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Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP);
Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed
radio Termination (FT)

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à!^: ç|cã} ^Á ^\ [{ ~ } ä æä Telecommunications (DECT)
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European Standard (Telecommunications series)

**Digital Enhanced Cordless Telecommunications (DECT);
Generic Access Profile (GAP);
Profile Test Specification (PTS);
Part 3: Profile Specific Test Specification (PSTS) -
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 3 of a multi-part EN covering the Generic Access Profile (GAP) as identified below:

Part 1: "Summary";

Part 2: "Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)";

Part 3: "Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)".

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(National transposition dates)

Date of adoption of this EN:	6 August 1999
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1 Scope

The present document contains the test specification for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) Fixed Part (FP) applications.

The main objective of the GAP test specification is to provide approval tests giving a high probability of air interface inter-operability between different manufacturer's equipment in different environments (i.e. public, business and residential).

The ISO standard for the methodology of conformance testing ISO/IEC 9646 Parts 1 to 7 [9] to [15] is used as the basis for the test methodology, and as the basis for the test case specification. This is considered to be unsuitable for Physical layer testing, and therefore a text description is used.

The test cases listed in the present document have been derived from the DECT Common Interface (CI) Test Case Library (TCL) [18] to [26]. In addition as far as the Physical layer is concerned EN 300 176 [16] applies. Additional GAP specific test cases are included where required. The Profile IXIT is based on the DECT CI PIXITs specified in EN 300 497 [18] to [26].

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 300 175-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)".
- [3] EN 300 175-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".
- [4] EN 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".
- [5] EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [6] EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".
- [7] EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".
- [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 9646-4: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 4: Test realization".
- [13] ISO/IEC 9646-5: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 5: Requirements on test laboratories and clients for the Conformance Assessment process".
- [14] ISO/IEC 9646-6: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 6: Protocol Profile Test Specification".
- [15] ISO/IEC 9646-7: "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 7: Implementation Conformance Statements".
- [16] EN 300 176: "Digital Enhanced Cordless Telecommunications (DECT); Approval test specification".
- [17] ETS 300 476, part 1 to 7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma".
- [18] 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".
- [19] EN 300 497-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 2: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Portable radio Termination (PT)".
- [20] EN 300 497-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 3: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Fixed radio Termination (FT)".
- [21] EN 300 497-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer".
- [22] EN 300 497-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer".
- [23] EN 300 497-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 6: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Portable radio Termination (PT)".
- [24] EN 300 497-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 7: Abstract Test Suite (ATS) for Network (NWK) layer - Portable radio Termination (PT)".
- [25] EN 300 497-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL); Part 8: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Fixed radio Termination (FT)".
- [26] EN 300 497-9: "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)".
- [27] ETS 300 474-1: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)".

- [27A] ETS 300 474-2: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)".
- [28] EN 300 494-1: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary".

3 Definitions and abbreviations

3.1 Definitions

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

- terms defined in ISO/IEC 9646 Parts 1 to 7 [9] to [15];
- definitions in EN 300 175 Parts 1 to 7 [1] to [7];
- definitions in EN 300 444 [8].

3.2 Abbreviations

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

AC	Authentication Code
ATS	Abstract Test Suite
CC	Call Control
CI	Common Interface
DCK	Derived Cipher Key
DLC	Data Link Control
FT	Fixed radio Termination
GAP	Generic Access Profile
ICS	Implementation Conformance Statement
IPUI	International Portable User Identity
IUT	Implementation Under Test
IXIT	Implementation eXtra Information for Testing
LCE	Link Control Entity
LLME	Lower Layer Management Entity
MAC	Medium Access Control
MM	Mobility Management
NLF	New Link Flag
NWK	Network
PARK	Portable Access Rights Key
PH	Physical
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation eXtra Information for Testing
PT	Portable radio Termination
PSTS	Profile Specific Test Specification
PTS	Profile Test Specification
SARI	Secondary Access Rights Identity
SUT	System Under Test
TPUI	Temporary Portable User Identity
TS	Test System

4 Relevant test cases list

4.1 Network (NWK) layer

This subclause includes lists of the test groups and abstract test cases relevant for GAP Profile Test Specification (PTS); NWK layer Fixed Termination (FT) derived from EN 300 497-9 [26].

NOTE: References when necessary shall be made based on the particular test case name unique through all test specification EN 300 497 [18] to [26].

4.1.1 Test suite structure (TSS)

Table 1

Test Suite Structure	
Suite Name: nwk_ft	
Standards Ref: EN 300 444 [8]; EN 300 497-9 [26]	
Profile ICS Ref: ETS 300 474 [27]	
Profile IXIT Ref: EN 300 494-3	
Test Method: remote	
Comments:	
Test Group Reference	Test Group Objective
FT/	To check the behaviour of the NWK layer of the FT(IUT)
FT/CC/	To check the IUT CC-state machine behaviour
FT/CC/IT/	To check that the IUT CC-state machine provides sufficient conformance for possible interconnection without trying to perform thorough testing
FT/CC/CA/	Limited testing that the observable capabilities of the CC entity of the IUT are in accordance with the static conformance requirements and the additional capabilities claimed in the PROFILE ICS/PROFILE IXIT
FT/CC/BV/	To test the CC entity of the IUT in response to syntactically and contextual correct behaviour of the test system
FT/CC/BV/OC/	To check the IUT's behaviours to setup an outgoing call
FT/CC/BV/IC/	To check the IUT's behaviours to setup an incoming call
FT/CC/BV/CI/	To check the IUT's behaviour in information transfer procedures
FT/CC/BV/CR/	To check the IUT's behaviours to release an outgoing/incoming call
FT/CC/RS	To check the IUT's behaviour during call related supplementary service procedures
FT/CC/BO/	To check the behaviour of the CC entity of the IUT in response to the messages that are syntactically correct but not allowed to occur in some states of the CC procedures
FT/CC/BI/	To check the behaviour of the CC entity of the IUT in response to invalid messages
FT/CC/TI/	To verify that the IUT CC timers are with correct values and the IUT is reacting properly to the expiry of a timer
FT/MM/	To check the behaviour of the Mobility Management entity of the IUT
FT/MM/IT/	To check that the MM entity of the IUT provides sufficient conformance for possible interconnection without trying to perform thorough testing
FT/MM/CA/	Limited testing that the observable capabilities of the MM entity of the IUT are in accordance with the static conformance requirements and the additional capabilities claimed in the PROFILE ICS/PROFILE IXIT
FT/MM/BV/	To test the MM entity of the IUT in response to syntactically and contextual correct behaviour of the test system
FT/MM/BV/ID/	To check the IUT's behaviour concerning identity procedures
FT/MM/BV/AU/	To check the IUT's behaviour concerning the authentication procedures
FT/MM/BV/LO/	To check the IUT's behaviour concerning the location procedures
FT/MM/BV/AR/	To check the IUT's behaviour concerning the access rights procedures
FT/MM/BV/KA/	To check the IUT's behaviour concerning the key allocation procedure
FT/MM/BV/CH/	To check the IUT's behaviour concerning the ciphering related procedures
FT/MM/BO/	To check the IUT behaviour in response to the messages that are syntactically correct but not allowed to occur in some phase of the MM procedures
FT/MM/BI/	To check the IUT in response to invalid MM messages

Test Suite Structure	
Suite Name: nwk_ft Standards Ref: EN 300 444 [8]; EN 300 497-9 [26] Profile ICS Ref: ETS 300 474 [27] Profile IXIT Ref: EN 300 494-3 Test Method: remote Comments:	
Test Group Reference	Test Group Objective
FT/MM/TI/	To verify that the IUT MM timers are with correct values and the IUT is reacting properly to the expiry of a timer
FT/ME/	To check the behaviour of the LLME of the IUT
FT/ME/IT/	To check that LLME of the IUT provides sufficient conformance for possible interconnection without trying to perform thorough testing
FT/ME/CA/	Limited testing that the observable capabilities of the LLME of the IUT are in accordance with the static conformance requirements and the additional capabilities claimed in the PROFILE ICS/PROFILE IXIT
FT/ME/BV/	To test the LLME of the IUT in response to syntactically and contextual correct behaviour of the test system
FT/LC/	To check the behaviour of the LCE of the IUT
FT/LC/IT/	To check that LCE of the IUT provides sufficient conformance for possible interconnection without trying to perform thorough testing
FT/LC/CA/	Limited testing that the observable capabilities of the LCE of the IUT are in accordance with the static conformance requirements and the additional capabilities claimed in the PROFILE ICS/PROFILE IXIT
FT/LC/BV/	To test the LCE of the IUT in response to syntactically and contextual correct behaviour of the test system
FT/LC/BV/LE/	To check the IUT's behaviour concerning the connection oriented link establishment procedures
FT/LC/BV/LR/	To check the IUT's behaviour concerning the connection oriented link release procedures
FT/LC/BI/	To check the IUT in response to invalid LCE messages
FT/LC/TI/	To verify that the IUT LCE timers are with correct values and the IUT is reacting properly to the expiry of a timer
Detailed Comments: The sub-sub-groups with identifiers FT/xx/IT/ and FT/xx/CA/ do not include their own test cases but only list an appropriate selection of tests from the relevant sub-group with identifier FT/xx/.	

4.1.2 Test case index

Table 2

Test Case Index		
Test Group Reference	Test Case Id	Description
FT/CC/BV/OC/	TC_FT_CC_BV_OC_01	Outgoing normal call; F-00 to F-10; piece-wise dialling
	TC_FT_CC_BV_OC_06	Verify that the IUT can correctly establish a following outgoing call from the LT when the LT has use SARI as the means to lock to the IUT
FT/CC/BV/IC/	TC_FT_CC_BV_IC_01	Incoming call; F-00, F-06, F-07 to F-10
FT/CC/BV/CI/	TC_FT_CC_BV_CI_01	Incoming call; <<Signal>> either in {CC-SETUP} or in {CC-INFO}
	TC_FT_CC_BV_CI_02	Outgoing normal call; F-02; {CC-INFO}, <<Multi keypad>>, "Go to pulse" handling
	TC_FT_CC_BV_CI_03	Outgoing normal call; F-10; {CC-INFO}, <<Multi keypad>>, 'Go to pulse' handling
	TC_FT_CC_BV_CI_04	Outgoing normal call; F-02; {CC-INFO}, <<Multi keypad>>, "dialling pause" handling
	TC_FT_CC_BV_CI_05	Outgoing normal call; F-10; {CC-INFO}, <<Multi keypad>>, "Dialling pause" handling
	TC_FT_CC_BV_CI_06	Outgoing normal call; F-02; {CC-INFO}, <<Multi keypad>>, "Go to DTMF defined tone length" handling