



SLOVENSKI STANDARD

SIST EN 300 175-4 V1.5.1:2003

01-december-2003

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 1.5.1**

SIST EN 300 175-4 V1.5.1:2003
<https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003>

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 V1.5.1:2003 **en**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 300 175-4 V1.5.1:2003

<https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003>

ETSI EN 300 175-4 V1.5.1 (2001-02)

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 V1.5.1:2003](https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003)

<https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003>



Reference

REN/DECT-000157-4

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 V1.5.1:2003

<https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003>

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://www.etsi.org/tb/status/>

If you find errors in the present document, send your comment to:
editor@etsi.fr

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 2001.
All rights reserved.

Contents

Intellectual Property Rights	11
Foreword	11
1 Scope	12
2 References	12
3 Definitions and abbreviations	13
3.1 Definitions	13
3.2 Abbreviations	14
4 Data Link Control (DLC) layer overview	15
4.1 General	15
4.2 C-Plane services	16
4.3 U-plane services	17
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	24
6.1.4.2 C _S /CL _S logical channel	24
6.1.5 Invalid frames	25
6.2 Broadcast service frame structure	25
6.2.1 Standard frame structure	25
6.2.2 Extended frame structure	26
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	27
7.3.1 REserved bit (RES)	27
7.3.2 Command Response (C/R) bit	27
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)	28
7.4 Control field formats	28
7.5 Control field parameters	29
7.5.1 Poll/Final (P/F) bit	29
7.5.2 Multiple frame operation variables and sequence numbers	29
7.5.2.1 Modulus	29
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)	30

7.5.2.6	Receive sequence Number N(R)	30
7.5.3	Unacknowledged operation variables and sequence numbers	30
7.5.4	Supervisory and Unnumbered function bits S and U	30
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.....	31
7.7.3	Length parameter; L _J	31
7.7.4	Extended length parameter; L _{JJ}	32
7.7.5	Reserved bit; RES.....	32
7.8	Fill field format	32
7.9	Checksum field format	32
7.10	Checksum field parameters.....	32
7.11	Commands and responses.....	34
7.11.1	Information (I) command.....	34
7.11.2	Receive Ready (RR) command/response	34
7.11.3	Receive Not Ready (RNR) command/response	35
7.11.4	REject (REJ) command/response	35
7.11.5	Set Asynchronous Balanced Mode (SABM) command.....	35
7.11.6	Disconnect Mode (DM) response	35
7.11.7	Unnumbered Information (UI) command.....	36
7.11.8	DISConnect (DISC) command	36
7.11.9	Unnumbered ACK (UA) response	36
8	Primitives	36
8.1	Primitive types	36
8.2	Primitives to the MAC layer (lower layer)	36
8.3	Primitives to the NWK layer (higher layer)	37
8.3.1	Parameter definitions	37
8.3.2	S-SAP primitives	38
8.3.2.1	DL_ESTABLISH primitive	38
8.3.2.2	DL_RELEASE primitive	39
8.3.2.3	DL_DATA primitive	39
8.3.2.4	DL_UNIT_DATA primitive	39
8.3.2.5	DL_SUSPEND primitive	39
8.3.2.6	DL_RESUME primitive	40
8.3.2.7	DL_ENC_KEY primitive.....	40
8.3.2.8	DL_ENCRYPT primitive.....	40
8.3.2.9	DL_SERVICE_MOD primitive	40
8.3.3	B-SAP primitives.....	41
8.3.3.1	DL_BROADCAST primitive.....	41
8.3.3.2	DL_EXPEDITED primitive.....	41
8.4	Primitives to the interworking unit.....	41
8.4.1	Parameter definitions	41
8.4.2	LU _X -SAP primitives.....	42
8.4.2.1	DL_U_DATA primitive.....	42
8.4.2.2	DL_U_UNIT_DATA primitive.....	42
8.4.2.3	DL_U_ERROR primitive.....	42
9	C-plane peer-to-peer procedures	43
9.1	General	43
9.2	Point to point acknowledged operation.....	43
9.2.1	Procedure for the use of the P/F bit.....	43
9.2.1.1	Class A acknowledged information transfer	43
9.2.1.2	Class B acknowledged information transfer.....	44
9.2.2	Use of LLN.....	44
9.2.2.1	Class A operation	44
9.2.2.2	Class B operation.....	44
9.2.3	Link establishment and information transfer in class A operation	44
9.2.3.1	Establishing class A operation.....	44
9.2.3.2	Class A acknowledged information transfer	45
9.2.3.3	Transmission of class A I-frames	45

9.2.3.4	Reception of class A I-frames	46
9.2.3.5	Receiving acknowledgements	46
9.2.3.6	Waiting for acknowledgement	47
9.2.3.7	Release of class A operation	47
9.2.3.8	Re-establishment of class A operation	47
9.2.4	Establishing class B multiple frame operation	48
9.2.4.1	Overview	48
9.2.4.2	Class B multiple frame establishment procedures	48
9.2.4.3	Class B LLN assignment procedures	49
9.2.4.3.1	PT establishment	50
9.2.4.3.2	FT establishment	50
9.2.5	Link maintenance and information transfer in class B multiple frame operation	50
9.2.5.1	Transmitting I-frames	51
9.2.5.2	Receiving I-frames	51
9.2.5.2.1	P bit set to 1	51
9.2.5.2.2	P bit set to 0	51
9.2.5.3	Sending and receiving acknowledgements	51
9.2.5.3.1	Sending acknowledgements	51
9.2.5.3.2	Receiving acknowledgements	52
9.2.5.4	Receiving REJ-frames	52
9.2.5.5	Receiving RNR-frames	53
9.2.5.6	LAPC own receiver busy condition	54
9.2.5.7	Waiting acknowledgement	54
9.2.5.8	Appropriate supervisory frame	55
9.2.6	Release of class B multiple frame operation	55
9.2.7	Link suspension and resumption	56
9.2.7.1	Link suspension	56
9.2.7.1.1	Class B acknowledged suspend	56
9.2.7.1.2	Unacknowledged suspend	57
9.2.7.1.2.1	Class A	57
9.2.7.1.2.2	Class B	57
9.2.7.1.2.3	Class U	58
9.2.7.2	Class B link resumption	58
9.2.7.3	Connection handover	59
9.2.7.3.1	Class A connection handover	60
9.2.7.3.2	Class B connection handover	61
9.2.7.3.3	Expiry of connection handover timer	61
9.2.8	Re-establishment of class B multi-frame operation	61
9.2.8.1	Criteria for re-establishment	61
9.2.8.2	Procedure	62
9.2.9	Exception handling	62
9.2.9.1	General	62
9.2.9.2	Class B exception condition reporting and recovery	63
9.2.9.2.1	N(S) sequence error	63
9.2.9.2.2	N(R) sequence error	63
9.2.9.2.3	Timer recovery condition	63
9.2.9.2.4	Collision of identical transmitted and received commands	63
9.3	Unacknowledged operation	64
9.3.1	Use of LLN for unacknowledged information transfer	64
9.3.2	Class U link establishment	64
9.3.3	Unacknowledged information transfer	64
9.3.3.1	Transmission of unacknowledged information	64
9.3.3.2	Reception of unacknowledged information	64
9.3.4	Unacknowledged release	64
9.4	Broadcast operation	65
9.4.1	Normal operation	65
9.4.1.1	Procedure in the Fixed radio Termination (FT)	65
9.4.1.2	Procedure in the Portable radio Termination (PT)	65
9.4.2	Expedited operation	65
9.4.2.1	Procedure in the Fixed radio Termination (FT)	65
9.4.2.2	Procedure in the Portable radio Termination (PT)	65
9.5	MAC layer interfaces	66

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

11.6.3.1	General.....	86
11.6.3.2	Data buffering and initial rate adaption.....	87
11.6.3.3	Multi-channel set multiplexing.....	87
11.6.3.4	Segmentation of MDUs	88
11.6.3.5	Frame transmission.....	88
11.7	LU6 Secondary Rate AdapTion (SRAT) service	89
11.7.1	General.....	89
11.8	LU16 ESCape Service (ESC).....	90
11.8.1	General.....	90
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.....	93
11.9.4.2.1.1	Format control parameter coding.....	93
11.9.4.2.1.2	Offset variable V(O).....	93
11.9.4.2.1.3	Time variables $V_n(T)$	93
11.9.4.2.1.4	Offset number N(O).....	94
11.9.4.2.1.5	Send state variable V(S).....	94
11.9.4.2.1.6	Acknowledge state variable V(A).....	94
11.9.4.2.1.7	Send sequence number N(S).....	94
11.9.4.2.1.8	Receive state variable V(R).....	94
11.9.4.2.1.9	Receive sequence number N(R).....	95
11.9.4.2.2	Information field	95
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
11.9.4.3.2.1	Transmitting frames (first time transmission).....	97
11.9.4.3.2.2	Re-transmitting frames.....	98
11.9.4.3.2.3	Receiving frames	98
11.9.4.3.2.4	Sending acknowledgements	99
11.9.4.3.2.5	Receiving acknowledgements	99
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.....	99
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.....	100
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.....	101
11.10.1	Physical layer service.....	101
11.10.2	MAC layer service.....	101
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).....	108
11.11.5.1	General.....	108
11.11.5.2	Measurement of phase differences	108
11.11.5.3	Compensation control rules.....	109
11.11.5.3.1	General	109
11.11.5.3.2	Optimizing error resilience	109
11.11.5.3.2.1	Procedure for conveying state changes	109
11.11.5.3.2.2	Procedure for executing positive and negative compensation	110
11.11.6	Information field.....	110
11.11.6.1	General.....	110
11.11.6.2	User data rates.....	110
11.11.6.3	Information field filling rule.....	111
11.11.7	Primitives	111
11.12	LU10 Enhanced Frame RELay (EFREL) Service.....	112
11.12.1	General.....	112
11.12.2	Segmentation and transmission class.....	113
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.....	114
11.13.2	MAC layer service	114
11.13.3	DLC layer service	114
12	Frame structures for U-plane services	114
12.1	General	114
12.2	FU1 frame structure.....	115
12.2.1	General frame structure.....	115
12.2.2	FU1 buffering procedures.....	116
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.....	117
12.3.1	General frame structure.....	117
12.3.2	FU2 buffering procedures.....	117
12.3.3	Connection handover	117
12.3.4	Transmission order.....	118
12.4	FU3 frame structure.....	118
12.4.1	General frame structure.....	118
12.4.2	FU3 buffering procedures.....	119
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.....	123
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.....	125
12.11.3	Connection handover	125
12.11.4	Transmission order.....	125
13	Elements of procedures and formats of fields for U-plane peer-to-peer communication	126
13.1	General	126
13.2	Address elements	126
13.2.1	Address field format.....	126
13.2.2	Address field parameters	126
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.....	127
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.....	129
13.4	Sequence number elements.....	130
13.4.1	Send sequence number format.....	130
13.4.2	Send sequence number parameters	130
13.4.3	Receive sequence number format	130
13.4.4	Receive sequence number parameters.....	131
13.5	Fill elements - Fill field format	131
14	U-plane peer-to-peer procedures	131
14.1	General	131
14.2	Frame transmission principles.....	132
14.2.1	Sequence numbering.....	132
14.2.2	Acknowledgements.....	132
14.2.2.1	Sending acknowledgements	132
14.2.2.2	Receiving acknowledgements	132
14.2.3	Transmission classes	132
14.2.3.1	Class 0: No LU _X retransmission or sequencing.....	133
14.2.3.2	Class 1: no LU _X retransmission.....	133
14.2.3.3	Class 2: variable throughput, maximum delay LU _X retransmission	133
14.2.3.4	Class 3: fixed throughput LU _X retransmission	134
14.2.4	Operation parameter negotiation.....	134
14.3	Frame transmission procedures.....	134
14.3.1	General.....	134
14.3.2	Class 0 procedures	134
14.3.2.1	Sending side procedure	135
14.3.2.2	Receiving side procedure.....	135
14.3.3	Class 1 procedures	135
14.3.3.1	Sending side procedure	135
14.3.3.2	Receiving side procedure.....	136

14.3.4	Class 2 procedures	136
14.3.4.1	Sending side procedure	137
14.3.4.2	Receiving side procedure	138
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.....		142
A.1	LAPC timer values	142
A.2	U-plane timer values	143
A.3	Constants	143
A.3.1	Retransmission counter (N250).....	143
A.3.2	Maximum number of CHO attempts (N251)	143
Annex B (informative): Checksum algorithms		144
B.1	Arithmetic conventions	144
B.2	Coding algorithm	144
B.3	Decoding algorithm	144
B.4	Some examples	145
Annex C (informative): MAC connection states		146
Annex D (normative): Mapping of agreed channel rates to MCS sizes		147
D.1	Protected class operation.....	148
D.2	Unprotected class operation	148
Annex E (informative): Bibliography.....		150
History	https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003	151

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://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 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 EN covering the Common Interface (CI) for the Digital Enhanced Cordless Telecommunications (DECT), as identified below:

Part 1: "Overview";

Part 2: "Physical Layer (PHL)";

Part 3: "Medium Access Control (MAC) layer";

Part 4: "Data Link Control (DLC) layer";

Part 5: "Network (NWK) layer";

Part 6: "Identities and addressing";

Part 7: "Security features";

Part 8: "Speech coding and transmission".

Further details of the DECT system may be found in TR 101 178 [14] and ETR 043 [15].

National transposition dates

Date of adoption of this EN:	16 February 2001
Date of latest announcement of this EN (doa):	31 May 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2001
Date of withdrawal of any conflicting National Standard (dow):	30 November 2001

1 Scope

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

This part of the DECT CI 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.

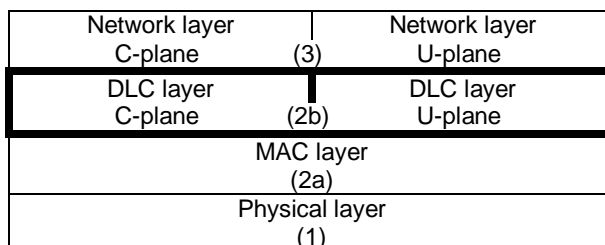


Figure 1.1

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 [11] and ITU-T Recommendation X.210 [12].

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.

- [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 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".
- [6] GSM Technical Specification 04.06 (V3.9.0): "European digital cellular telecommunications system (Phase 1); Mobile Station - Base Station System (MS-BSS) interface; Data link layer specification (GSM 04.06)".
- [7] ITU-T Recommendation Q.920 (1993): "Digital Subscriber Signalling System No. 1 (DSS1) - ISDN user-network interface data link layer - General aspects".
- [8] ITU-T Recommendation Q.921 (1993): "ISDN user-network interface - Data link layer specification".
- [9] ITU-T Recommendation V.42 (1996): "Error-correcting procedures for DCEs using asynchronous-to-synchronous conversion".
- [10] ITU-T Recommendation V.110 (1996): "Support by an ISDN of data terminal equipments with V-series type interfaces".
- [11] ITU-T Recommendation X.200 (1994): "Information technology - Open Systems Interconnection - Basic reference model: The basic model".
- [12] ITU-T Recommendation X.210 (1993): "Information technology - Open Systems Interconnection - Basic Reference Model: Conventions for the definition of OSI services".
- [13] ISO/IEC 8073 (1997): "Information technology - Open Systems Interconnection - Protocol for providing the connection-mode transport service".
- [14] ETSI TR 101 178: "Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standardization".
- [15] ETSI ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".

SIST EN 300 175-4 V1.5.1:2003

[https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-](https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003)

[602a461c34d5/sist-en-300-175-4-v1-5-1-2003](https://standards.iteh.ai/catalog/standards/sist/0a7542a8-6b4e-48ba-9024-602a461c34d5/sist-en-300-175-4-v1-5-1-2003)

3 Definitions and abbreviations

3.1 Definitions

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

bearer handover: see EN 300 175-1 [1].

C-plane: see EN 300 175-1 [1].

cluster: see EN 300 175-1 [1].

connection handover: see EN 300 175-1 [1].

Connectionless mode (C/L): see EN 300 175-1 [1].

Connection Oriented mode (C/O): see EN 300 175-1 [1].

Cordless Radio Fixed Part (CRFP): see EN 300 175-1 [1].

DLC broadcast: see EN 300 175-1 [1].

DLC data link (DLC link): see EN 300 175-1 [1].

DLC frame: see EN 300 175-1 [1].

double duplex bearer: see EN 300 175-1 [1].

Fixed radio Termination (FT): see EN 300 175-1 [1].