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Digitalne izboljġane brezvrviļ ne telekomunikacije (DECT) - Digitalno omreġje z integriranimi storitvami (ISDN) - Vzajemno delovanje DECT/ISDN v obliki posredovalnega sistema - 2. del: Preskuġevalna specifikacija, odvisna od profila (PSTS), za prenosno radijsko zaključļ itev (PT)

Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Part 2: Profile Specific Test Specification (PSTS) for Portable radio Termination (PT)

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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 2 of a multi-part EN covering the DECT/ISDN interworking for intermediate system configuration, as identified below:

Part 1: "Profile Test Specification (PTS) summary";

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

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

National transposition dates	
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1 Scope

The present document contains the test specification for Digital Enhanced Cordless Telecommunications/Integrated Services Digital Network (DECT/ISDN) Interworking for Intermediate system Profile (IIP) Portable Part (PP) applications as specified in ETS 300 822 [22].

This test specification provides conformance tests for DECT/ISDN terminal equipment conforming to ETS 300 822 [22]. The main objective is to perform a high probability of inter-operability between the DECT/ISDN terminal equipment and an ISDN network. The DECT/ISDN terminal equipment contains Fixed Parts (FPs) and PPs that may be supplied by different manufacturers.

The International Organization for Standardization (ISO) standard for the methodology of conformance testing ISO/IEC 9646 [23] to [29] is used as the basis for the test methodology, and as the basis for test case specification.

The test cases if listed in the present document have been derived from the corresponding ATS. Additional DECT/ISDN IIP specific test cases are included where required.

Annex A provides Profile Implementation eXtra Information for Testing (IXIT) proforma part of this specification.

Annex B provides Profile Conformance Test Report (Profile CTR) proforma part of this specification.

Annex C provides System Conformance Test Report proforma (SCTR) part of this specification.

Annex D provides the Profile IXIT Requirements List (XRL) proforma part of this specification.

Annex E provides modifications of DECT layer PCTR proforma of this specification.

Annex F provides the Tree and Tabular Combined Notation (TTCN) part for DECT Network (NWK) layer conforming to the requirements of this specification.

Annex G provides the Tree and Tabular Combined Notation (TTCN) part for DECT DLC layer conforming to the requirements of this specification.

Annex H provides the Tree and Tabular Combined Notation (TTCN) part for DECT Medium Access Control (MAC) layer conforming to the requirements of this specification.

Annex J provides the Tree and Tabular Combined Notation (TTCN) part for DECT/ISDN IWU - IIP profile.

2 Normative references

References may be made to:

a) specific versions of publications (identified by date of publication, edition number, version number, etc.), in which case, subsequent revisions to the referenced document do not apply; or

b) all versions up to and including the identified version (identified by "up to and including" before the version identity); or

c) all versions subsequent to and including the identified version (identified by "onwards" following the version identity); or

d) publications without mention of a specific version, in which case 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 301 241-1: "Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Profile Implementation Conformance Statement (ICS); Part 1: Portable radio Termination (PT)".

[2] EN 301 614-2: " Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Part 2: Profile Specific Test Specification (PSTS) for Portable radio Termination (PT)".

[3] ETS 300 012 (1992) including Amendment 2 (1996): "Integrated Services Digital Network (ISDN); Basic user-network interface; Layer 1 specification and test principles".

[4] Void.

[5] EN 300 175-2: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)".

[6] EN 300 175-3: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".

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

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

[9] EN 300 176-1: "Digital Enhanced Cordless Telecommunications (DECT); Approval test specification (ATS); Part 1: Radio".

[10] ETS 300 402-2: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Data link layer; Part 2: General protocol specification [ITU-T Recommendation Q.921 (1993), modified]".

[11] ETS 300 402-4: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Data link layer; Part 4: Protocol Implementation Conformance Statement (PICS) proforma specification for the general protocol".

[12] ETS 300 476-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 1: Network (NWK) layer - Portable radio Termination (PT)".

[13] ETS 300 476-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Data Link Control (DLC) layer - Portable radio Termination (PT)".

[14] ETS 300 476-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 3: Medium Access Control (MAC) layer - Portable radio Termination (PT)".

[15] ETS 300 476-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 7: Physical layer".

[16] 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".

[17] 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)".

[18] ETS 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".

[19] ETS 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".

[20] ETS 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)".

[21] ETS 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)".

[22] ETS 300 822: "Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for intermediate system configuration; Interworking and profile specification".

[23] 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)).

[24] 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)).

[25] ISO/IEC 9646-3 (1991): "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)).

[26] ISO/IEC 9646-4 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realization". (See also CCITT Recommendation X.292 (1992)).

[27] 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)).

[28] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[29] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statement".

[30] TBR 3: "Integrated Services Digital Network (ISDN); Attachment requirements for terminal equipment to connect to an ISDN using ISDN basic access".

[31] TBR 22: "Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications".

3 Definitions and abbreviations

3.1 Definitions

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

a) the terms defined in ISO/IEC 9646-7 [29]; and

b) the definitions in ETS 300 822 [22].

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ISO/IEC 9646-1 [23], ISO/IEC 9646-6 [28], ISO/IEC 9646-7 [29], ETS 300 822 [22] 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
CC	Call Control entity
CI	Common Interface
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control layer
FP	Fixed Part
FT	Fixed radio Termination
ICS	Implementation Conformance Statement
ISDN	Integrated Services Digital Network
ISO	International Organization for Standardization
IUT	Implementation Under Test
IXIT	Implementation Extra Information for Testing
LCE	Link Control Entity
MAC	Medium Access Control layer
MM	Mobility Management entity
MTC	Main Text Component
NWK	NetWorK
PDU	Protocol Data Unit
PHL	Physical Layer
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
SAP	Service Access Point
SCS	System Conformance Statement
SUT	System Under Test
TP	Test Purpose
TSS	Test Suite Structure
XRL	IXIT Requirements list

4 DECT NWK layer protocol

4.1 Additional Test Purposes (TPs)

Figure 1 shows the Network (NWK) Test Suite Structure (TSS) defined in ETS 300 497-6 [20] for the conformance testing.

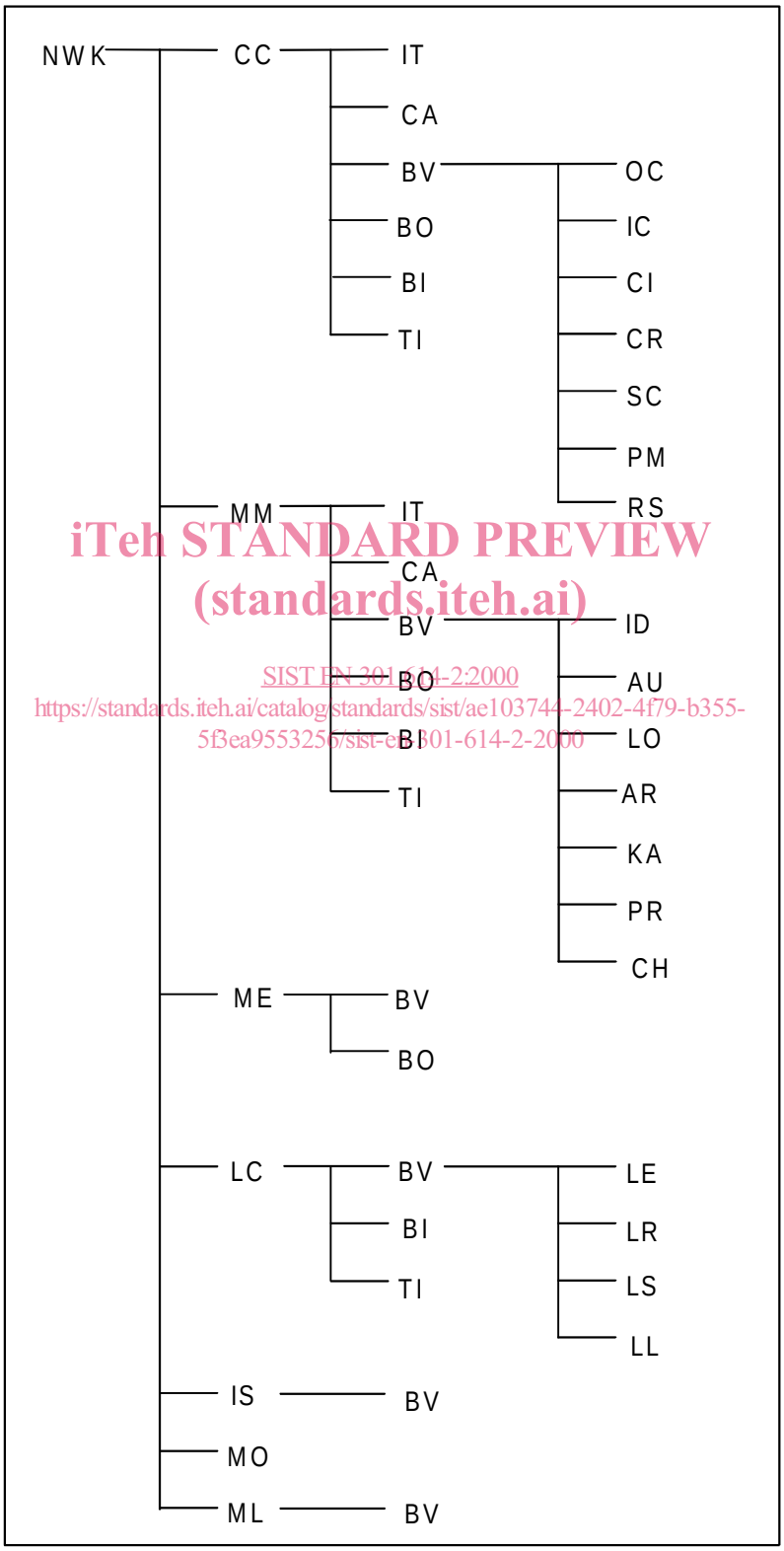

Figure 1: NWK TSS

No TP for Call Control entity (CC) entity of the NWK layer as specified in ETS 300 497-6 [20] applies without modification. The test groups "Portable radio Termination (PT)/CC/Valid Behaviour (BV)/IS", "PT/CC/Inopportune Behaviour (BO)/IS", "PT/CC/Invalid Behaviour (BI)/IS" and "PT/CC/TI/IS" have been added to test the intermediate system profile specific behaviours.

All TPs for Link Control Entity (LCE) entity of the NWK layer as specified in ETS 300 497-6 [20] apply. The test groups "PT/LC/BV/IS", has been added to test the intermediate system profile specific behaviours.

No TP for CISS entity of the NWK layer is relevant.

4.1.1 Additional TPs for IIP CC specific behaviours

4.1.1.1 Test group PT/CC/BV/IS

TP-PT-CC-BV-IS-01	ETS 300 822 [22], subclause 10.1.3 and annex C Initial condition: The signalling link is established, the CC state is t10. Check that the Implementation Under Test (IUT) supports segmentation of long ISDN messages into two <<IWU-TO-IWU>> with a <<REPEAT-INDICATOR>> sent in five or more consecutive messages
TP-PT-CC-BV-IS-02	ETS 300 822 [22], subclause 10.1.3 and annex C Initial condition: The signalling link is established, the CC state is t10. Check that the IUT supports segmentation of medium sized ISDN messages into one <<IWU-TO-IWU>> in two consecutive messages
TP-PT-CC-BV-IS-03	ETS 300 822 [22], subclause 10.2.1 and 6.3.2 Initial condition: The link is not established, the CC is idle. Check that the IUT can switch the ISDN channel B1 separately.
TP-PT-CC-BV-IS-04	ETS 300 822 [22], subclause 10.2.1 and 6.3.2 Initial condition: The link is not established, the CC is idle. Check that the IUT can switch the ISDN channel B2 separately.
TP-PT-CC-BV-IS-05	ETS 300 822 [22], subclause 10.2.1 and 6.3.2 Initial condition: The link is not established, the CC is idle. Check that the IUT can switch both the ISDN channels B1 and B2.
TP-PT-CC-BV-IS-06	ETS 300 822 [22], subclause 10.2.2 Initial condition: a first link supports the U-plane for B1 channel and Cs signalling data, the second one supports only the U-plane for B2 and is in state t10 Check that the U-plane for B2 when no longer needed, the IUT supports its release using the normal release procedure.
TP-PT-CC-BV-IS-07	ETS 300 822 [22], subclause 10.2.2 Initial condition: a first link supports the U-plane for B1 channel and Cs signalling data, the second one supports only the U-plane for B2 and is in state t08. Check that the U-plane for B2 when no longer needed, the IUT supports its release using the normal release procedure.
TP-PT-CC-BV-IS-08	ETS 300 822 [22], subclause 10.2.3 Initial condition: The U-plane is connected, the CC is in state t10. Check that the IUT supports disconnection/connection of the U-plane link by means of {IWU-INFO} messages

4.1.1.2 Test group PT/CC/BI/IS

TP-PT-CC-BI-IS-01	EN 300 175-5 [8], subclause 17.6.1 Initial condition: The link is not established, the CC is in state t00 Verify that the IUT sends a {CC_RELEASE_COM} on receipt of a {CC_SETUP} message with a mandatory information element missing.
TP-PT-CC-BI-IS-02	EN 300 175-5 [8], subclause 17.6.2 Initial condition: The link is not established, the CC is in state t00 Verify that the IUT sends a {CC_RELEASE_COM} on receipt of a {CC_SETUP} message containing a mandatory information element with wrong content.
TP-PT-CC-BI-IS-03	EN 300 175-5 [8], subclause 17.4.1 Initial condition: The link is not established, the CC is in state t00 Verify that the IUT ignores an unrecognized message, when it is constructed as a {CC_SETUP} with one bit wrong in the <<message type>>