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Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Profile Test Specification (PTS); Profile Specific Test Specification (PSTS); Part 2: Portable radio Termination (PT)

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Profile Test Specification (PTS);
Profile Specific Test Specification (PSTS);
Part 2: Portable radio Termination (PT)**

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Foreword

This European Telecommunication Standard (ETS) has been produced by the Digital Enhanced Cordless Telecommunications (DECT) Project of the European Telecommunications Standards Institute (ETSI).

The Digital Enhanced Cordless Communications/Global System for Mobile communication (DECT/GSM) Interworking Profile (IWP) Profile Test Specification (PTS) comprises three parts:

Part 1: "Summary";

Part 2: "Portable radio Termination (PT)";

Part 3: "Fixed radio Termination (FT)".

Transposition dates	
Date of adoption:	21 March 1997
Date of latest announcement of this ETS (doa):	31 July 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	31 January 1998
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1 Scope

This European Telecommunication Standard (ETS) contains the test specification for Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) Interworking Profile (IWP), Portable Part (PP) applications as specified in ETS 300 370 [5].

The main objective of the DECT/GSM IWP test specification is to provide approval tests giving a high probability of air interface inter-operability between any DECT Fixed Part (FP) and any PP conforming to ETS 300 370 [5] offered by different manufacturers.

All PPs conforming to ETS 300 370 [5], as far as DECT Network (NWK) layer is concerned, are tested for conformance separately:

- first to ETS 300 494-1 [11] and ETS 300 494-2 [12]; and
- second to this ETS.

For the purpose of this ETS the Portable radio Termination (PT) uses an International Portable User Identity (IPIU) type R.

All PPs conforming to ETS 300 370 [5], as far as the Data Link Control (DLC) layer, the Medium Access Control (MAC) layer and the Physical (PHL) layer are concerned, are tested to ETS 300 494-1 [11] and ETS 300 494-2 [12].

ISO/IEC 9646 Parts 1 to 7 [13]- [18] are used as the basis for the test methodology, and as the basis for test case specification.

The test cases, if listed in this ETS, have been derived from ETS 300 497, Parts 1, 6 and 7 [8] - [10] or ETS 300 494-1 [11] and ETS 300 494-2 [12]. Additional DECT/GSM IWP specific test cases are included where required. The Profile Implementation Extra Information for Testing (IXIT) is based on ETS 300 497, Parts 1, 6 and 7 [8] - [10] and the General Access Profile, Profile IXIT ETS 300 494-1 [11] and ETS 300 494-2 [12].

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Annex A contains the Abstract Test Suite (ATS).
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2 Normative references

This ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of, any of these publications apply to this ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 175-5: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [2] ETS 300 466: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications/Global System for Mobile Communications (DECT/GSM) interworking profile; General description of service requirements; Functional capabilities and information flows".
- [3] ETS 300 474, Part 1 and 2: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma".
- [4] ETS 300 476, Part 1 to 7: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma".

- [5] ETS 300 370: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications / Global System for Mobile communications (DECT/GSM) inter-working profile; Access and mapping (Protocol/procedure description for 3,1 kHz speech service)".
- [6] ETS 300 704-1: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) Interworking Profile (IWP); Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)".
- [7] ETS 300 444 (1995): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [8] ETS 300 497-1: "Radio Equipment and Systems (RES); 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".
- [9] ETS 300 497-6: "Radio Equipment and Systems (RES); 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)".
- [10] ETS 300 497-7: "Radio Equipment and Systems (RES); 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)".
- [11] ETS 300 494-1: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary".
- [12] ETS 300 494-2: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)".
- [13] ISO/IEC 9646-1 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts". (See also CCITT Recommendation X.290 (1991)).
- [14] ISO/IEC 9646-2 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 2: Abstract test suite specification". (See also CCITT Recommendation X.291 (1991)).
- [15] ISO/IEC 9646-3 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 3: The tree and tabular combined notation". (See also CCITT Recommendation X.292 (1992)).
- [16] ISO/IEC 9646-5 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 5: Requirements on test laboratories and clients for the conformance assessment process". (See also CCITT Recommendation X.292 (1992)).
- [17] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".
- [18] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statement".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this ETS, the following definitions apply:

- terms defined in ISO/IEC 9646 Parts 1 to 3 [13] - [15] and Parts 5 to 7 [16] - [18];
- definitions in ETS 300 370 [5];
- definitions in ETS 300 466 [2].

3.2 Abbreviations

For the purposes of this ETS, the following abbreviations apply:

ATS	Abstract Test Suite
CC	Call Control
CI	Common Interface
DLC	Data Link Control
FT	Fixed radio Termination
GAP	Generic Access Profile
GSM	Global System for Mobile Communications
ICS	Implementation Conformance Statement
IPUI	International Portable User Identity
IUT	Implementation Under Test
IWP	Interworking Profile
IXIT	Implementation Extra Information for Testing
LCE	Link Control Entity
LLME	Lower Layer Management Entity
LLN	Logical Link Number
MAC	Medium Access Control
MM	Mobility Management
NLF	New Link Flag
NWK	Network
PARK	Portable Access Rights Key
PHL	Physical
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation Extra Information for Testing
PP	Portable Part
PSTS	Profile Specific Test Specification
PT	Portable radio Termination
PTS	Profile Test Specification
SARI	Secondary Access Rights Identity
SUT	System Under Test
TCL	Test Case Library
TPUI	Temporary Portable User Identity
TS	Test System
TSO	Test Suite Overview
TSS&TP	Test Suite Structure & Test Purposes
TTCN	Tree and Tabular Combined Notation

4 Relevant test cases list

4.1 Network (NWK) layer

This subclause includes lists of test suite groups and abstract test cases, relevant for DECT/GSM IWP derived from ETS 300 497-7 [10] and ETS 300 494-2 [12].

If a test purpose, described in ETS 300 497-6 [9], is outside the scope of the DECT/GSM IWP the name of the relevant test case is excluded from the list.

NOTE: Exclusion of a test case may lead to exclusion of test steps, constraints, etc. and this should be taken into account when extracting the relevant information from ETS 300 497-7 [10].

If a test purpose, described in ETS 300 497-6 [9], is within the scope of the DECT/GSM IWP the name of the relevant test case is included into the list.

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4.1.1 Test suite structure

Table 1: Test suite structure

Test suite structure	
Suite name:	nwk_pt
Standards ref.:	ETS 300 370 [5]; ETS 300 497-7 [10]; ETS 300 494-2 [12]
Profile ICS ref.:	ETS 300 704-1 [6]
Profile IXIT ref.:	ETS 300 702-2 (this ETS)
Test method:	remote
Comments:	
Test group reference	Test group objective
PT/	To check the behaviour of the NWK layer of the PT(IUT)
PT/CC/	To check the IUT CC-state machine behaviour
PT/CC/IT/	To check that the IUT CC-state machine provides sufficient conformance for possible interconnection without trying to perform thorough testing
PT/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
PT/CC/BV/	To test the CC entity of the IUT in response to syntactically and contextual correct behaviour of the test system
PT/CC/BV/OC/	To check the IUT's behaviour to set-up an outgoing call
PT/CC/BV/IC/	To check the IUT's behaviour to set-up an incoming call
PT/CC/BV/CI/	To check the IUT's behaviour in information transfer procedures
PT/CC/BV/CR/	To check the IUT's behaviour to release an outgoing/incoming call
PT/CC/BV/HO/	To check the IUT's behaviour to perform external handover
PT/MM/	To check the behaviour of the MM entity of the IUT
PT/MM/IT/	To check that the MM entity of the IUT provides sufficient conformance for possible interconnection without trying to perform thorough testing
PT/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
PT/MM/BV/	To test the MM entity of the IUT in response to syntactically and contextual correct behaviour of the test system
PT/MM/BV/ID/	To check the IUT's behaviour concerning identity procedures
PT/MM/BV/AU/	To check the IUT's behaviour concerning the authentication procedures
PT/MM/BV/LO/	To check the IUT's behaviour concerning the location procedures
PT/MM/BV/CH/	To check the IUT's behaviour concerning the ciphering related procedures
PT/ME/	To check the behaviour of the LLME of the IUT
PT/ME/IT/	To check that LLME of the IUT provides sufficient conformance for possible interconnection without trying to perform thorough testing
PT/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
PT/ME/BV/	To tests the LLME of the IUT in response to syntactically and contextual correct behaviour of the test system
PT/LC/	To check the behaviour of the LCE of the IUT
PT/LC/IT/	To check that LCE of the IUT provides sufficient conformance for possible interconnection without trying to perform thorough testing
PT/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
PT/LC/BV/	To tests the LCE of the IUT in response to syntactically and contextual correct behaviour of the test system
PT/LC/BV/LE/	To check the IUT's behaviour concerning the connection oriented link establishment procedures
Detailed comments:	
1)	The sub-sub-groups with identifiers PT/xx/IT/ and PT/xx/CA/ do not include their own test cases but only list an appropriate selection of tests from the relevant sub-group with identifier PT/xx/.