ICS 33.070.30 SLOVENSKÁ TECHNICKÁ NORMA August 2015

STN	**Digitálne bezšnúrové telekomunikácie (DECT). Paketové rádiové služby DECT (DPRS).**	**STN EN 301 649 V2.3.1** 87 1649

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 07/15

Obsahuje: EN 301 649 V2.3.1:2015

121150

ETSI EN 301 649 V2.3.1 (2015-03)

Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)

Reference
REN/DECT-00305

Keywords
access, data, DECT, DPRS, frame relay,
IMT-2000, internet, interoperability, interworking,
IP, IPv6, LAN, mobility, multimedia, packet mode,
profile, radio, synchronization, TDD, TDMA

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Sous-Préfecture de Grasse (06) N° 7803/88

Contents

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Foreword

This European Standard (EN) has been produced by ETSI Technical Committee Digital Enhanced Cordless Telecommunications (DECT).

The present document is based on ETSI EN 300 175-1 [1] to ETSI EN 300 175-8 [8]. General attachment requirements and speech attachment requirements are based on ETSI EN 301 406 [33] (replacing ETSI TBR 006 [i.3]) and ETSI EN 300 176-2 [10] (previously covered by ETSI TBR 010 [i.4]). Further details of the DECT system may be found in ETSI TR 101 178 [i.1].

The present document has been developed in accordance to the rules of documenting a profile specification as described in ISO/IEC 9646-6 [i.14].

The information in the present document is believed to be correct at the time of publication. However, DECT standardization is a rapidly changing area, and it is possible that some of the information contained in the present document may become outdated or incomplete within relatively short time-scales.

National transposition dates	
Date of adoption of this EN:	23 March 2015
Date of latest announcement of this EN (doa):	30 June 2015
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 December 2015
Date of withdrawal of any conflicting National Standard (dow):	31 December 2015

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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1 Scope

The present document defines the standard for packet radio services for Digital Enhanced Cordless Telecommunications (DECT) systems conforming to ETSI EN 300 175-1 [1] to ETSI EN 300 175-8 [8]. It is the basis of profiles, which define more specific applications (Application Specific Access Profiles ASAPs), aimed at the connection of terminals supporting packet data services to a fixed infrastructure, both private and public.

DECT Packet Radio Service defines several operation modes, named Classes, and several transported services and protocols, that may be frame relay or character oriented.

- Class 1 does not use a network layer C-plane and provides a service similar to a Wireless Local Area Network.
- Class 2 implements full DPRS capabilities, including complete C-plane with call control and mobility management, and provides all capabilities of the packet service of public cellular networks (i.e. GPRS). Both services Class 1 and Class 2 support multiberaer and asymmetric connections, and implement Management Entity procedures intended to achieve maximum performance, optimal efficiency and minimal access times.
- Class 3 and Class 4 are simplified modes intended for auxiliary data services in voice terminals or other moderate rate data services.

The annexes to the present document contain the conventions for interworking of the frame-relay and character oriented services, as well as, other relevant information. The following services are defined in the present document:

Frame relay services:

- LAN IEEE 802.3 [13] (also known as ISO/IEC 8802-3), (clause B.4).
- LAN IEEE 802.5 [14] (also known as ISO/IEC 8802-5), (clause B.5).
- Internet Protocol (IP) [15], (clause B.6).
- Point to Point Protocol (PPP) [16], (clause B.7).
- Generic interworking (clause B.8) that allows the direct transport of other protocols.

Character Oriented Services:

- V.24 asynchronous interface, including a Packet Assembler and Disasembler (PAD) module (annex C).

The present document defines the additional requirements on the Physical Layer (PHL), Medium Access Control (MAC) layer, Data Link Control (DLC) layer and Network (NWK) layer of DECT. The standard also specifies Management Entity (ME) requirements, which ensure the efficient use of the DECT spectrum.

The present document includes New Generation DECT, a further development of the DECT standard introducing wideband speech, improved data services, new slot types and other technical enhancements.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

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

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

[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 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".

[5] ETSI EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".

[6] ETSI EN 300 175-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".

[7] ETSI EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".

[8] ETSI EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission".

[9] ETSI EN 300 176-1: "Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 1: Radio".

[10] ETSI EN 300 176-2: "Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Audio and speech".

[11] ETSI EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".

[12] ETSI EN 300 824: "Digital Enhanced Cordless Telecommunications (DECT); Cordless Terminal Mobility (CTM); CTM Access Profile (CAP)".

[13] IEEE 802.3™: "Standard for Ethernet" (also known as ISO/IEC 8802-3).

[14] IEEE 802.5™: "IEEE Standard for Information technology - Telecommunications and information exchange between systems - Local and metropolitan area networks - Specific requirements - Part 5: Token Ring Access Method and Physical Layer Specification" (also known as ISO/IEC 8802-5).

[15] IETF RFC 791: "Internet Protocol" (STD 5).

[16] IETF RFC 1661: "The Point-to-Point Protocol (PPP)" (STD 51).

[17] IETF RFC 1662: "PPP in HDLC-like Framing" (STD 51).

[18] Recommendation ITU-T V.24: "List of definitions for interchange circuits between data terminal equipment (DTE) and data circuit-terminating equipment (DCE)".

[19] Void.

[20] Void.

[21] IETF RFC 768: "User Datagram Protocol" (STD 6).

[22] IETF RFC 793: "Transmission Control Protocol" (STD 7).

[23] IETF RFC 1939: "Post Office Protocol - Version 3" (STD 53).

[24] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[25] IETF RFC 2046: "Multipurpose Internet Mail Extensions (MIME) Part Two: Media Types".

[26] IETF RFC 2049: "Multipurpose Internet Mail Extensions (MIME) Part Five: Conformance Criteria and Examples".

[27] IETF RFC 2616: "Hypertext Transfer Protocol -- HTTP/1.1".

[28] IETF RFC 3851: "Secure/Multipurpose Internet Mail Extensions (S/MIME) Version 3.1 Message Specification".

[29] IETF RFC 5321: "Simple Mail Transfer Protocol".

[30] IETF RFC 5322: "Internet Message Format".

[31] IETF RFC 3261: "SIP: Session Initiation Protocol".

[32] IETF RFC 3550: "RTP: A Transport Protocol for Real-Time Applications".

[33] ETSI EN 301 406: "Digital Enhanced Cordless Telecommunications (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering the essential requirements under article 3.2 of the R&TTE Directive; Generic radio".

[34] IETF RFC 2460: "Internet Protocol, Version 6 (IPv6) Specification".

[35] IETF RFC 1034: "Domain Names - Concepts and Facilities" (STD 13).

[36] IETF RFC 1035: "Domain Names - Implementation and Specification" (STD 13).

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the reference document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ETSI TR 101 178: "Digital Enhanced Cordless Telecommunications (DECT); A high Level Guide to the DECT Standardization".

[i.2] ETSI TS 102 527-4: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 4: Light Data Services; Software Update Over The Air (SUOTA), content downloading and HTTP based applications".

[i.3] ETSI TBR 006: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements".

[i.4] ETSI TBR 010: "Digital Enhanced Cordless Telecommunications (DECT); General Terminal Attachment Requirements; Telephony Applications".

[i.5] "The Ethernet, A Local Area Network: Data Link Layer and Physical Layer Specification", AA-K759B-TK, Digital Equipment Corporation, Maynard, MA. Also as: "The Ethernet - A Local Area Network", Version 1.0, Digital Equipment Corporation, Intel Corporation, Xerox Corporation, September 1980. And: XEROX, "The Ethernet, A Local Area Network: Data Link Layer and Physical Layer Specification", X3T51/80-50, Xerox Corporation, Stamford, CT., October 1980.

[i.6] IETF RFC 1483: "Multiprotocol Encapsulation over ATM Adaptation Layer 5".

[i.7] IETF RFC 1618: "PPP over ISDN".

[i.8] IETF RFC 1973: "PPP in Frame Relay".

[i.9] IETF RFC 2364: "PPP Over AAL5".

[i.10] IETF RFC 1490: "Multiprotocol Interconnect over Frame Relay".

[i.11] IETF RFC 894 (1984): "A Standard for transmission of IP datagrams over Ethernet Networks" (STD 41).

[i.12] IETF RFC 1042: "Standard for the transmission of IP datagrams over IEEE 802 networks" (STD 43).

[i.13] Recommendation ITU-T Q.922 (02/92): "ISDN data link layer specification for frame mode bearer services".

[i.14] ISO/IEC 9646-6: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".

[i.15] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".