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Foreword

This European Telecommunication Standard (ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI), and was adopted, having passed through the ETSI standards approval procedure (Public Enquiry 23: 1991-09-02 to 1991-12-27, Vote 22: 1992-05-25 to 1992-07-17).

Annexes A and D to this ETS are normative. Annexes B and C to this ETS are informative.

Further details of the DECT system may be found in ETSI Technical Reports ETR 015, [16], and ETR 043 [15], and also in draft ETSI Technical Report: "Digital European Cordless Telecommunications System description document" [17].

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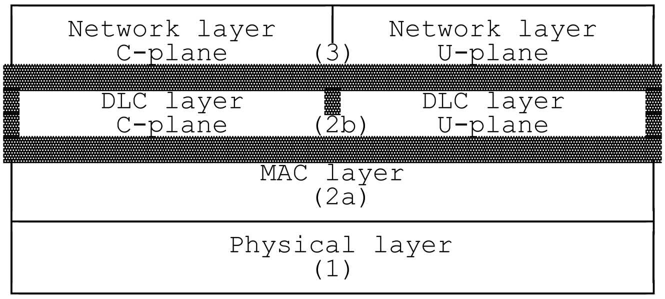
1 Scope

This part of the Digital European Cordless Telecommunications (DECT) Common Interface specifies the Data Link Control (DLC) layer. The Data Link Control layer is Part 4 of the DECT Common Interface standard and layer 2b of the DECT protocol stack.



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

This part of the standard uses the layered model principles and terminology as described in CCITT Recommendations X.200 [23] and X.210 [24].

2 Normative references

This European Telecommunications Standard (ETS) 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 ETS 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 Part 1: Overview".

[2] ETS 300 175-2: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 2: Physical layer".

[3] ETS 300 175-3: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 3: Medium access control layer".

[4] ETS 300 175-4: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 4: Data link control layer".

[5] ETS 300 175-5: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 5: Network layer".

[6] ETS 300 175-6: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 6: Identities and addressing".

[7] ETS 300 175-7: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 7: Security features".

[8] ETS 300 175-8: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 8: Speech coding and transmission".

[9] ETS 300 175-9: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Part 9: Public access profile".

[10] Reserved.

[11] Reserved.

[12] I-ETS 300 176: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Approval test specification".

[13] Reserved for future ETS version of [12].

[14] CEPT Recommendation T/SGT SF2 (89) 6/0 : "Draft Recommendation T/SF Services and Facilities of Digital European Cordless Telecommunications".

[15] ETR 043: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunications (DECT) Common Interface Services and Facilities, requirements specification".

[16] ETR 015: "Digital European Cordless Telecommunications Reference Document".

[17] Draft ETSI Technical Report: "Digital European Cordless Telecommunications System Description Document".

[18] ETR 042: "Radio Equipment and Systems (RES); Digital European Cordless Telecommunication (DECT). A guide to the DECT features that influence the traffic capacity and the maintenance of high radio link transmission quality, including the results of simulations".

[19] Reserved for future DECT related document.

[20] Reserved.

[21] ETSI-GSM Technical Specification 04.06 (Version 3.6.0): "MS-BSS interface data link layer specification".

[22] ISO/IEC Publication ISO.8073 (1988 (E)): "Information processing systems - Open Systems Interconnection (OSI) - Connection oriented transport protocol specification".

[23] CCITT Recommendation X.200 (1988): "Reference model of open systems interconnection for CCITT applications".

[24] CCITT Recommendation X.210 (1988): "OSI layer service conventions".

[25]-[29] Reserved.

[30] CCITT Recommendation Q.920 (1988): "Digital subscriber signalling system no. 1 data link layer - general aspects".

[31] CCITT Recommendation Q.921 (1988): "Digital subscriber signalling system no. 1 data link layer".

[32] CCITT Recommendation V.32 (1988): "Error-correcting procedures for DCES using asynchronous-to-synchronous conversion".

[33] CCITT Recommendation V.110 (1988): "Support of Data Terminal Equipment (DTEs) with V-series type interfaces by an Integrated services digital network".

3 Definitions, symbols and abbreviations

Refer to ETS 300 175-1 [1] for the main listing of definitions, symbols and abbreviations. For the purposes of this ETS the following definitions apply:

3.1 DLC Layer definitions

Bearer handover: the internal handover process provided by the Medium Access Control (MAC) layer, whereby one MAC connection can modify its underlying bearers while maintaining the service provided to the Data Link Control (DLC) layer.

NOTE: Bearer handover is slot based.

C-plane: the control plane of the DECT protocol stacks, which contains all of the internal DECT protocol control, but may also include some external user information.

NOTE: The C-plane stack always contains protocol entities up to and including the network layer.

Cluster: a logical grouping of one or more cells between which bearer handover is possible. A cluster control function controls one cluster.