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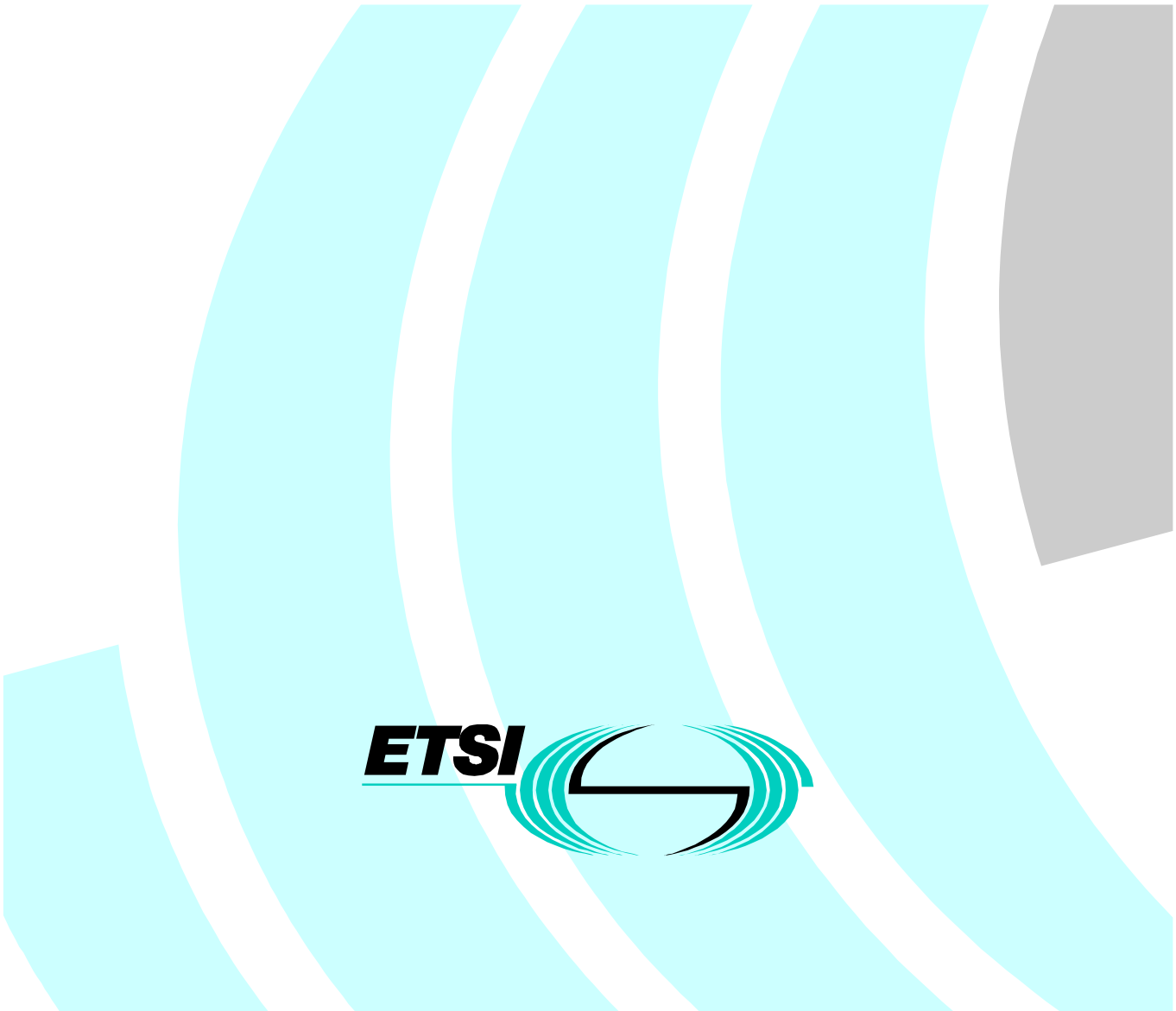
Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Fixed radio Termination (FT)



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Foreword

This European Standard (Telecommunications series) has been produced by ETSI Project Digital Enhanced Cordless Telecommunications (DECT).

The present document is part 9 of a multi-part EN covering the Common Interface (CI) 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 - Portable radio Termination (PT)";

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

Part 6: "Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Portable radio Termination (PT)";

Part 7: "Abstract Test Suite (ATS) for Network (NWK) layer - Portable radio Termination (PT)";

Part 8: "Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Fixed radio Termination (FT)";

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

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Date of adoption of this EN:	27 August 1999
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1 Scope

The present document contains the Abstract Test Suite (ATS) to test the Network (NWK) layer, Fixed radio Termination (FT).

The objective of this test specification is to provide a basis for approval tests for DECT equipment giving a high probability of air interface inter-operability between different manufacturer's DECT equipment. This test specification contains the Abstract Test Suite for testing of the NWK layer at the FT.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646) as well as the ETSI rules for conformance testing (protocol and profile conformance testing specifications, standardization methodology ETS 300 406 [7]) are used as basis for the test methodology.

Annex B provides the partial Protocol Implementation Extra Information for Testing (PIXIT) proforma.

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] EN 300 175-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".

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

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

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

[5] EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".

[6] EN 300 497-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer".

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

[8] EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".

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

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

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

[12] ISO/IEC 9646-6: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 6: Protocol Profile Test Specification".

[13] ETR 141: "Methods for Testing and Specification (MTS); Protocol and profile conformance testing specifications; The Tree and Tabular Combined Notation (TTCN) style guide".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ISO/IEC 9646-1 [9], ISO/IEC 9646-2 [10], EN 300 175-1 [1], EN 300 175-5 [3], EN 300 175-6 [4] and EN 300 175-7 [5] apply.

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AC	Authentication Code
ASP	Abstract Service Primitive
ATS	Abstract Test Suite
AU	Authentication
BI	Invalid Behaviour
BO	Inopportune Behaviour
BV	Valid Behaviour
CC	Call Control
CH	Ciphering
CI	Call Information
CR	Call Release
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control
FT	Fixed radio termination
HP	Handover Procedure
IC	Incoming Call
ID	Identification
IPEI	International Portable Equipment Identity
IPUI	International Portable User Identity
IUT	Implementation Under Test
IWU	Interworking Unit
KA	Key Allocation
LC	Link Control
LE	Connection oriented Link Establishment
LO	Location
LR	Connection oriented Link Release
LT	Lower Tester
MAC	Medium Access Control
ME	Management Entity
MM	Mobility Management
NWK	Network layer
OC	Outgoing Call
PARK	Portable Access Rights Key
PCO	Point of Control and Observation
PDU	Protocol Data Unit
PHL	Physical Layer
PICS	Protocol Implementation Conformance Statement

PIXIT	Protocol Implementation Extra Information for Testing
PR	Parameter Retrieval
PT	Portable radio Termination
RPN	Radio fixed Part Number
RS	Call Related Supplementary Services
SUT	System Under Test
TCS	Test Case Selection
TCV	Test Case Variable
TP	Test Purposes
TSO	Test Suite Operations
TSP	Test Suite Parameter
TSV	Test Suite Variable
TTCN	Tree and Tabular Combined Notation
UAK	User Authentication Key
UT	Upper Tester

4 Abstract Test Method (ATM)

Clause 4 describes the ATM, the Point of Control and Observation (PCO) used to test the NWK layer of the FT.

4.1 ATM

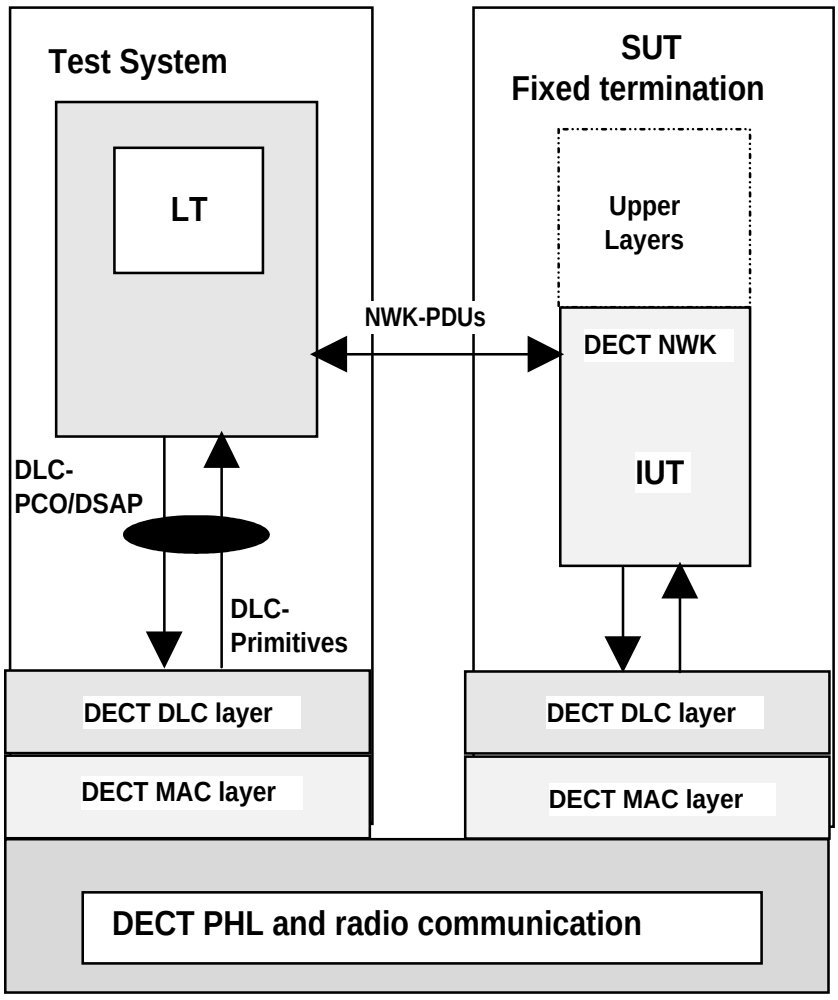

Figure 1: Remote single layer test method embedded variant

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 UT 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.

4.2 DLC primitives

In subclause 4.2 the DSAP primitives are defined according to EN 300 175-4 [2], subclause 8.3.2 (S-SAP primitives) and EN 300 175-4 [2], subclause 8.3.3 (B-SAP primitives).

4.2.1 S-SAP primitives

Table 1: DL_DATA_IND primitive

ASP Declaration		
ASP NAME DL_DATA_IND	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.3
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
message_unit	PDU	EN 300 175-4 [2], subclause 8.3.1

Table 2: DL_DATA_REQ primitive

ASP Declaration		
ASP NAME DL_DATA_REQ	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.3
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
message_unit	PDU	EN 300 175-4 [2], subclause 8.3.1

Table 3: DL_ENCRYPT_CNF primitive

ASP Declaration		
ASP NAME DL_ENCRYPT_CNF	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.8
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
encription_status	CIPHER_STATUS (INTEGER(0,1))	EN 300 175-4 [2], subclause 8.3.1

Table 4: DL_ENCRYPT_IND primitive

ASP Declaration		
ASP NAME DL_ENCRYPT_IND	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.8
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
connection_identities	CONNECTION_IDENTITIES (OCTETSTRING)	EN 300 175-4 [2], subclause 8.3.1
encription_status	CIPHER_STATUS (INTEGER(0,1)	EN 300 175-4 [2], subclause 8.3.1

Table 5: DL_ENCRYPT_REQ primitive

ASP Declaration		
ASP NAME DL_ENCRYPT_REQ	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.8
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
connection_identities	CONNECTION_IDENTITIES (OCTETSTRING)	EN 300 175-4 [2], subclause 8.3.1
encription_status	CIPHER_STATUS (INTEGER(0,1)	EN 300 175-4 [2], subclause 8.3.1

Table 6: DL_ENC_KEY_REQ primitive

ASP Declaration		
ASP NAME DL_ENC_KEY_REQ	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.7
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], 7.3.6
connection_identities	CONNECTION_IDENTITIES (OCTETSTRING)	EN 300 175-4 [2], 8.3.1
encription_key	ENCRYPTION_KEY (BITSTRING[64])	EN 300 175-4 [2], 8.3.1

Table 7: DL_ESTABLISH_CNF primitive

ASP Declaration		
ASP NAME DL_ESTABLISH_CNF	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.1
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6

Table 8: Void

Table 9: DL_ESTABLISH_REQ primitive

ASP Declaration		
ASP NAME DL_ESTABLISH_REQ	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.1
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
establish_mode	ESTABLISH_MODE (INTEGER(0,1,2)	EN 300 175-4 [2], subclause 8.3.1
radio_fixed_part_number	RADIO_FIXED_PART_NUMBER (INTEGER)	EN 300 175-4 [2], subclause 8.3.1
message_unit	PDU	EN 300 175-4 [2], subclause 8.3.1

Table 10: DL_ESTABLISH_RES primitive

ASP Declaration		
ASP NAME DL_ESTABLISH_RES	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.1
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6

Table 11: DL_RELEASE_CNF primitive

ASP Declaration		
ASP NAME DL_RELEASE_CNF	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.2
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
release_mode	RELEASE_MODE (INTEGER(0,1)	EN 300 175-4 [2], subclause 8.3.1

Table 12: DL_RELEASE_IND primitive

ASP Declaration		
ASP NAME DL_RELEASE_IND	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.2
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
release_mode	RELEASE_MODE (INTEGER(0,1)	EN 300 175-4 [2], subclause 8.3.1

Table 13: DL_RELEASE_REQ primitive

ASP Declaration		
ASP NAME DL_RELEASE_REQ	PCO TYPE S-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.2.2
Service control information		
Parameter name	**Type**	**Comments**
data_link_endpoint_identifier	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	EN 300 175-4 [2], subclause 7.3.6
release_mode	RELEASE_MODE (INTEGER(0,1)	EN 300 175-4 [2], subclause 8.3.1

4.2.2 B-SAP primitives

Table 14: DL_BROADCAST_IND primitive

ASP Declaration		
ASP NAME DL_BROADCAST_IND	PCO TYPE B-SAP	COMMENTS EN 300 175-4 [2], subclause 8.3.3.1
Service control information		
Parameter name	**Type**	**Comments**
cluster_address_list	CLUSTER_ADDRESS_LIST (OCTETSTRING)	EN 300 175-4 [2], subclause 8.3.1
message_unit	PDU	EN 300 175-4 [2], subclause 8.3.1
extended_message_flag	BIT_1 (BITSTRING[1])	EN 300 175-4 [2], subclause 8.3.1
error_flag	BIT_1 (BITSTRING[1])	EN 300 175-4 [2], subclause 8.3.1

Table 15: Void

4.3 TC execution sequence

The test cases can be executed in any order, there are no restrictions on this matter.

5 Untestable Test Purposes (TP)

Clause 5 gives a list of TP which are not implemented in the ATS (annex A) due to the chosen ATM or other restrictions.

5A Control protocol

The following test purposes are not implemented in the ATS due to unknown reaction of the IUT after testing the TP:

Table 16: Untestable TP's (1)

Test Purpose	Reference to EN 300 497-9
TP/FT/MM/BV/PR-01	
TP/FT/IS/BV-01	
TP/FT/IS/BV-02	
TP/FT/IS/BV-03	
TP/FT/CL/BV-01	
TP/FT/CL/BV-02	
TP/FT/CL/BV-03	
TP/FT/MM/BV/LO-52	

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 clause 6 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 guidelines of the documents ETS 300 406 [7] and ETR 141 [13] were 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_rx01.

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 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.

6.1.1.4 Test Case Selection (TCS) expression definitions

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

6.1.1.5 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.

6.1.1.6 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.

6.1.1.7 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.

6.1.1.8 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.

6.1.1.9 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.

6.1.1.10 ASP type definitions

The identifier of an ASP uses exactly the same name as the name defined in the specifications. It is written in uppercases, 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.

6.1.1.11 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 are belonging to. The following identifiers are used:

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

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

EXAMPLE 3: BI-CC-SETUP.

6.1.1.12 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 lower case 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 Id 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 the TCs is built in the same way as for the TP described in EN 300 497-1 [6], subclause 5.1.1, with the exception that "TP" is replaced by "TC_FT":

- TP identifier: TP/CC/BI-04;
- TC identifier: TC_FT_CC_BI_04.

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.

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

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
auth	authentication
algo	algorithm
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);
identity;
number(s);
character(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 comments 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 subclause 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 called LTS_pre_step. All LTS_pre_steps are described in the detailed comment part of the TTCN table.

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 called LTS_post_step. All LTS_post_steps are described in the detailed comment part of the TTCN table.

All events which are defined as a 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 a default. That allows to apply them with no restrictions regarding the error handling.

All verdict assignments are labelled. According to ISO/IEC 9646-3 [11], clause E.2, labels should be written to the conformance log. This allows to identify 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 capability 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: specific receive event is expected.

Expected behaviour: no event or a timer expiry is expected.

Expected status: IUT is expected to be in a particular status.

6.2.5 Coding of some information elements

Due to special requirements of using shift information elements in DECT messages these are not described in the TTCN.

For the rules of incorporating "shift" information elements in a message see EN 300 175-5 [3] shift procedure, subclauses 7.5.2, 7.5.3 and 7.5.4 (e.g. a shift may appear at any place in a message, locking shift may shift only to higher code set, a non locking shift indicating the current codeset shall not constitute an error, etc).

6.2.6 Order of information elements

The order of information elements as defined in EN 300 175 is mandatory. See EN 300 175-5 [3] subclause 6.3.1 and subclause 17.5.1.

This implies that the order shall be mandatory in the TTCN as well.

Annex A (normative): Abstract test suite for NWK testing

This ATS has been produced using the Tree and Tabular Combined Notation (TTCN) according to ISO/IEC 9646-3 [11].

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 (497p9v12.PDF contained in archive 4lq9011c.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 (497p9v12.MP contained in archive 4lq9011c.ZIP) which accompanies the present document.

Annex B (normative): Partial PIXIT proforma

The PIXIT Proforma is based on ISO/IEC 9646-6 [12]. Any additional information needed 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:	
Protocol to be tested:	
ATS Specification:	
Abstract Test Method:	Embedded variant of the Remote Test Method with no UT

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:	DECT - Network Layer
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_aupt_ccstate	CCSTATE_TYPE (INTEGER 0, 1, 2, 3, 4, 6, 7, 10, 19)	Indicates the FT CC state in which the authentication of PT procedure shall be tested. Values 0, 1, 2, 6, 7, 10 and 19 are valid. Ref. EN 300 175-5 [3], subclause 13.3.1	
2	TSPX_mmproc_auus_ccstate	CCSTATE_TYPE (INTEGER 0, 1, 2, 3, 4, 6, 7, 10, 19)	Indicates the FT CC state in which the authentication of the user procedure shall be tested. Values 0, 1, 2, 6, 7, 10 and 19 are valid. Ref. EN 300 175-5 [3], subclause 13.3.2	
3	TSPX_mmproc_cift_ccstate	CCSTATE_TYPE (INTEGER 0, 1, 2, 3, 4, 6, 7, 10, 19)	Indicates the FT CC state in which the FT initiated ciphering procedure shall be tested. Values 0, 1, 2, 6, 7, 10 and 19 are valid. Ref. EN 300 175-5 [3], subclause 13.8	
4	TSPX_mmproc_idpt_ccstate	CCSTATE_TYPE (INTEGER 0, 1, 2, 3, 4, 6, 7, 10, 19)	Indicates the FT CC state in which the identification of PT procedure shall be tested. Values 0, 1, 2, 6, 7, 10 and 19 are valid. Ref. EN 300 175-5 [3], subclause 13.2.1	
5	TSPX_mmproc_loup_ccstate	CCSTATE_TYPE (INTEGER 0, 1, 2, 3, 4, 6, 7, 10, 19)	Indicates the FT CC state in which the location update procedure shall be tested. Values 0, 1, 2, 10 and 19 are valid Ref. EN 300 175-5 [3], subclause 13.4.3	
6	TSPX_mmproc_keal_ccstate	CCSTATE_TYPE (INTEGER 0, 1, 2, 3, 4, 6, 7, 10, 19)	Indicates the FT CC state in which the key allocation procedure shall be tested. Values 0, 1, 2, 6, 7, 10 and 19 are valid. Ref. EN 300 175-5 [3], subclause 13.6	
7	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 [3], subclause 13.5.2	

Item	Parameter	Parameter type	Explanation and EN reference	Value
8	TSPX_mmproc_aupt_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the authentication of PT procedure. Values are: 0 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.2 (not using protocol stimuli); 1 - for IUT that will initiate the procedure when IUT is prepared for subscription to be initiated, and, Access-rights-req is sent by the LT; 2 - for IUT that will initiate the procedure when LT initiates location registration procedure when TPUI is assigned; 3 - for IUT that will initiate the procedure after LT has initiated and completed a location registration procedure when TPUI is assigned; 4 - for IUT that will initiate the procedure when IUT is in F-00 and LT initiates location registration procedure when only a default TPUI is available. This value is only valid when TSPX_mmproc_aupt_ccstate is 0; 5...10 - for IUT that will initiate the procedure immediately when the IUT enters the state specified by TSPX_mmproc_aupt_ccstate; Ref. EN 300 175-5 [3], subclause 13.3.1	
9	TSPX_mmproc_auus_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the authentication of the user procedure. Values are: 0 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.3 (not using protocol stimuli) after a link has been established by the LT; 1-reserved 2 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.3 (not using protocol stimuli) when there is no link established by the LT. This value is only valid when TSPX_mmproc_auus_ccstate is 0; 3...10 - for IUT that will initiate the procedure immediately when the IUT enters the state specified by TSPX_mmproc_auus_ccstate; Ref. EN 300 175-5 [3], subclause 13.3.2	

Item	Parameter	Parameter type	Explanation and EN reference	Value
10	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 [3], subclause 13.8	
11	TSPX_mmproc_idpt_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the identification of PT procedure. Values are: 0 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.8 (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.9.8 (not using protocol stimuli), when there is no link established by the LT. This value is only valid when TSPX_mmproc_idpt_ccstate is 0; 2 - the procedure is invoked when the LT attempts the Access rights procedure after the LT's subscription has been deleted and then restored at the IUT in a proprietary way; Ref. EN 300 175-5 [3], subclause 13.2.1	

Item	Parameter	Parameter type	Explanation and EN reference	Value
12	TSPX_mmproc_loup_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the location update procedure. Values are: 0 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.11 (not using protocol stimuli); 1 - for IUT that will initiate the procedure immediately when the IUT enters the state specified by TSPX_mmproc_loup_ccstate; 2 - to handle invocation by establishing a bearer for a call using an arbitrary PMID, even though an individual TPUI has been assigned beforehand. The link is then released and after that the IUT starts the location update procedure; 3 - for IUT that will initiate the procedure after subscription (and optionally location registration) because the IUT wants to assign more (e.g. group) TPUIs; 4..10 - for IUT that will initiate the procedure immediately when the IUT enters the state specified by TSPX_mmproc_loup_ccstate; Ref. EN 300 175-5 [3], subclause 13.4.3	
13	TSPX_mmproc_keal_invoke	MMPROC_TYPE (INTEGER 0 .. 10)	Indicates the way of invoking the key allocation procedure. Values are: 0 - the procedure is invoked in a proprietary way as specified by PIXIT question B.9.10 (not using protocol stimuli); 1 - for IUTs that will initiate the procedure when the LT makes an access rights request when there is an existing subscription. This is only valid when TSPX_mmproc_keal_ccstate is 0; 2 - for IUTs that will initiate the procedure when the LT makes an access rights request when there is no existing subscription. This is only valid when TSPX_mmproc_keal_ccstate is 0; 3 - for IUTs that will initiate the procedure when the LT makes an access rights request. This is only valid when TSPX_mmproc_keal_ccstate is not 0; 4..10 - for IUTs that will initiate the procedure immediately when the IUT enters the state identified by TSPX_mmproc_keal_ccstate; Ref. EN 300 175-5 [3], subclause 13.6	

Item	Parameter	Parameter type	Explanation and EN reference	Value
14	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.parameter TSPX_called_party_number.	
15	TSPX_access_rights_uak	BOOLEAN	TRUE if IUT supports the access rights procedure with Auth_Key_Type = 1 (UAK).	
16	TSPX_set_bit_a38	BOOLEAN	TRUE if the "higher layer capabilities" bit a38 be set dynamically on the IUT by the test operator.	
17	TSPX_lce_02	INTEGER	Value of timer <LCE_02> in milliseconds	
18	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;	
19	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.	
20	TSPX_some_digits_length	OCT_1	The number of digits in TSPX_some_digits	
21	TSPX_basic_digits	OCT_1	This string contains one of each of the basic dialling digits 0123456789*# in an order suitable for dialling through the IUT.	
22	TSPX_change_f02	BOOLEAN	TRUE if the IUT waits for more than one dialling digit to be received before it changes the F-02 state.	

In all cases where a parameter of type CC_STATE is used, the mapping between the state as defined in EN 300 175-5 [3], clause B.2 and the numerical value is as follows:

Value	CC state
0	F-00
1	F-01
2	F-02
3	F-03
4	F-04
6	F-06
7	F-07
10	F-10
19	F-19

Table B.8: Addresses

Item	Address name	Parameter type	Explanation and EN reference	Value
1	TSPX_decimal_ac_value	OCT_4 (OCTETSTRING[4])	Value of AC to be used. TSPX_decimal_ac_value consists of up to 8 decimal digits representing the AC as entered by the user. If less than 8 digits are entered, 'F' digits are inserted on the left to pad TSPX_decimal_ac_value to 4 octets. The AC to bitstring mapping will be done with operator TSO_cinft_convert_ac_to_bitstring. Ref. EN 300 444 [8], subclause 14.2	
2	TSPX_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 [3], subclause 7.7.18	
3	TSPX_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 [3], subclause 7.7.18	
4	TSPX_dlei_value	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	Value of data link endpoint identifier to be used in the test system (local test system matter).	
5	TSPX_ipei_value	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	Value of IPEI (IPUI-N) to be sent to the FT (IUT) before subscription. This will always be 40 bits long. Ref. EN 300 175-5 [3], subclause 7.7.30	
6	TSPX_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 [3], subclause 7.7.30	
7	TSPX_location_area_level	BIT_6 (BITSTRING[6])	The location area level that is going to be used. Ref. EN 300 175-5 [3], subclause 7.7.25	
8	TSPX_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 [3], subclause 7.7.18	
9	TSPX_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 [3], subclause 7.7.30	

Item	Address name	Parameter type	Explanation and EN reference	Value
10	TSPX_decimal_upi_value	OCT_4 (OCTETSTRING[4])	Value of UPI to be used. TSPX_decimal_upi_value consists of up to 8 decimal digits representing the UPI as entered by the user. If less than 8 digits are entered, 'F' digits are inserted on the left to pad TSPX_decimal_upi_value to 4 octets. The UPI to bitstring mapping will be done with operation TSO_cinft_convert_upi_to_bitstring. Ref. EN 300 444 [8], subclause 8.22	
11	TSPX_park_length_indicator	INTEGER	The number of significant bits of the PARK value (PLI).	
12	TSPX_ari_length_indicator	INTEGER	The number of significant bits of the ARI value (specified in TSPX_complete_fixed_id_ari_value). This will have the value 36 for ARI A and 31 for all other ARI types.	
13	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,	
14	TSPX_emergency_cpn	OCT_1_14	The emergency called party number to be dialled by the PT (LT) in oder to get connection to the network. For practical reasons, the number is limited to 14 digits,	
15	TSPX_calling_party_number	DECT_1_14	Calling party number which IUT is expected to include in incoming call to tester. For practical reasons the number is limited to 14 digits.	
16	TSPX_complete_fixed_id_park_value_2	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of fixed_id to be used for simulating a second FP	
17	TSPX_emergency_number	DECT_1_255	Emergency number to be sent by the LT for emergency call. (1 to 4 digits long)	
18	TSPX_emergency_number_length	INTEGER	Length of emergency number to be sent by the LT	
19	TSPX_dlei_value_2	DATA_LINK_ENDPOINT_IDENTIFIER (INTEGER)	Value of data link endpoint identifier to be used for FP-2 in case of 2 FPs system testing	
20	TSPX_fp1_pari	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	To define the PARI of FP-1	
21	TSPX_fp1_rpn	RADIO_FIXED_PART_NUMBER (INTEGER)	To define the RPN of FP-1	
22	TSPX_fp2_pari	PORT_ID_VALUE_TYPE (BITSTRING[8..104])	To define the PARI of FP-2	
23	TSPX_fp2_rpn	RADIO_FIXED_PART_NUMBER (INTEGER)	To define the RPN of FP-2	
24	TSPX_complete_fixed_id_sari_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of SARI used by IUT	
25	TSPX_complete_fixed_id_tari_value	FIXED_ID_VALUE_TYPE (BITSTRING[8..72])	Value of TARI used by IUT	

Table B.9: Implicit send events

Item	PIXIT (see note)	Related implicit send message (PDU)	Indication how the implicit send event can be invoked
1	TSPX_invoke_access_term_req	To invoke the FT initiated terminate access rights procedure. A dl_data_indication is to be expected, containing an ACCESS_RIGHTS_TERM_REQUEST message. Expected Constrain: Access_rights_term_req_rx_base	
2	TSPX_invoke_pt_authentication	To invoke the FT initiated PT authentication procedure. A dl_data_indication is to be expected, containing an AUTH_REQUEST message. Expected Constraint: Auth_request_rx01	
3	TSPX_invoke_user_authentication	To invoke the FT initiated user authentication procedure. A dl_data_indication is to be expected, containing an AUTH_REQUEST message with UPI. Expected Constraint: Auth_request_rx03	
4	TSPX_invoke_pt_auth_with_zap	To invoke the FT initiated PT authentication procedure. A dl_data_indication is to be expected, containing an AUTH_REQUEST message. The AUTH_REQ message shall contain the <<auth_type>>i.e. with ZAP_increment bit set to 1. Expected Constraint: Auth_request_rx02	
5	TSPX_invoke_ft_init_ciphering_off	To invoke the FT to initiate ciphering off. A dl_data_ind is expected, containing a CIPHER-REQUEST PDU. Expected Constraint: Cipher_request_rx02	
6	TSPX_invoke_ft_init_ciphering_on	A dl_data_ind is expected, containing a CIPHER-REQUEST PDU. Expected Constraint: Cipher_request_rx01	
7	TSPX_invoke_incoming_call	To invoke the IUT to initiate a normal incoming call setup, while in state F-00. Precondition: Timer T_USER_INVOKE is started. It will be cancelled when the link is established. Expected Constraint: Lce_request_page_rx01	
8	TSPX_invoke_identity_req	To invoke the FT to initiate identity request. A dl_data_ind is expected, containing a IDENTITY-REQUEST PDU. Expected Constraint: Identity_request_rx_base	
9	TSPX_invoke_normal_release	To invoke the IUT to go on hook, thus initiating a normal release, while in any cc state. A dl_data_indication is to be expected, containing a CC_RELEASE message. Expected Constraint: Cc_release_rx_base This indicates as well whether the IUT supports invocation of normal release.	

Item	PIXIT (see note)	Related implicit send message (PDU)	Indication how the implicit send event can be invoked
10	TSPX_invoke_key_allocate	To invoke a key allocation procedure initiated by the FT side. Expected Constraint: Key_allocate_rx01	
11	TSPX_invoke_location_update	To initiate the FT initiated location update procedure. A dl_data_indication is to be expected, containing an MM_INFO_SUGGEST message. Expected Constraint: Mm_info_suggest_rx_base	
12	TSPX_invoke_partial_release	To invoke the IUT to initiate a partial release. A precondition to the execution of this test step is, that a link exists and a CC transaction is in progress **/** active between the lt and the iut. Expected Constraint: Cc_release_rx_base	
13	TSPX__invoke_call_answering	To invoke the IUT to answer the call by sending a CC-CONNECT message. Expected constraint: Cc_connect_rx_base	
NOTE: The PIXIT names are related to the test steps where the Implicit send events are handled, e.g. the PIXIT TSPX_invoke_abnormal_release is related to the test step STP_invoke_abnormal_release.			

Annex C (normative): Protocol Conformance Test Report (PCTR) Proforma for DECT NWK

The PCTR Proforma is based on ISO/IEC 9646-6 [12]. Any additional information needed 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

ATS reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause 7)
TC_FT_CC_BV_OC_01	Yes/No	Yes/No		
TC_FT_CC_BV_OC_02	Yes/No	Yes/No		
TC_FT_CC_BV_OC_03	Yes/No	Yes/No		
TC_FT_CC_BV_OC_04	Yes/No	Yes/No		
TC_FT_CC_BV_OC_05	Yes/No	Yes/No		
TC_FT_CC_BV_OC_06	Yes/No	Yes/No		
TC_FT_CC_BV_OC_50	Yes/No	Yes/No		
TC_FT_CC_BV_IC_01	Yes/No	Yes/No		
TC_FT_CC_BV_IC_02	Yes/No	Yes/No		
TC_FT_CC_BV_CI_01	Yes/No	Yes/No		
TC_FT_CC_BV_CI_02	Yes/No	Yes/No		
TC_FT_CC_BV_CI_03	Yes/No	Yes/No		
TC_FT_CC_BV_CI_04	Yes/No	Yes/No		
TC_FT_CC_BV_CI_05	Yes/No	Yes/No		
TC_FT_CC_BV_CI_06	Yes/No	Yes/No		
TC_FT_CC_BV_CI_07	Yes/No	Yes/No		
TC_FT_CC_BV_CI_08	Yes/No	Yes/No		
TC_FT_CC_BV_CI_09	Yes/No	Yes/No		
TC_FT_CC_BV_CI_10	Yes/No	Yes/No		
TC_FT_CC_BV_CR_01	Yes/No	Yes/No		
TC_FT_CC_BV_CR_02	Yes/No	Yes/No		
TC_FT_CC_BV_CR_03	Yes/No	Yes/No		
TC_FT_CC_BV_CR_04	Yes/No	Yes/No		
TC_FT_CC_BV_CR_05	Yes/No	Yes/No		
TC_FT_CC_BV_CR_06	Yes/No	Yes/No		
TC_FT_CC_BV_CR_07	Yes/No	Yes/No		
TC_FT_CC_BV_CR_08	Yes/No	Yes/No		
TC_FT_CC_BV_CR_09	Yes/No	Yes/No		
TC_FT_CC_BV_CR_10	Yes/No	Yes/No		
TC_FT_CC_BV_CR_50	Yes/No	Yes/No		
TC_FT_CC_BV_CR_51	Yes/No	Yes/No		
TC_FT_CC_BV_RS_07	Yes/No	Yes/No		
TC_FT_CC_BV_HP_50	Yes/No	Yes/No		
TC_FT_CC_BV_HP_51	Yes/No	Yes/No		
TC_FT_CC_BV_HP_52	Yes/No	Yes/No		
TC_FT_CC_BV_HP_53	Yes/No	Yes/No		
TC_FT_CC_BV_HP_54	Yes/No	Yes/No		
TC_FT_CC_BO_01	Yes/No	Yes/No		
TC_FT_CC_BO_02	Yes/No	Yes/No		
TC_FT_CC_BI_01	Yes/No	Yes/No		
TC_FT_CC_BI_02	Yes/No	Yes/No		
TC_FT_CC_BI_03	Yes/No	Yes/No		
TC_FT_CC_TI_01	Yes/No	Yes/No		
TC_FT_CC_TI_02	Yes/No	Yes/No		
TC_FT_CC_TI_03	Yes/No	Yes/No		
TC_FT_CC_TI_04	Yes/No	Yes/No		
TC_FT_MM_BV_ID_01	Yes/No	Yes/No		
TC_FT_MM_BV_AU_01	Yes/No	Yes/No		
TC_FT_MM_BV_AU_02	Yes/No	Yes/No		
TC_FT_MM_BV_AU_03	Yes/No	Yes/No		
TC_FT_MM_BV_AU_04	Yes/No	Yes/No		
TC_FT_MM_BV_AU_05	Yes/No	Yes/No		
TC_FT_MM_BV_AU_06	Yes/No	Yes/No		
TC_FT_MM_BV_LO_01	Yes/No	Yes/No		
TC_FT_MM_BV_LO_02	Yes/No	Yes/No		
TC_FT_MM_BV_LO_03	Yes/No	Yes/No		
TC_FT_MM_BV_LO_05	Yes/No	Yes/No		
TC_FT_MM_BV_LO_06	Yes/No	Yes/No		
TC_FT_MM_BV_LO_07	Yes/No	Yes/No		

ATS reference	Selected?	Run?	Verdict	Observations (Reference to any observations made in clause 7)
TC_FT_MM_BV_LO_51	Yes/No	Yes/No		
TC_FT_MM_BV_LO_52	Yes/No	Yes/No		
TC_FT_MM_BV_AR_01	Yes/No	Yes/No		
TC_FT_MM_BV_AR_02	Yes/No	Yes/No		
TC_FT_MM_BV_AR_03	Yes/No	Yes/No		
TC_FT_MM_BV_AR_06	Yes/No	Yes/No		
TC_FT_MM_BV_AR_07	Yes/No	Yes/No		
TC_FT_MM_BV_AR_50	Yes/No	Yes/No		
TC_FT_MM_BV_KA_01	Yes/No	Yes/No		
TC_FT_MM_BV_KA_02	Yes/No	Yes/No		
TC_FT_MM_BV_CH_01	Yes/No	Yes/No		
TC_FT_MM_BV_CH_02	Yes/No	Yes/No		
TC_FT_MM_BV_CH_03	Yes/No	Yes/No		
TC_FT_MM_BV_CH_04	Yes/No	Yes/No		
TC_FT_MM_BV_CH_05	Yes/No	Yes/No		
TC_FT_MM_BV_CH_08	Yes/No	Yes/No		
TC_FT_MM_BV_CH_09	Yes/No	Yes/No		
TC_FT_MM_BV_CH_10	Yes/No	Yes/No		
TC_FT_MM_BV_CH_11	Yes/No	Yes/No		
TC_FT_MM_BV_CH_12	Yes/No	Yes/No		
TC_FT_MM_BV_CH_13	Yes/No	Yes/No		
TC_FT_MM_BV_CH_14	Yes/No	Yes/No		
TC_FT_MM_BV_CH_15	Yes/No	Yes/No		
TC_FT_MM_BV_HP_50	Yes/No	Yes/No		
TC_FT_MM_BV_HP_51	Yes/No	Yes/No		
TC_FT_MM_BV_HP_52	Yes/No	Yes/No		
TC_FT_MM_BV_HP_53	Yes/No	Yes/No		
TC_FT_MM_BV_HP_54	Yes/No	Yes/No		
TC_FT_MM_BO_01	Yes/No	Yes/No		
TC_FT_MM_BI_02	Yes/No	Yes/No		
TC_FT_MM_BI_03	Yes/No	Yes/No		
TC_FT_MM_TI_01	Yes/No	Yes/No		
TC_FT_MM_TI_02	Yes/No	Yes/No		
TC_FT_MM_TI_03	Yes/No	Yes/No		
TC_FT_MM_TI_04	Yes/No	Yes/No		
TC_FT_MM_TI_05	Yes/No	Yes/No		
TC_FT_MM_TI_06	Yes/No	Yes/No		
TC_FT_MM_TI_07	Yes/No	Yes/No		
TC_FT_ME_BV_01	Yes/No	Yes/No		
TC_FT_ME_BV_02	Yes/No	Yes/No		
TC_FT_ME_BV_03	Yes/No	Yes/No		
TC_FT_LC_BV_LE_01	Yes/No	Yes/No		
TC_FT_LC_BV_LE_02	Yes/No	Yes/No		
TC_FT_LC_BV_LE_03	Yes/No	Yes/No		
TC_FT_LC_BV_LR_01	Yes/No	Yes/No		
TC_FT_LC_BV_LR_02	Yes/No	Yes/No		
TC_FT_LC_BV_LR_03	Yes/No	Yes/No		
TC_FT_LC_BV_LR_04	Yes/No	Yes/No		
TC_FT_LC_BI_01	Yes/No	Yes/No		
TC_FT_LC_BI_04	Yes/No	Yes/No		
TC_FT_LC_BI_05	Yes/No	Yes/No		
TC_FT_LC_BI_07	Yes/No	Yes/No		
TC_FT_LC_TI_02	Yes/No	Yes/No		
TC_FT_IS_BV_50	Yes/No	Yes/No		
TC_FT_IS_BV_51	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.

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