SLOVENSKI STANDARD
SIST EN 300 497-4 V0.3.0:2003

01-december-2003

Digitalne izboljġane brezvrviļ ne telekomunikacije (DECT) ï Skupni vmesnik (CI) ï Knjiġnica preskuġalnih primerov (TCL) ï 4. del: Zgradba preskuġalnega niza (TSS) in nameni preskuġanja (TP) ï Plast krmiljenja podatkovnih povezav (DLC)

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

Ta slovenski standard je istoveten z: **EN 300 497-4 Version 0.3.0**

ICS:

33.070.30	Digitalne izboljġane brezvrviļ ne telekomunikacije (DECT)	Digital Enhanced Cordless Telecommunications (DECT)

SIST EN 300 497-4 V0.3.0:2003 **en**

ETSI EN 300 497-4 V0.3.0 (1999-10)

European Standard (Telecommunications series)

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

Reference
REN/DECT-040131-4 (4lp00100.PDF)

Keywords
DECT, testing, TSS&TP, layer 2

ETSI

Postal address
F-06921 Sophia Antipolis Cedex - FRANCE

Office address
650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16
Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Internet
secretariat@etsi.fr
Individual copies of this ETSI deliverable
can be downloaded from
http://www.etsi.org
If you find errors in the present document, send your
comment to: editor@etsi.fr

Contents

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (http://www.etsi.org/ipr).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

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

The present document is part 4 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)".

National transposition dates	
Date of adoption of this EN:	17 September 1999
Date of latest announcement of the present document (doa):	31 December 1999
Date of latest publication of new National Standard or endorsement of the present document (dop/e):	30 June 2000
Date of withdrawal of any conflicting National Standard (dow):	30 June 2000

1 Scope

The present document contains the Test Suite Structure (TSS) and Test Purposes (TP) to test the Digital Enhanced Cordless Telecommunications (DECT) Data Link Control (DLC) layer.

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.

The ISO standard for the methodology of conformance testing (ISO/IEC 9646-1 [10] and ISO/IEC 9646-2 [11]) as well as the ETSI rules for conformance testing (ETS 300 406 [9]) are used as the basis for the test methodology.

Test specifications for the Physical Layer (PHL), Medium Access Control (MAC) layer, and Network (NWK) layer are provided in other the DECT standards.

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 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".

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

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

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

[12] Directive 98/13/EC of the European Parliament and of the Council of 12 February 1998 relating to telecommunications terminal equipment and satellite earth station equipment, including the mutual recognition of their conformity.

[13] TBR 6: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements".

[14] TBR 10: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements; Telephony applications".

[15] TBR 22 including Amendment 2: "Digital Enhanced Cordless Telecommunications (DECT); Attachment requirements for terminal equipment for DECT Generic Access Profile (GAP) applications".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the definitions given in ISO/IEC 9646-1 [10], ISO/IEC 9646-2 [11], EN 300 175-1 [1], EN 300 175-4 [4], EN 300 175-6 [6] and EN 300 175-7 [7] apply.

3.2 Abbreviations

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

BI	Invalid Behaviour
BO	Inopportune Behaviour
BV	Valid Behaviour
C/L	Connectionless mode
C/O	Connection Oriented mode
CA	Capability tests
C-plane	Control plane
DECT	Digital Enhanced Cordless Telecommunications
DLC	Data Link Control layer
FP	Fixed Part
FT	Fixed radio Termination
IUT	Implementation Under Test
LAPC	a DLC layer C-plane protocol entity
Lb	a DLC broadcast entity
LLME	Lower Layer Management Entity
LT	Lower Tester
MAC	Medium Access Control layer
NWK	Network layer
PDU	Protocol Data Unit
PHL	Physical Layer
PICS	Protocol Implementation Conformance Statement
PIXIT	Protocol Implementation Extra Information for Testing
PP	Portable Part
PT	Portable radio Termination
RFP	Radio Fixed Part
SAPI	Service Access Point Identifier
TDMA	Time Division Multiple Access
TP	Test Purposes
TSS	Test Suite Structure
ULI	Unassigned Link Identifier (U-Plane)
U-plane	User plane

4 Test Suite Structure (TSS)

4.1 Overview

The Data Link Control (DLC) layer is layer 2b of the DECT protocol stack. The separation of the user information from the DECT signalling data is managed by the allocation of two independent planes:

- the User plane (U-plane); and
- the Control plane (C-plane).

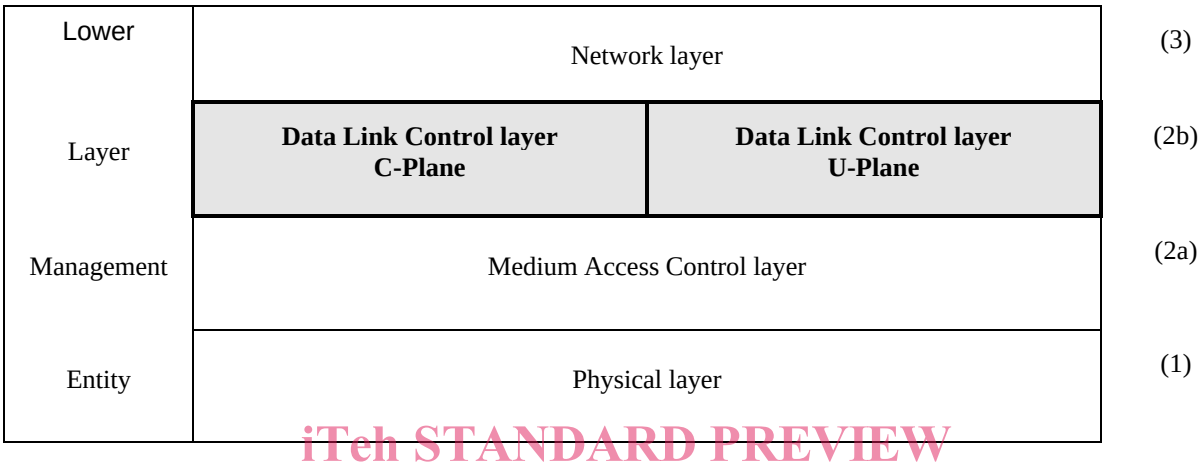

Figure 1: DECT protocol stack

The U-plane is the part of the DLC implementation that is responsible for the transmission of the user data. The U-plane may provide a series of different services and facilities, grouped into categories (LUx families).

The C-Plane is the second part of DECT DLC and is mainly involved with the transfer of signalling information. It provides the means to support DECT Connection Oriented, Connectionless and Broadcast services (the broadcast service exists only at the FT to PT direction). DECT DLC provides three classes of operation (Unacknowledged for C/L services, Single frame and Multiframe for C/O services).

At the DLC layer, C-plane and U-plane resources are considered as completely independent. The association of C and U-plane resources to serve a higher layer service (e.g. to setup and maintain a call) is a NWK layer responsibility. Moreover, no interaction is required between the services provided by each of the planes.

Figure 2 shows the DLC (TSS) including its subgroups and defined for the conformance testing.

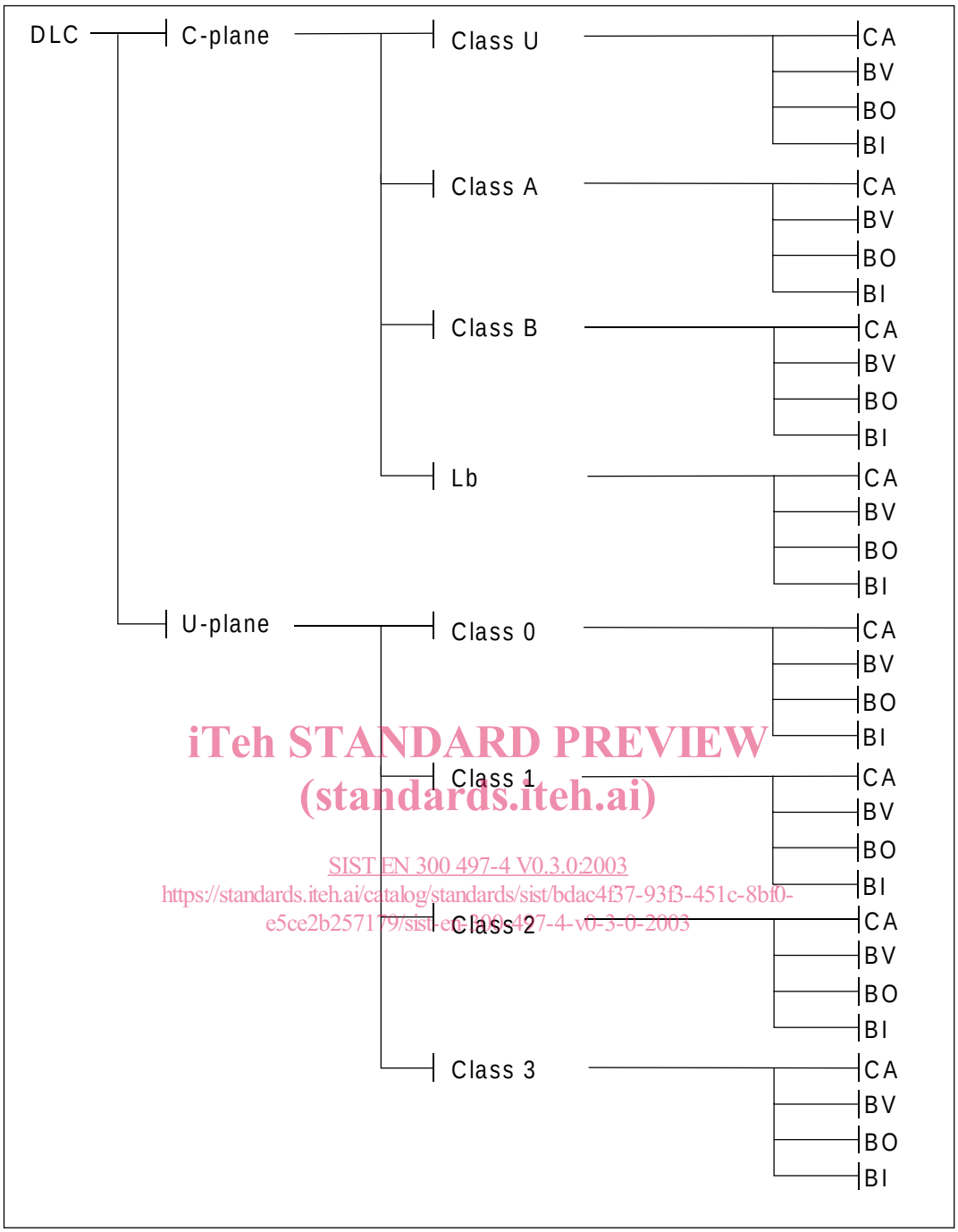

Figure 2: DLC TSS

4.2 TSS

The test suite is structured as a tree with a first level defined as DLC representing the protocol group "DLC for Portable Part (PP) and Fixed Part (FP)".

4.3 Test groups

The test groups are organized in three levels. The first level creates two protocol groups representing the protocol plane. The second level separates the protocol plane in functional modules. The last level contains the standard ISO subgroups CA, BV, BO and BI.