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### 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

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*European Standard (Telecommunications series)*

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

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**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

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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 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".

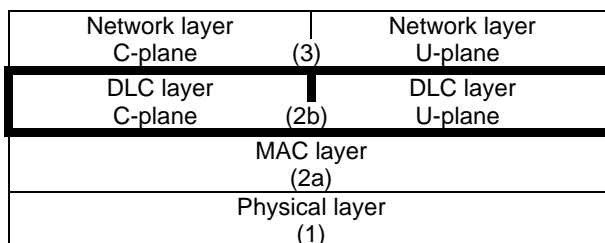
Further details of the DECT system may be found in ETR 015 [17], ETR 043 [18] and ETR 056 [19].

<b>National transposition dates</b>	
Date of adoption of this EN:	28 May 1999
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# 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 0**

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 [14] and ITU-T Recommendation X.210 [15].

# 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 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [5] EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".
- [6] EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".
- [7] EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".
- [8] Void.
- [9] GSM Technical Specification 04.06 (Version 3.9.0): "Mobile Station - Base Station System (MS-BSS) interface data link layer specification (GSM 04.06)".
- [10] ITU-T Recommendation Q.920 (1993): "ISDN user-network interface data link layer - General aspects".
- [11] ITU-T Recommendation Q.921 (1993): "ISDN user-network interface - Data link layer specification".
- [12] ITU-T Recommendation V.42 (1996): "Error-correcting procedures for DCEs using asynchronous-to-synchronous conversion".
- [13] ITU-T Recommendation V.110 (1996): "Support by an ISDN of data terminal equipments with V-Series type interfaces".
- [14] ITU-T Recommendation X.200 (1994): "Information technology - Open Systems Interconnection - Basic reference model: The basic model".
- [15] ITU-T Recommendation X.210 (1993): "Information technology - Open Systems Interconnection - Basic reference model: Conventions for the definition of OSI services".  
<https://standards.iteh.ai/catalog/standards/sist/d174eb0-3094-4595-8aa9-720000000000/itu-t-recommendation-x-210-1993>
- [16] ISO/IEC 8073 (1997): "Information technology - Open Systems Interconnection - Protocol for providing the connection-mode transport service".
- [17] ETR 015: "Digital Enhanced Cordless Telecommunications (DECT); Reference document".
- [18] ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".
- [19] ETR 056: "Digital Enhanced Cordless Telecommunications (DECT); System description document".

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## 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].