



SLOVENSKI STANDARD
SIST EN 300 175-4 V1.8.1:2006
01-marec-2006

**Digitalne izboljšane brezvrvične telekomunikacije (DECT) – Skupni vmesnik (CI) –
4. del: Plast krmiljenja podatkovnih povezav (DCL)**

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4:
Data Link Control (DLC) layer

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: **EN 300 175-4 Version 1.8.1**
<https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83c3-89c27906dce2/sist-en-300-175-4-v1-8-1-2006>

ICS:

33.070.30	Digitalne izboljšane brezvrvične telekomunikacije (DECT)	Digital Enhanced Cordless Telecommunications (DECT)
35.100.20	Podatkovni povezovalni sloj	Data link layer

SIST EN 300 175-4 V1.8.1:2006 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 300 175-4 V1.8.1:2006

<https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83e3-89c27906dce2/sist-en-300-175-4-v1-8-1-2006>

ETSI EN 300 175-4 V1.8.1 (2004-11)

European Standard (Telecommunications series)

Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 300 175-4 V1.8.1:2006](https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83e3-89c27906dce2/sist-en-300-175-4-v1-8-1-2006)

<https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83e3-89c27906dce2/sist-en-300-175-4-v1-8-1-2006>



Reference

REN/DECT-000215-4

Keywords

DECT, radio**ETSI**

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - 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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 300 175-4 V1.8.1:2006

<https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83e3-89c27906dca2/etsi-en-300-175-4-v1-8-1-2006>
Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

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 2004.
All rights reserved.

DECT™, **PLUGTESTS™** and **UMTS™** are Trade Marks of ETSI registered for the benefit of its Members.
TIPHON™ and the **TIPHON logo** are Trade Marks currently being registered by ETSI for the benefit of its Members.
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

Contents

Intellectual Property Rights	11
Foreword.....	11
1 Scope	12
2 References	12
3 Definitions, symbols and abbreviations	13
3.1 Definitions	13
3.2 Symbols.....	13
3.3 Abbreviations	13
4 Data Link Control (DLC) layer overview	15
4.1 General	15
4.2 C-plane services	16
4.3 U-plane services	16
4.4 Lower Layer Management Entity (LLME)	19
5 C-plane service characteristics	19
5.1 Data link service (LAPC+Lc).....	19
5.1.1 General.....	19
5.1.2 LAPC types of operation	20
5.1.3 Establishment of information transfer modes	20
5.1.3.1 Data Link Identifier (DLI)	20
5.1.3.2 LAPC states.....	20
5.2 Broadcast service (Lb).....	21
6 Frame structures for C-plane services	22
6.1 Data link service frame structure	22
6.1.1 General frame structure	22
6.1.2 Lc frame delimiting and transparency	23
6.1.3 Transmission order	23
6.1.4 Routing to logical channels.....	23
6.1.4.1 C _F /CL _F logical channel.....	23
6.1.4.2 C _S /CL _S logical channel.....	24
6.1.5 Invalid frames	24
6.2 Broadcast service frame structure.....	25
6.2.1 Standard frame structure	25
6.2.2 Extended frame structure	25
7 Elements of procedures and formats of fields for C-plane peer-to-peer communication.....	26
7.1 General	26
7.2 Address field formats	26
7.3 Address field parameters	26
7.3.1 REServed bit (RES)	26
7.3.2 Command Response (C/R) bit	26
7.3.3 SAPI field	27
7.3.4 New Link Flag (NLF) bit.....	27
7.3.5 LLN-field.....	27
7.3.6 Data Link Identifiers (DLI).....	27
7.4 Control field formats	28
7.5 Control field parameters	28
7.5.1 Poll/Final (P/F) bit	28
7.5.2 Multiple frame operation variables and sequence numbers	28
7.5.2.1 Modulus	28
7.5.2.2 Send state Variable V(S)	29
7.5.2.3 Acknowledge state Variable V(A)	29
7.5.2.4 Send sequence Number N(S)	29
7.5.2.5 Receive state Variable V(R).....	29

7.5.2.6	Receive sequence Number N(R)	29
7.5.3	Unacknowledged operation variables and sequence numbers	29
7.5.4	Supervisory and Unnumbered function bits S and U	29
7.6	Length indicator field format	30
7.7	Length indicator field parameters	30
7.7.1	Length indicator field extension bit (N)	30
7.7.2	More data bit (M)	30
7.7.3	Length parameter (L _I)	31
7.7.4	Extended length parameter (L _{JJ})	31
7.7.5	Reserved bit (RES)	31
7.8	Fill field format	31
7.9	Checksum field format	32
7.10	Checksum field parameters	32
7.11	Commands and responses	33
7.11.1	Information (I) command	33
7.11.2	Receive Ready (RR) command/response	34
7.11.3	Receive Not Ready (RNR) command/response	34
7.11.4	REJect (REJ) command/response	34
7.11.5	Set Asynchronous Balanced Mode (SABM) command	34
7.11.6	Disconnect Mode (DM) response	35
7.11.7	Unnumbered Information (UI) command	35
7.11.8	DISConnect (DISC) command	35
7.11.9	Unnumbered ACK (UA) response	35
8	Primitives	35
8.1	Primitive types	35
8.2	Primitives to the MAC layer (lower layer)	36
8.3	Primitives to the NWK layer (higher layer)	36
8.3.1	Parameter definitions	36
8.3.2	S-SAP primitives	37
8.3.2.1	DL_ESTABLISH primitive	37
8.3.2.2	DL_RELEASE primitive	38
8.3.2.3	DL_DATA primitive	38
8.3.2.4	DL_UNIT_DATA primitive	38
8.3.2.5	DL_SUSPEND primitive	38
8.3.2.6	DL_RESUME primitive	39
8.3.2.7	DL_ENC_KEY primitive	39
8.3.2.8	DL_ENCRYPT primitive	39
8.3.2.9	DL_SERVICE_MOD primitive	39
8.3.3	B-SAP primitives	40
8.3.3.1	DL_BROADCAST primitive	40
8.3.3.2	DL_EXPEDITED primitive	40
8.4	Primitives to the interworking unit	40
8.4.1	Parameter definitions	40
8.4.2	LU _X -SAP primitives	41
8.4.2.1	DL_U_DATA primitive	41
8.4.2.2	DL_U_UNIT_DATA primitive	41
8.4.2.3	DL_U_ERROR primitive	41
9	C-plane peer-to-peer procedures	42
9.1	General	42
9.2	Point to point acknowledged operation	42
9.2.1	Procedure for the use of the P/F bit	42
9.2.1.1	Class A acknowledged information transfer	42
9.2.1.2	Class B acknowledged information transfer	43
9.2.2	Use of LLN	43
9.2.2.1	Class A operation	43
9.2.2.2	Class B operation	43
9.2.3	Link establishment and information transfer in class A operation	43
9.2.3.1	Establishing class A operation	43
9.2.3.2	Class A acknowledged information transfer	44
9.2.3.3	Transmission of class A I-frames	44

9.2.3.4	Reception of class A I-frames	45
9.2.3.5	Receiving acknowledgements	45
9.2.3.6	Waiting for acknowledgement	45
9.2.3.7	Release of class A operation	46
9.2.3.8	Re-establishment of class A operation	46
9.2.4	Establishing class B multiple frame operation.....	46
9.2.4.1	Overview	46
9.2.4.2	Class B multiple frame establishment procedures.....	47
9.2.4.3	Class B LLN assignment procedures	48
9.2.4.3.1	PT establishment	48
9.2.4.3.2	FT establishment	49
9.2.5	Link maintenance and information transfer in class B multiple frame operation	49
9.2.5.1	Transmitting I-frames.....	49
9.2.5.2	Receiving I-frames	50
9.2.5.2.1	P bit set to 1	50
9.2.5.2.2	P bit set to 0.....	50
9.2.5.3	Sending and receiving acknowledgements.....	50
9.2.5.3.1	Sending acknowledgements	50
9.2.5.3.2	Receiving acknowledgements	50
9.2.5.4	Receiving REJ-frames.....	51
9.2.5.5	Receiving RNR-frames	52
9.2.5.6	LAPC own receiver busy condition	53
9.2.5.7	Waiting acknowledgement.....	53
9.2.5.8	Appropriate supervisory frame.....	54
9.2.6	Release of class B multiple frame operation.....	54
9.2.7	Link suspension and resumption.....	55
9.2.7.1	Link suspension.....	55
9.2.7.1.1	Class B acknowledged suspend	55
9.2.7.1.2	Unacknowledged suspend	56
9.2.7.2	Class B link resumption	57
9.2.7.3	Connection handover	58
9.2.7.3.1	Class A connection handover.....	59
9.2.7.3.2	Class B connection handover.....	60
9.2.7.3.3	Expiry of connection handover timer	60
9.2.8	Re-establishment of class B multi-frame operation	60
9.2.8.1	Criteria for re-establishment.....	60
9.2.8.2	Procedure	61
9.2.9	Exception handling	61
9.2.9.1	General	61
9.2.9.2	Class B exception condition reporting and recovery.....	62
9.2.9.2.1	N(S) sequence error	62
9.2.9.2.2	N(R) sequence error	62
9.2.9.2.3	Timer recovery condition	62
9.2.9.2.4	Collision of identical transmitted and received commands	62
9.3	Unacknowledged operation	63
9.3.1	Use of LLN for unacknowledged information transfer.....	63
9.3.2	Class U link establishment.....	63
9.3.3	Unacknowledged information transfer.....	63
9.3.3.1	Transmission of unacknowledged information	63
9.3.3.2	Reception of unacknowledged information	63
9.3.4	Unacknowledged release	63
9.4	Broadcast operation	64
9.4.1	Normal operation	64
9.4.1.1	Procedure in the Fixed radio Termination (FT)	64
9.4.1.2	Procedure in the Portable radio Termination (PT)	64
9.4.2	Expedited operation	64
9.4.2.1	Procedure in the Fixed radio Termination (FT)	64
9.4.2.2	Procedure in the Portable radio Termination (PT)	64
9.5	MAC layer interfaces	65
9.5.1	MC-SAP	65
9.5.1.1	C-plane overview	65
9.5.1.2	C-plane service data procedures.....	65

9.5.1.3	U-plane service data	66
9.5.2	MB-SAP	66
9.5.2.1	C-plane service data procedures	66
9.5.2.2	U-plane service data	66
9.5.3	MA-SAP	67
9.5.3.1	Overview	67
9.5.3.2	Service data procedures	67
10	Management procedures	67
10.1	Lower Layer Management Entity (LLME)	67
10.2	MAC connection management	68
10.2.1	MAC connection set-up	68
10.2.2	MAC connection release	68
10.2.3	MAC connection modification	68
10.2.4	MAC connection identifiers	69
10.2.4.1	Overview	69
10.2.4.2	Advanced MAC Connection Identifiers (AMCI)	69
10.2.4.3	Basic MAC Connection Identifiers (BMCI)	70
10.2.4.4	MAC Connection Endpoint Identifier (MCEI)	70
10.2.5	Selection of logical channel (C_S or C_F)	70
10.3	DLC C-plane (LAPC) management	71
10.3.1	Provision of link signature	71
10.3.2	Routing of connection oriented links	71
10.3.3	Routing of connectionless links	72
10.4	DLC U-plane (LUX) management	72
10.4.1	U-plane establishment	72
10.4.2	U-plane release	72
10.4.3	U-plane suspend and resume	72
10.5	Connection handover management	73
10.6	Ciphering management	73
10.6.1	Ciphering management in cases where the NWK layer executes the ciphering related MM procedure	73
10.6.1.1	Providing a key to the MAC layer	73
10.6.1.2	Starting and stopping the ciphering	74
10.6.1.3	Connection handover	74
10.6.2	Ciphering management in cases where the NWK layer does not execute the ciphering related MM procedure	74
10.7	Broadband data link management	74
11	U-plane service characteristics	75
11.1	General	75
11.2	LU1 TRansparent UnProtected service (TRUP)	75
11.3	LU2 Frame RELay service (FREL)	76
11.3.1	General	76
11.3.2	Checksum operation	77
11.3.3	Segmentation and transmission class	77
11.3.4	Data transmission	78
11.3.4.1	Send side procedure	78
11.3.4.2	Receive side procedure	78
11.4	LU3 Frame SWItching service (FSWI)	79
11.5	LU4 Forward Error Correction (FEC) service	79
11.6	LU5 Basic Rate Adaption service (BRAT)	80
11.6.1	Overview	80
11.6.2	Protected service operation	81
11.6.2.1	General	81
11.6.2.2	Data buffering and initial rate adaptation	81
11.6.2.3	Multi-channel set multiplexing	82
11.6.2.4	Segmentation of Multiplexed Data Units (MDU)	83
11.6.2.5	Frame sequencing and addition of control and fill octets	84
11.6.2.6	Frame transmission	85
11.6.3	Unprotected service operation	86
11.6.3.1	General	86
11.6.3.2	Data buffering and initial rate adaption	86

11.6.3.3	Multi-channel set multiplexing	86
11.6.3.4	Segmentation of MDUs.....	87
11.6.3.5	Frame transmission	88
11.7	LU6 Secondary Rate AdapTion (SRAT) service	88
11.7.1	General.....	88
11.8	LU16 ESCape Service (ESC).....	89
11.8.1	General.....	89
11.9	LU7 64 kbit/s data bearer service	90
11.9.1	General.....	90
11.9.2	Physical layer service.....	90
11.9.3	MAC layer service	90
11.9.4	DLC layer service	90
11.9.4.1	Architectural model.....	90
11.9.4.1.1	Transmit (Tx) frame buffering	91
11.9.4.1.2	Receive (Rx) frame buffering.....	91
11.9.4.2	Automatic-Repeat-Request (ARQ) and Forward Error Control (FEC).....	91
11.9.4.2.1	Control field	92
11.9.4.2.2	Information field.....	94
11.9.4.2.3	ARQ checksum.....	95
11.9.4.3	Procedures for normal operation	95
11.9.4.3.1	Establishment and synchronization procedures	95
11.9.4.3.2	Active phase	97
11.9.4.3.3	Release.....	99
11.9.4.4	Exceptional procedures	99
11.9.4.4.1	Invalid frame condition	99
11.9.4.4.2	Establishment	99
11.9.4.4.3	Transmitting frames.....	99
11.9.4.4.4	Receiving frames.....	99
11.9.4.4.5	Sending acknowledgements.....	100
11.9.4.4.6	Forwarding of received data	100
11.9.4.4.7	N(R) sequence error	100
11.9.4.4.8	N(O) sequence error	100
11.9.4.4.9	N(S) sequence error	101
11.9.4.4.10	Format error.....	101
11.9.4.4.11	Abnormal release.....	101
11.9.4.4.12	Implicit reset.....	101
11.9.5	Network layer service	101
11.9.5.1	LCE service.....	101
11.9.5.2	CC service.....	101
11.10	LU8 service	102
11.10.1	Physical layer service.....	102
11.10.2	MAC layer service.....	102
11.10.3	DLC layer service	102
11.11	LU9 - Unprotected Rate Adaption for V series Equipment (RAVE) Service	102
11.11.1	Overview	102
11.11.1.1	FU9 frame structure	103
11.11.1.1.1	General frame structure	103
11.11.1.1.2	FU9 buffering procedures.....	103
11.11.1.1.3	Connection handover.....	103
11.11.1.1.4	Transmission order	104
11.11.2	Alignment signal management	104
11.11.2.1	General	104
11.11.2.2	Procedures	104
11.11.3	V.24 Signalling	105
11.11.3.1	General	105
11.11.3.2	Transmitter procedures.....	106
11.11.3.3	Receiver procedures	106
11.11.4	Rate Coding	106
11.11.4.1	General	106
11.11.4.2	Transmitter procedures.....	107
11.11.4.3	Receiver procedures	107
11.11.5	DECT Independent Clocking (DIC)	107

11.11.5.1	General	107
11.11.5.2	Measurement of phase differences	107
11.11.5.3	Compensation control rules	108
11.11.5.3.1	General	108
11.11.5.3.2	Optimizing error resilience	109
11.11.6	Information field	109
11.11.6.1	General	109
11.11.6.2	User data rates	110
11.11.6.3	Information field filling rule	110
11.11.7	Primitives	111
11.12	LU10 Enhanced Frame RELay (EFREL) service	111
11.12.1	General	111
11.12.2	Segmentation and transmission class	112
11.12.3	Data transmission	113
11.12.3.1	Send side procedures	113
11.12.3.2	Receive side procedure	113
11.13	LU11 service	113
11.13.1	Physical layer service	113
11.13.2	MAC layer service	113
11.13.3	DLC layer service	113
12	Frame structures for U-plane services	114
12.1	General	114
12.2	FU1 frame structure	114
12.2.1	General frame structure	114
12.2.2	FU1 buffering procedures	115
12.2.3	Minimum delay (speech) operation	116
12.2.4	Connection handover	116
12.2.5	Transmission order	116
12.3	FU2 frame structure	116
12.3.1	General frame structure	116
12.3.2	FU2 buffering procedures	117
12.3.3	Connection handover	117
12.3.4	Transmission order	117
12.4	FU3 frame structure	118
12.4.1	General frame structure	118
12.4.2	FU3 buffering procedures	118
12.4.3	Connection handover	119
12.4.4	Transmission order	119
12.5	FU4 frame structure	119
12.5.1	General frame structure	119
12.5.2	FU4 buffering procedures	120
12.5.3	Connection handover	120
12.5.4	Transmission order	120
12.6	FU5 frame structure	121
12.6.1	General frame structure	121
12.6.2	FU5 buffering procedures	122
12.6.3	Connection handover	122
12.6.4	Transmission order	122
12.7	FU6 frame structure	122
12.7.1	General frame structure	122
12.7.2	FU6 buffering procedures	123
12.7.3	Connection handover	123
12.7.4	Transmission order	123
12.8	FU7 frame structure	123
12.9	FU8 frame structure	124
12.10	FU9 frame structure	124
12.11	FU10 frame structure	124
12.11.1	General frame structure	124
12.11.2	FU10 buffering procedures	126
12.11.3	Connection handover	126
12.11.4	Transmission order	126

13	Elements of procedures and formats of fields for U-plane peer-to-peer communication	126
13.1	General	126
13.2	Address elements.....	127
13.2.1	Address field format	127
13.2.2	Address field parameters	127
13.3	Length indicator elements	127
13.3.1	Length indicator field format.....	127
13.3.1.1	Length indicator field format for all services except LU10	127
13.3.1.2	Length indicator field format for service LU10	128
13.3.2	Length indicator field parameters	128
13.3.2.1	Length indicator field parameters for all services except LU10.....	128
13.3.2.2	Length indicator field parameters for LU10 service	129
13.3.2.2.1	Meaning of the more (M) bit	130
13.4	Sequence number elements	131
13.4.1	Send sequence number format.....	131
13.4.2	Send sequence number parameters	131
13.4.3	Receive sequence number format	131
13.4.4	Receive sequence number parameters	132
13.5	Fill elements - Fill field format	132
14	U-plane peer-to-peer procedures	132
14.1	General	132
14.2	Frame transmission principles.....	132
14.2.1	Sequence numbering.....	132
14.2.2	Acknowledgements.....	133
14.2.2.1	Sending acknowledgements	133
14.2.2.2	Receiving acknowledgements.....	133
14.2.3	Transmission classes.....	133
14.2.3.1	Class 0: No LU _x retransmission or sequencing	133
14.2.3.2	Class 1: no LU _x retransmission.....	134
14.2.3.3	Class 2: variable throughput, maximum delay LU _x retransmission.....	134
14.2.3.4	Class 3: fixed throughput LU _x retransmission.....	134
14.2.4	Operation parameter negotiation.....	135
14.3	Frame transmission procedures.....	135
14.3.1	General.....	135
14.3.2	Class 0 procedures	135
14.3.2.1	Sending side procedure	135
14.3.2.2	Receiving side procedure	135
14.3.3	Class 1 procedures	136
14.3.3.1	Sending side procedure	136
14.3.3.2	Receiving side procedure	136
14.3.4	Class 2 procedures	137
14.3.4.1	Sending side procedure	137
14.3.4.2	Receiving side procedure	139
14.3.5	Class 3 procedures	140
14.3.5.1	Sending side procedure	140
14.3.5.2	Receiving side procedure	141
Annex A (normative):	System parameters.....	143
A.1	LAPC timer values	143
A.2	U-plane timer values	144
A.3	Constants	144
A.3.1	Retransmission counter (N250).....	144
A.3.2	Maximum number of CHO attempts (N251)	144
Annex B (normative):	Checksum algorithms.....	145
B.1	Arithmetic conventions	145
B.2	Coding algorithm.....	145

B.3	Decoding algorithm.....	145
B.4	Some examples.....	146
Annex C (informative):	MAC connection states.....	147
Annex D (normative):	Mapping of agreed channel rates to MCS sizes	148
D.1	Protected class operation.....	148
D.2	Unprotected class operation	149
Annex E (informative):	Bibliography.....	150
Annex F (informative):	Change history	151
History		152

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 300 175-4 V1.8.1:2006](https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83e3-89c27906dce2/sist-en-300-175-4-v1-8-1-2006)

<https://standards.iteh.ai/catalog/standards/sist/8871194d-81ac-42c3-83e3-89c27906dce2/sist-en-300-175-4-v1-8-1-2006>

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 ETSI 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://webapp.etsi.org/IPR/home.asp>).

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 ETSI 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 deliverable. Full details of the entire series can be found in part 1 [1].

Further details of the DECT system may be found in TR 101 178 and ETR 043 (see Bibliography).

National transposition dates	
Date of adoption of this EN:	12 November 2004
Date of latest announcement of this EN (doa):	28 February 2005
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 August 2005
Date of withdrawal of any conflicting National Standard (dow):	31 August 2005

1 Scope

The present document gives an introduction and overview of the complete Digital Enhanced Cordless Telecommunications (DECT) Common Interface (CI).

The present document specifies the Data Link Control (DLC) layer. The DLC layer is part 4 of the DECT CI standard and layer 2b of the DECT protocol stack.

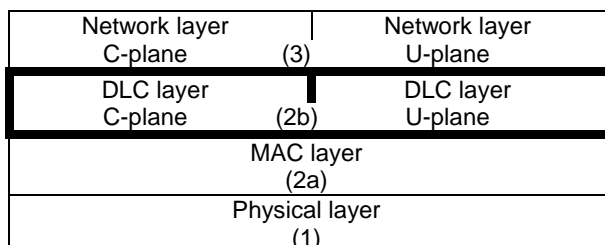


Figure 1.1

Two planes of operation are specified for this DLC (sub)layer. These planes are called the Control plane (C-plane) and the User plane (U-plane).

The C-plane is mostly concerned with the DECT signalling aspects. It provides a reliable point-to-point service that uses a link access protocol to offer error protected transmission of Network (NWK) layer messages. The C-plane also provides a separate point-to-multipoint (broadcast) service (Lb).

The U-plane is only concerned with end-to-end user information. This plane contains most of the application dependent procedures of DECT. Several alternative services (both circuit-mode and packet-mode) are defined as a family of independent entities. Each service provides one or more point-to-point U-plane data links, where the detailed characteristics of those links are determined by the particular needs of each service. The defined services cover a wide range of performance, from "unprotected with low delay" for speech applications to "highly protected with variable delay", for local area network applications.

The present document uses the layered model principles and terminology as described in ITU-T Recommendation X.200 [12] and ITU-T Recommendation X.210 [13].

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

- [1] ETSI EN 300 175-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".
- [2] ETSI EN 300 175-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)".
- [3] ETSI EN 300 175-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".

- [4] ETSI EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [5] ETSI EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".
- [6] ETSI EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".
- [7] ETSI TS 144 006: "Digital cellular telecommunications system (Phase 2+); Mobile Station - Base Stations System (MS - BSS) Interface Data Link (DL) layer specification (3GPP TS 44.006)".
- [8] ITU-T Recommendation Q.920 (1993): "ISDN user-network interface data link layer - General aspects".
- [9] ITU-T Recommendation Q.921: "ISDN user-network interface - Data link layer specification".
- [10] ITU-T Recommendation V.42 (1996): "Error-correcting procedures for DCEs using asynchronous-to-synchronous conversion".
- [11] ITU-T Recommendation V.110 (2000): "Support by an ISDN of data terminal equipments with V-Series type interfaces".
- [12] ITU-T Recommendation X.200: "Information technology - Open Systems Interconnection - Basic Reference Model: The basic model".
- [13] ITU-T Recommendation X.210: "Information technology - Open systems Interconnection - Basic Reference Model: Conventions for the definition of OSI services".
- [14] ISO/IEC 8073 (1997): "Information technology - Open Systems Interconnection - Protocol for providing the connection-mode transport service".

STANDARD PREVIEW
(standards.iteh.ai)

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 300 175-1 [1] apply.

3.2 Symbols

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

B_S	A logical channel to the MAC layer
FB_N	Frame Buffer (Unprotected)
FB_P	Frame Buffer (Protected)
G_F	a logical channel to the MAC layer
I_N	higher layer Information channel (unprotected), (logical channels to the MAC layer)
I_P	higher layer Information channel (Protected), (logical channels to the MAC layer)
LAPC	a DLC layer C-plane protocol entity
Lb	a DLC layer C-plane protocol entity
Lc	a DLC layer C-plane protocol entity

3.3 Abbreviations

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

ACK	ACKnowledgement
ADU	Adapted Data Unit