



SLOVENSKI STANDARD

DSIST TBR 022:2002 - ,

01-Uj [i gh2002 - ,

Radijska oprema in sistemi (RES) - Priključitvene zahteve za terminalsko opremo za digitalne izboljšane brezvrvične telekomunikacije (DECT): Uporaba profila generičnega dostopa (GAP)

Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications

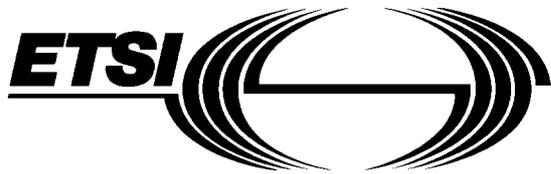
Ta slovenski standard je istoveten z: TBR 022 Edition 1

ICS:

33.070.30	Digitalne izboljšane brezvrvične telekomunikacije (DECT)	Digital Enhanced Cordless Telecommunications (DECT)
-----------	--	---

DSIST TBR 022:2002 - ,

en



TECHNICAL
BASIS for
REGULATION

TBR 22

January 1997

Source: ETSI TC-RES

Reference: DTBR/RES-03055

ICS: 33.020

Key words: Access, DECT, type approval

**Radio Equipment and Systems (RES);
Attachment requirements for terminal equipment for
Digital Enhanced Cordless Telecommunications (DECT)
Generic Access Profile (GAP) applications**

ETSI

European Telecommunications Standards Institute

ETSI Secretariat

Postal address: F-06921 Sophia Antipolis CEDEX - FRANCE

Office address: 650 Route des Lucioles - Sophia Antipolis - Valbonne - FRANCE

X.400: c=fr, a=atlas, p=etsi, s=secretariat - **Internet:** secretariat@etsi.fr

Tel.: +33 4 92 94 42 00 - Fax: +33 4 93 65 47 16

Copyright Notification: No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 1997. All rights reserved.

Contents

Foreword	7
1 Scope	9
2 Normative references	9
3 Definitions and abbreviations	12
3.1 Definitions	12
3.2 Abbreviations	12
4 How to use this TBR.....	13
5 Requirements	13
5.1 Network (NWK) layer features	14
5.2 Data Link Control (DLC) layer services.....	16
5.3 Medium Access Control (MAC) layer services	17
5.4 Application features	18
5.5 PHysical (PH) layer requirements.....	18
6 Test specification	19
6.1 Portable Part (PP).....	19
6.1.1 NWK layer	19
6.1.1.1 Test suit structure	19
6.1.1.2 Test case index	21
6.1.2 DLC layer.....	28
6.1.2.1 Test suit structure	28
6.1.2.2 Test case index	29
6.1.3 MAC layer.....	31
6.1.3.1 Test suit structure	31
6.1.3.2 Test case index	33
6.1.4 PH layer.....	34
6.1.4.1 Normal Transmitted Power (NTP)	34
6.1.4.2 PP radio receiver sensitivity.....	34
6.1.4.3 Radio receiver interference performance	34
6.1.4.4 Receiver intermodulation performance.....	34
6.1.4.5 User controlled volume control	35
6.1.4.6 Additional test cases.....	35
6.2 Fixed Part (FP).....	36
6.2.1 NWK layer	36
6.2.1.1 Test suit structure	36
6.2.1.2 Test case index	38
6.2.2 DLC layer.....	44
6.2.2.1 Test suit structure	44
6.2.2.2 Test case index	45
6.2.3 MAC layer.....	47
6.2.3.1 Test suit structure	47
6.2.3.2 Test case index	48
6.2.4 PH layer.....	50
6.2.4.1 Normal Transmitted Power (NTP)	50
6.2.4.2 RFP radio receiver sensitivity	50
6.2.4.3 Radio receiver interference performance	50
6.2.4.4 Receiver intermodulation performance.....	50
6.2.4.5 Additional test cases.....	50
Annex A (normative): Requirements Tables (RT).....	51

A.1	Introduction	51
A.2	Portable Part (PP).....	52
A.2.1	Tables for PP NWK layer	52
A.2.1.1	Major Capabilities	52
A.2.1.1.1	Entities	52
A.2.1.1.2	CC features.....	53
A.2.1.1.3	MM features	54
A.2.1.1.4	SS features (services).....	54
A.2.1.1.5	LCE features	54
A.2.1.1.6	Procedures.....	55
A.2.1.2	Messages	57
A.2.1.2.1	Call control messages.....	57
A.2.1.2.2	Mobility management messages	57
A.2.1.2.3	Link control entity messages.....	58
A.2.2	Tables for PP DLC layer.....	58
A.2.2.1	Capabilities	58
A.2.2.1.1	Services	58
A.2.2.1.2	Procedures.....	59
A.2.2.2	Protocol PDUs	60
A.2.2.2.1	C-plane PDUs	60
A.2.2.2.2	C-plane messages	61
A.2.2.2.3	U-plane PDUs	61
A.2.3	Tables for PP MAC layer.....	61
A.2.3.1	Major Capabilities	61
A.2.3.1.1	Services	61
A.2.3.1.1.1	Connection oriented control services ...	61
A.2.3.1.1.2	Broadcast control services	62
A.2.3.1.1.3	Multiplexing services	62
A.2.3.1.1.4	Management services	62
A.2.3.2	Procedures	62
A.2.3.2.1	Connection setup procedures	62
A.2.3.2.2	Connection data transfer procedures.....	63
A.2.3.2.3	Connection handover procedures	63
A.2.3.2.4	Connection release procedures	63
A.2.3.2.5	Broadcast procedures.....	63
A.2.3.2.6	CSF multiplexing procedures.....	64
A.2.3.2.7	Layer management procedures	64
A.2.3.3	Other capabilities	64
A.2.4	Tables for PP PHL layer.....	64
A.2.4.1	Physical layer procedures.....	64
A.2.5	Tables for PP Application requirements.....	65
A.2.5.1	Application features	65
A.2.5.2	Application Procedures.....	65
A.3	Fixed Part (FP)	66
A.3.1	Tables for FP NWK layer	66
A.3.1.1	Major capabilities	66
A.3.1.1.1	Entities	66
A.3.1.1.2	CC features.....	66
A.3.1.1.3	MM features	68
A.3.1.1.4	SS features (services).....	69
A.3.1.1.5	LCE features	69
A.3.1.1.6	Procedures.....	69
A.3.1.2	Messages	72
A.3.1.2.1	Call control messages.....	72
A.3.1.2.2	Mobility management messages	73
A.3.1.2.3	Link control entity messages.....	74
A.3.2	Tables for FP DLC layer.....	75
A.3.2.1	Capabilities	75
A.3.2.1.1	Services	75
A.3.2.1.2	Procedures.....	75
A.3.2.2	Protocol PDUs	77

	A.3.2.2.1	C-plane PDUs.....	77		
	A.3.2.2.2	C-plane messages.....	77		
	A.3.2.2.3	U-plane PDUs.....	77		
A.3.3	Tables for FP MAC layer.....		78		
	A.3.3.1	Major Capabilities.....	78		
		A.3.3.1.1	Services.....		
			A.3.3.1.1.1	Connection oriented control services....	78
			A.3.3.1.1.2	Broadcast control services.....	78
			A.3.3.1.1.3	Multiplexing services.....	78
			A.3.3.1.1.4	Management services.....	79
	A.3.3.2	Procedures.....	79		
		A.3.3.2.1	Connection setup procedures.....	79	
		A.3.3.2.2	Connection data transfer procedures.....	79	
		A.3.3.2.3	Connection handover procedures.....	80	
		A.3.3.2.4	Connection release procedures.....	80	
		A.2.3.2.5	Broadcast procedures.....	80	
		A.2.3.2.6	CSF multiplexing procedures.....	80	
		A.3.3.2.7	Layer management procedures.....	80	
	A.3.3.3	Other capabilities.....	81		
A.3.4	Tables for FP PHL layer.....		81		
	A.3.4.1	Physical layer procedures.....	81		
A.3.5	Tables for FP Application requirements.....		81		
	A.3.5.1	Application features.....	81		
	A.2.5.2	Application Procedures.....	81		
Annex B (normative):	Declarations on features supported.....		82		
B.1	Introduction.....		82		
B.2	Declarations for portable part.....		82		
	B.2.1	Network layer.....	82		
B.3	Declarations for fixed part.....		84		
	B.3.1	Network layer.....	84		
Annex C (informative):	Bibliography.....		85		
History.....			86		

Blank page

Foreword

This Technical Basis for Regulation (TBR) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

Details of the Digital Enhanced Cordless Telecommunications (DECT) Common Interface (CI) may be found in ETS 300 175, Parts 1 - 9 [1] to [9].

Blank page

1 Scope

This TBR specifies the technical characteristics which shall be provided by terminal equipment which is capable of connection to a public telecommunications network (see note) and which uses DECT cordless communications. These requirements shall apply to equipment providing any DECT telephony application. The cordless transmissions for such terminal equipment operate within the frequency band 1880-1900 MHz.

This TBR shall apply in addition to the attachment requirements for the appropriate public network; and in addition to the CTRs for DECT General attachment requirements and for telephony applications.

DECT comprises two equipment elements, referred to as Fixed Part (FP) and Portable Part (PP).

The objective of this TBR is to ensure the air interface interoperability of DECT equipment capable of telephony applications, in such a way that any DECT PP conforming to the procedures described in this TBR shall be capable of interoperability with any DECT FP conforming to the procedures described in this TBR.

The FP and /or the PP shall conform to the requirements and tests in this TBR. This TBR is structured to allow type approval of the FP and PP as separate items. Where the DECT FP is connected to a PSTN, and where there are specific national variations in the requirements for voice telephony, these shall be accommodated within the FP so that the PP shall be common.

NOTE: CTR for basic ISDN, CTR for primary rate ISDN, or national regulations (implementing ETS 300 001) for PSTN. Interconnection of DECT terminal to GSM network is still under study; in due course, the scope statement may need amending to reflect this point.

This TBR is based on the radio and protocol provisions of ETS 300 175, Parts 1 to 8 [1] - [8].

2 Normative references

This TBR 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 TBR only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

- [1] ETS 300 175-1: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".
- [2] ETS 300 175-2: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer".
- [3] ETS 300 175-3: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".
- [4] ETS 300 175-4: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".
- [5] ETS 300 175-5: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [6] ETS 300 175-6: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".

- [7] ETS 300 175-7: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".
- [8] ETS 300 175-8: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".
- [9] ETS 300 175-9: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 9: Public Access Profile (PAP)".
- [10] ETS 300 444 (1995): "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [11] prETS 300 476-1 (1996): "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 1: Network (NWK) layer - Portable radio Termination (PT)".
- [12] prETS 300 476-2 (1996): "Radio Equipment and Systems (RES); 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)".
- [13] prETS 300 476-3 (1996): "Radio Equipment and Systems (RES); 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)".
- [14] prETS 300 476-4 (1996): "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 4: Network (NWK) layer - Fixed radio Termination (FT)".
- [15] prETS 300 476-5 (1996): "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 5: Data Link Control (DLC) layer - Fixed radio Termination (FT)".
- [16] prETS 300 476-6 (1996): "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 6: Medium Access Control (MAC) layer - Fixed radio Termination (FT)".
- [17] prETS 300 476-7 (1996): "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 7: Physical layer".
- [18] prETS 300 474-1: "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; Part 1: Portable radio Termination (PT)".
- [19] prETS 300 474-2: "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; Part 2: Fixed radio Termination (FT)".
- [20] Reserved value.

- [21] 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)).
- [22] 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)).
- [23] 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)).
- [24] ISO/IEC 9646-4 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 4: Test realisation". (See also CCITT Recommendation X.292 (1992)).
- [25] 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)).
- [26] ISO/IEC 9646-6 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".
- [27] ISO/IEC 9646-7 (1991): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation conformance statement".
- [28] 91/263/EEC: "Council Directive of 29 April 1991 on the approximation of the laws of the Member states concerning telecommunications terminal equipment, including the mutual recognition of their conformity. (Terminal Directive)".
- [29..40] Reserved values.
- [41] I-ETS 300 176: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); Approval test specification".
- [42] TBR 6: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); General terminal attachment requirements".
- [43] TBR 10: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT); General terminal attachment requirements: Telephony applications".
- [44 .. 46] Reserved values.
- [47] prETS 300 497: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI) Test Case Library (TCL)".
- [48] prETS 300 494-1: "Radio Equipment and Systems (RES); Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary".
- [49] prETS 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)".