operations (TSO) definitions

The TSO identifiers are composed of a string in uppercase letters starting by the string "TSO_" (e.g. TSO_INTEGER_TO_O_1).

6.1.1.3 Test suite selection expressions

All selection expression names for test groups are to be preceded with the prefix "SENG_".

All selection expression names for test cases are to be preceded with the prefix "SENC_".

6.1.1.4 Test Suite Parameter (TSP) declarations

The TSP identifiers are composed of a string in uppercase letters starting by the string "TSP_" (e.g. TSP_WINDOW_SIZE).

If the TSP references a Protocol Implementation Conformance Statement (PICS) item, the letter "C" is added to the standard prefix (e.g. TSPC_PICS_ITEM_S23).

If the TSP references a PIXIT item, the letter "X" is added to the standard prefix (e.g. TSPX_PIXIT_ITEM_2).

Exception: If the TSP represents a system parameter or value, only the name defined in the specifications is used (e.g. V_S = send sequence variable).

Complete names as defined in the specifications are used.

6.1.1.5 Test Case Selection (TCS) expression definitions

The naming conventions for the TCS expression definitions use almost the same rules as the TSP, except for the prefix that is "TCS_". Also they are logical combinations of the TSP definitions.

6.1.1.6 Test Suite Constant (TSC) declarations

The TSC identifiers are composed of a string in uppercase letters starting by the string "TSC_" (e.g. TSC_RETRY).

Exception: If the TSC represents a system parameter or value, only the name defined in the specifications is used (e.g. N250).

Complete names as defined in the specifications are used.

6.1.1.7 Test Suite Variable (TSV) declarations

The TSV identifiers are composed of a string in uppercase letters starting by the string "TSV_".

Complete names as defined in the specifications are used.

6.1.1.8 Test Case Variable (TCV) declarations

The TCV identifiers are composed of a string in uppercase letters starting by the string "TCV_".

EXAMPLE: TCV_CRVALUE.

Complete names as defined in the specifications are used.

6.1.1.9 Point of Control and Observation (PCO) declarations

The PCO identifiers are composed of two or four capital letters, beginning with "L", as there are only LTs.

EXAMPLE: LMAC represents a PCO on Medium Access Control (MAC) interface as LT in the test equipment;
LDLC represents a PCO on DLC interface as LT in the test equipment.

6.1.1.10 Timer declarations

Two types of timers can be identified:

1) standardized:

- those defined in the standard, e.g. T302. They use exactly the same name as in the standard, beginning with a capital "T";
- 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: T302_max, T302_min, and T302.

2) not standardized:

- those not defined in the 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 capital letters.

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

6.1.1.11 ASP type definitions

The identifier of an ASP uses exactly the same name as the name defined in the specifications. It is written in uppercase, finishing by an underscore character ("_"), and three capital letters indicating whether it is a request, an indication, a response or a confirmation primitive.

EXAMPLE: DL-RELEASE_REQ for an ASP containing a layer 3 release request passed to layer 2;
MAC-CO_DATA_REQ for an ASP containing a layer 2b PDU passed to layer 2a.

6.1.1.12 PDU type definitions

The identifier of a PDU is given in a string in uppercase letters, representing the layer message.

EXAMPLE 1: rr for the Receive Ready layer 2 message;
disconnect for the DISCONNECT layer 3 message.

Where the message is a composite word, an underscore character ("_") appears in the string.

EXAMPLE 2: release_complete is the RELEASE COMPLETE layer 3 message.

Id names of PDUs commence with a protocol identifier to define which protocol they belong to. The following identifiers are used:

- Call Control (CC): cc e.g. CC-SETUP.

Id names of PDUs, which are used for invalid tests, commence with "bi":

EXAMPLE 3: BI-CC-SETUP.

6.1.1.13 Alias definitions

These are used to make the sending and receiving of PDUs within ASPs more understandable when writing the dynamic part of the test suite. This is done by giving the ASP an alias. The alias name indicates the PDU carried by the ASP and whether it is sent or received by the tester.

The identifier of an alias consists of a string in capital letters indicating the message, followed by two lowercase letters "r" or "s" indicating if the message should be sent or received by the tester.

6.1.2 Constraints part

Subclause 6.1.2 describes the naming conventions chosen for the elements of the ATS constraints part.

Constraint identifiers commence with uppercase. The remaining part of the identifier name is written in lowercase.

Identifier names of elements concerning the same subject have equivalent names in the Declaration and the Constraint part:

- declaration Part: cc_setup;
- constraint Part: cc_setup.

The name of the modified constraint describes the particularity of the modified constraint.

EXAMPLE: Cc_setup_mand_only (modified Cc_setup with only the mandatory Information Elements).

If formal parameter lists are used, the variable names are written in lowercase. The variable name is the same as the name of the element it is representing.

Structured type constraints declarations are divided into:

- receive constraints:
  - the receive constraints are noted down as "name_rx*". The receive constraints are subdivided into:
    - receive base constraints:
      - they are noted down as "name_rx_base";
    - receive special constraints:
      - they are noted down as "name_rx_<extension>", where <extension> is a descriptive name (e.g. "Signal_rx_alerting_on");
- transmit constraints:
  - the transmit constraints are noted down as "name_tx_<extension>", where <extension> is a descriptive name. (e.g. "Signal_tx_alerting_off");

If a certain structured type constraint is valid for both receiving and transmitting, because it contains no wildcards, and the receiving constraint should exactly match, the constraint will be noted down as:

- "<structured_type_name>_extention";

EXAMPLE: "Portable_id_ipui".

PDU Constraints Declarations are divided into:

- receive constraints:
  - the receive constraints are noted down as "name_rx*". The receive constraints are subdivided into:
    - receive base constraints:
      - they are noted down as "name_rx_base". They constrain all allowed values, and for the optional fields, the "IF_PRESENT" keyword is added;
    - receive special constraints:
      - they are noted down as "name_rx0n", where n is a sequence number;
- transmit constraints:
  - the transmit constraints are noted down as "name_tx", where n is a sequence number. They can be subdivided into:
    - transmit base constraints:
      - they are noted down as "name_tx_base". They constrain all mandatory fields to all allowed values in the standard, and they constrain all optional fields to "OMIT";
    - transmit special constraints:
      - they are noted down as "name_tx0n" where n is a sequence number. They shall not contain any wildcards.

Derived constraints shall not be more than 1 level deep. They shall only be derived directly from the base constraint.

The test suite is not ready yet to handle PDU's with empty information elements. For every receive constraint, also a information element constraint with an empty parameter list should be added.

6.1.3 Dynamic part

Subclause 6.1.3 describes the naming conventions chosen for the elements of the ATS dynamic part.

6.1.3.1 Test Case (TC) identifier

The identifier of a test case is built according to table 2.

Table 2: Test Case (TC) naming convention

Identifier: TC-FT-<fm>-<x>-<s>-<nn>			
<fm>	= functional module	MM ME	Mobility Management. Portable radio Termination.
x	= Type subgroup	AR CH BH	Access Rights Ciphering Bearer handover Empty
s	= Type of testing	BV	BV, Valid Behaviour tests
<nn>	= sequential number	(WRS00 - WRS99, FT00 – FT99)	test case Number

6.1.3.2 Test Step (TS) identifier

The TS identifier is built with two strings of capital letters joined by underscore character. The first string indicates the main function of the TS, e.g. PR for preamble, PO for postamble, CS for check state and STP for general step. The second string indicates the meaning of the step.

In some TCs, test steps as well as local trees can be used. To allow an easy distinguishing of them the following naming applies:

- LTS_[local_tree_name] local tree;

- STP_[test_step_name] test step.

TSs are grouped together according to their functionality: CC, MM, LC or ME.

6.1.3.3 Default identifier

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

6.1.3.4 General aspects

Final verdicts will only be assigned in defaults and in postambles.

All verdict assignments are labelled. To allow an exact identification in which table the verdict was assigned, the following name convention is applied:

B	test Body
CS	Check State test steps
D	Default
E	Error handling test steps
PO	POstamble
PR	PReamble
S	test Step

Also combinations of labels are possible:

EXAMPLE: DPR → label which is used in a default for preambles.

6.1.3.5 ATS abbreviations

These abbreviations are used to shorten identifier names:

ack	acknowledgement
algo	algorithm
auth	authentication
cc	call control
cfm	confirm
est	establish
ext	extension
id	identification
ind	indication
info	information
max	maximum
min	minimum
prop	proprietary
req	request
res	response

The following keywords will NOT be abbreviated in identifier names:

address(es);
attribute(s);
character(s);
identity;
number(s).

6.2 Implementation conventions

6.2.1 Declaration part

The comment line of single element Tree and Tabular Combined Notation (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 specifications. 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. ASPs) is used to reference to the protocol specification. The detailed comments are used to describe any particularity of the table.

In the ASP and PDU declarations, the comment column is used to identify if an element is mandatory or optional:

- m: mandatory;
- o: optional.

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

In tables where structure types are used the information element and the relevant structured type have always the same name, that allows to have the same structure as in the protocol standards is used to document the relation between information elements in a table and their specific description in an other clause of the protocol standard.

The following conventions apply to identifier names in the Structured Type definitions part:

- bits of bit sequences having a fixed value, meant to fill up the octet, are called fn, where n stands for the octet number;
- extension flags, will be called extn, where n stands for the octet number.

6.2.2 Constraint part

The ASPs and PDUs are defined in a way that all relevant element 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 DECT profile test specifications.

The comment line of a constraint contains always the reference to the used specifications.

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

6.2.3 Dynamic part

Some TCs need a particular initialization of the IUT environment conditions to run the actual test, e.g. for testing re-provisioning procedures. Such message sequence can be quite complicated and long. In cases where a Local Test Step (LTS) facilitates the TC structure, the preamble and the condition setting are described in a LTS.

Some TCs need after the actual test a particular re-initialization of the IUT, e.g. after re-provisioning. Such message sequence can be quite complicated and long. In cases where a Local Test Step (LTS) facilitates the TC structure, the postamble and the re-initialization are described in a LTS.

All LTS are described in the detailed comment part of the TTCN table.

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

All invalid events are handled in the default tree. FAIL verdicts are only assigned in the default tree.

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

Test steps do not contain default. That allows applying them with no restrictions regarding the error handling.

All verdict assignments are labelled. According to ISO/IEC 9646-3 [9], annex E.2, labels should be written to the conformance log. This allows identifying were the test failed. To allow an exact identification in which table the verdict was assigned, the naming convention as described in subclause 6.1.3.3 is applied.

The labels of the same type are numbered sequentially if they are in the same TC, test step or default.

TP, which are listed in the untestable TP list in clause 5, or which reference to an other TP, e.g. BV TP which were already defined as CA TP, are not considered in the ATS, thus these TC identifiers are missing in the ATS and the numbering of the TCs is not always continues.

6.2.4 Documentation

The comment line of the TC or test step header contains a reference to the relevant protocol specification.

The comment column of the dynamic behaviour part is used to number the test events, which are relevant for the particular test or test operation.

Based on the numbering in the comment column all for the TC relevant events are described in the Detailed Comments part of each TTCN table.

Test procedures, which cover a conformance requirement and lead to a preliminary or final verdict assignment, are described as follows in the Detailed Comments part:

- expected event: a specific receive event is expected;
- expected behaviour: no event or a timer expiry is expected;
- expected status: the IUT is expected to be in a particular status.

7 Test case and test purpose mapping

There is a one-to-one mapping between the test case identifiers and the test purpose identifiers. Examples of the correspondence rule are given in the following table:

Table 3: Test case and test purpose mapping

Test purpose identifier	Test case identifier
TP/FT/MM/AR/BV-WRS00	TC-FT-MM-AR-BV-WRS00
TP/FT/MM/CH/BV-FT02	TC-FT-MM-CH-BV-FT02
TP/FT/ME/BH/BV-FT04	TC-FT-ME-BH-BV-FT04

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 [9].

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 an Adobe Portable Document Format™ file (1808p9v01.PDF contained in archive ts_10180809v010101p0.ZIP) which accompanies the present document.

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

The TTCN.MP representation corresponding to this ATS is contained in an ASCII file (1808p9v01.MP contained in archive ts_10180809v010101p0.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 DECT WRS NWK FT

The PIXIT proforma is based on ISO/IEC 9646-6. Any additional needed 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:	EN 300 700
Protocol to be tested:	
ATS Specification:	TS 101 808-9
Abstract Test Method:	TS 101 808-9 clause 4

B.3 Test laboratory

Table B.3

Test Laboratory Identification:	
Test Laboratory Manager:	
Means of Testing:	
Service Access Point (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:	DECT - NWK Layer - EN 300 700
Version:	
PICS References:	

B.6.2 IUT information

Table B.7: General configuration

Item	Parameter	Parameter type	Explanation and EN reference	Value
1	TSPX_mmproc_arte_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the access rights terminate procedure. Values are: 0 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.1 (not using protocol stimuli) after a link has been established by the LT; 1 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.1 (not using protocol stimuli), when there is no link established by the LT; 2..10 - reserved Ref. EN 300 175-5, subclause 13.5.2	
2	TSPX_mmproc_cift_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the FT initiated ciphering procedure (enabling and disabling). Values are: 0 - for IUT that will initiate the procedure immediately when the IUT enters the state specified by TSPX_mmproc_cift_ccstate; 1 - for IUT that will initiate the procedure when it receives a Cipher-Suggest message from the LT specifying cipher enable or disable as required by the test context; 2..10 reserved Ref. EN 300 175-5, subclause 13.8	
3	TSPX_nr_of_digits_in_cpn	CPN_LENGTH_TYPE	This parameter is related to parameter TSPX_called_party_number. It specifies the actual number of digits present in the cpn.	
4	TSPX_mmproc_arte_revoke	MMPROC_TYPE	Indicates the way of revoking the access rights of a PT. Values are: 0 - the procedure for invoking the termination of access rights is used, see PIXIT question B.7.8; 1 - the access rights are revoked in a proprietary way by the operator on request from the test system;	
5	TSPX_some_digits	DECT_1_255	A short valid sequence of dialled digits to be used with the tests for dialling pause, go to DTMF, etc.	
6	TSPX_some_digits_length	OCT_1	The number of digits in TSPX_some_digits	
7	TSPX_ft_testing	BOOLEAN	True if FT is tested. False if CRFP_FT side is tested.	
8	TSPX_PT_DCK_stored	BOOLEAN	The PT is subscribed by the test operator to the FT. If during this subscription a DCK has been derived, this item shall be set to YES. After the subscription, the valid IPUI of the PT has also to be entered as a parameter	

Table B.8: Addresses

Item	Address name	Parameter type	Explanation and EN reference	Value
1	TSPX_PT_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
2	TSPX_CRFP_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
3	TSPX_CRFP_user1_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
4	TSPX_CRFP_user2_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
5	TSPX_CRFP_user3_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
6	TSPX_CRFP_user4_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
7	TSPX_CRFP_user5_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
8	TSPX_CRFP_user6_decimal_ac_value	OCT_4 (OCTETSTRING[2])	Value of AC to be used. The AC will be entered as maximal 8 decimal digits. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring.	
9	TSPX_PT_complete_fixed_id_ari_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed identity to be used in case of ARI, consisting of the ARI preceded by a fill bit of '0'. This will be 37 bits long in the case of ARI A and 32 bits long in all other cases. Ref. EN 300 175-5, subclause 7.7.18	
10	TSPX_CRFP_complete_fixed_id_ari_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed identity to be used in case of ARI, consisting of the ARI preceded by a fill bit of '0'. This will be 37 bits long in the case of ARI A and 32 bits long in all other cases. Ref. EN 300 175-5, subclause 7.7.18	
11	TSPX_PT_complete_fixed_id_ari_rpn_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed identity to be used in case of ARI + RPN, consisting of a fill bit of 0, the ARI and then the RPN. This will always be 40 bits long. Ref. EN 300 175-5, subclause 7.7.18	
12	TSPX_CRFP_complete_fixed_id_ari_rpn_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed identity to be used in case of ARI + RPN, consisting of a fill bit of 0, the ARI and then the RPN. This will always be 40 bits long. Ref. EN 300 175-5, subclause 7.7.18	

13	TSPX_PT_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPUI to be used. (After subscription). WRS Ref. EN 300 175-5, subclause 7.7.30	
14	TSPX_number_of_IPEIs	INTEGER	Number of IPEIs.	
15	TSPX_PT_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. Ref. EN 300 175-5, subclause 7.7.30	
16	TSPX_CRFP_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
17	TSPX_CRFP2_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
18	TSPX_CRFP_user1_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
19	TSPX_CRFP_user2_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
20	TSPX_CRFP_user3_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
21	TSPX_CRFP_user4_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
22	TSPX_CRFP_user5_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
23	TSPX_CRFP_user6_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be expected from the IUT (before subscription). Fill up to 40 bits, with leading zeros. WRS Ref. EN 300 175-5, subclause 7.7.30	
24	TSPX_CRFP_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	
25	TSPX_CRFP_user1_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	
26	TSPX_CRFP_user2_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	

27	TSPX_CRFP_user3_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	
28	TSPX_CRFP_user4_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	
29	TSPX_CRFP_user5_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	
30	TSPX_CRFP_user6_ipui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of International Portable User Identity (IPUI) to be used by the PT (LT) (after subscription). The 4 first bits represent the type of IPUI. The following bits are the IPUI coded in BCD or in binary depending on the type. Ref. EN 300 175-5, subclause 7.7.30	
31	TSPX_location_area_level	BIT_6 (BITSTRING[4])	The location area level that is going to be used. Ref. EN 300 175-5, subclause 7.7.25	
32	TSPX_PT_complete_fixed_id_park_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed_id to be used in case of Portable Access Rights Key (PARK). In the case of PARK A it consists of a fill bit of '0'B the PARK and then fill bits '000'B making a total of 40 bits. In other cases it consists of a fill bit of '0'B then the PARK making a total of 32 bits. Ref. EN 300 175-5, subclause 7.7.18	
33	TSPX_CRFP_complete_fixed_id_park_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed_id to be used in case of Portable Access Rights Key (PARK). In the case of PARK A it consists of a fill bit of '0'B the PARK and then fill bits '000'B making a total of 40 bits. In other cases it consists of a fill bit of '0'B then the PARK making a total of 32 bits. Ref. EN 300 175-5, subclause 7.7.18	
34	TSPX_PT_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
35	TSPX_CRFP_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
36	TSPX_CRFP_user1_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
37	TSPX_CRFP_user2_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
38	TSPX_CRFP_user3_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	

39	TSPX_CRFP_user4_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
40	TSPX_CRFP_user5_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
41	TSPX_CRFP_user6_tpui_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of tpui to be used by the PT(LT). 20 bits value is required. Ref. EN 300 175-5, subclause 7.7.30	
42	TSPX_decimal_upi_value	OCT_4 (OCTETSTRING[2])	For WRS. Value of UPI to be used. The UPI will be entered as maximal 8 decimal digits. The UPI to bitstring mapping will be done with operator TSO_cinft_convert_upi_to_bitstring.	
43	TSPX_PT_decimal_upi_value	OCT_4 (OCTETSTRING[2])	For PT. Value of UPI to be used. The UPI will be entered as maximal 8 decimal digits. The UPI to bitstring mapping will be done with operator TSO_cinft_convert_upi_to_bitstring.	
44	SPX_PT_park_length_indicator	INTEGER	The number of significant bits of the PARK value (PLI).	
45	PX_CRFP_park_length_indicator	INTEGER	The number of significant bits of the PARK value (PLI) WRS.	
46	TSPX_PT_ari_length_indicator	INTEGER	The number of significant bits of the ARI value.	
47	TSPX_CRFP_ari_length_indicator	INTEGER	The number of significant bits of the ARI value.	
48	TSPX_called_party_number	OCT_1_14	The called party number to be dialled by the PT (LT) in order to get connection to the network. For practical reasons, the number is limited to 14 digits,	

Annex C (normative): Protocol Conformance Test Report (PCTR) proforma for DECT WRS NWK FT

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

C.1 Identification summary

C.1.1 Protocol conformance test report

Table C.1

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

C.1.2 IUT identification

Table C.2

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

C.1.3 Testing environment

Table C.3

PIXIT Number:	
ATS Specification:	
Abstract Test Method:	Remote test method, Embedded variant with no UT
Means of Testing identification:	
Date of testing:	
Conformance Log reference(s):	
Retention Date for Log reference(s):	

C.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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C.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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C.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 3 in this report) and there are no "FAIL" verdicts to be recorded (in clause 6) strike the words "has or", otherwise strike the words "or has not".

C.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.

C.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 6 of this report) strike the words "did or", otherwise strike the words "or did not".

Summary of the results of groups of test:

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C.5 Static conformance review report

If clause 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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C.6 Test campaign report

Table C.4

ATS Reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause 7)
TC_FT_MM_AR_BV_WRS00	Yes/No	Yes/No		
TC_FT_MM_AR_BV_FT00	Yes/No	Yes/No		
TC_FT_MM_AR_BV_FT01	Yes/No	Yes/No		
TC_FT_MM_AR_BV_FT02	Yes/No	Yes/No		
TC_FT_MM_CH_BV_WRS00	Yes/No	Yes/No		
TC_FT_MM_CH_BV_FT00	Yes/No	Yes/No		
TC_FT_MM_CH_BV_FT01	Yes/No	Yes/No		
TC_FT_MM_CH_BV_FT02	Yes/No	Yes/No		
TC_FT_MM_CH_BV_FT03	Yes/No	Yes/No		
TC_FT_MM_CH_BV_FT04	Yes/No	Yes/No		
TC_FT_MM_BH_BV_WRS00	Yes/No	Yes/No		
TC_FT_MM_BH_BV_FT00	Yes/No	Yes/No		
TC_FT_MM_BH_BV_FT01	Yes/No	Yes/No		
TC_FT_MM_BH_BV_FT02	Yes/No	Yes/No		
TC_FT_MM_BH_BV_FT03	Yes/No	Yes/No		
TC_FT_ME_BV_WRS00	Yes/No	Yes/No		

C.7 Observations

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

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Bibliography

The following material, though not specifically referenced in the body of the present document (or not publicly available), gives supporting information.

- ETSI EN 300 175-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".
- ETSI EN 300 175-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)".
- ETSI EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security Features".
- ETSI EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech Coding and Transmission".

History

Document history		
V1.1.1	September 2000	Publication