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STN	**Rozšírené digitálne bezšnúrové telekomunikácie (DECT) Špecifikácia skúšky Časť 1: Rádio**	**STN EN 300 176-1 V2.3.1** 87 0176

Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 1: Radio

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Foreword

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

The present document contains text pertaining to testing of the Digital Enhanced Cordless Telecommunications (DECT) Common Interface [1] to [4] and [i.11] to [i.14]. Such text should be considered as guidance to approval (or licensing) authorities.

Details of the DECT Common Interface may be found in ETSI EN 300 175 [1] to [4] and [i.11] to [i.14]. Further details of the DECT system may be found in the ETSI Technical Reports, ETSI TR 101 178 [i.1] and ETSI ETR 043 [i.2]. Information about ULE may be found in the ETSI Technical Specifications ETSI TS 102 939-1 [i.20] and ETSI TS 102 939-2 [i.21].

The present document is part 1 of a multi-part deliverable covering the test specification for Digital Enhanced Cordless Telecommunications (DECT), as identified below:

Part 1: "Radio";

Part 2: "Audio and speech".

National transposition dates	
Date of adoption of this EN:	25 January 2018
Date of latest announcement of this EN (doa):	30 April 2018
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 October 2018
Date of withdrawal of any conflicting National Standard (dow):	31 October 2018

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 specifies tests applicable to all Digital Enhanced Cordless Telecommunications (DECT) equipment accessing the DECT frequency band 1 880 MHz to 1 900 MHz (including provisions for testing other or extended frequency bands as described in ETSI EN 300 175-1 [i.11] and ETSI EN 300 175-2 [1]). Part 2 of the present multi-part deliverable [i.15] specifies tests applicable to DECT speech and audio transmission using a collection of speech codecs, including Recommendation ITU-T G.726 [i.7] ADPCM codec, Recommendation ITU-T G.722 [i.8] "7 kHz codec", "MPEG-4 codec" [i.10] and others.

The aims of the present document are to ensure:

- efficient use of frequency spectrum;
- no harm done to any connected network and its services;
- no harm done to other radio networks and services;
- no harm done to other DECT equipment or its services;
- interworking of terminal equipment via the public network.

The tests of ETSI EN 300 176 are split into two parts:

- the present document (part 1) covers testing of radio frequency parameters, security elements and those DECT protocols that facilitate the radio frequency tests and efficient use of frequency spectrum;
- part 2 [i.15] describes testing of speech and audio requirements between network interface and DECT PT, or between a DECT CI air interface and alternatively a DECT PT or FT. Part 2 is not applicable to terminal equipment specially designed for the disabled (e.g. with amplification of received speech as an aid for the hard-of-hearing).

DECT terminal equipment consists of the following elements:

a) Fixed Part (FP);

b) Portable Part (PP);

c) Cordless Terminal Adapter (CTA);

d) Wireless Relay Station (WRS) (FP and PP combined);

e) Hybrid Part (HyP) (a PP with capability to act as a FP to provide PP to PP communication).

Details of the DECT Common Interface may be found in ETSI EN 300 175-1 [i.11], ETSI EN 300 175 parts 2 to 3 [1] to [2], ETSI EN 300 175-4 [i.12], ETSI EN 300 175 parts 5 to 6 [3] to [4], and ETSI EN 300 175 parts 7 to 8 [i.13] to [i.14]. Further details of the DECT system may be found in the ETSI Technical Reports, ETSI TR 101 178 [i.1] and ETSI ETR 043 [i.2]. Information about ULE may be found in the ETSI Technical Specifications ETSI TS 102 939-1 [i.20] and ETSI TS 102 939-2 [i.21].

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 referenced document (including any amendments) applies.

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

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

[1] ETSI EN 300 175-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer (PHL)".

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

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

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

[5] Recommendation ITU-T V.11: "Electrical characteristics for balanced double-current interchange circuits operating at data signalling rates up to 10 Mbit/s".

[6] Recommendation ITU-T O.153: "Basic parameters for the measurement of error performance at bit rates below the primary rate".

[7] ETSI EN 300 700: "Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)".

2.2 Informative references

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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 ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".

[i.3] ETSI EN 301 649: "Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)".

[i.4] ETSI TS 102 527-1: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband speech".

[i.5] ETSI TS 102 527-2: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 2: Support of transparent IP packet data".

[i.6] ETSI TS 102 527-3: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended Wideband speech services".

[i.7] Recommendation ITU-T G.726 (1990): "40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)".

[i.8] Recommendation ITU-T G.722: "7 kHz audio - coding within 64 kbit/s".

[i.9] Void.

[i.10] ISO/IEC JTC1/SC29/WG11 (MPEG): International Standard ISO/IEC 14496-3:2005/ AMD 1:2007: "Information Technology - Coding of audio-visual objects - Part 3: Audio; AMENDMENT 1: Low Delay AAC profile".

[i.11] ETSI EN 300 175-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".

[i.12] ETSI EN 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".

[i.13] ETSI EN 300 175-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".

[i.14] ETSI EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission".

[i.15] ETSI EN 300 176-2: "Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Audio and speech".

[i.16] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".

NOTE: See also ITU-T Recommendation X.290.

[i.17] Void.

[i.18] Council Directive 2004/108/EC of 15 December 2004 on the approximation of the laws of the Member States relating to electromagnetic compatibility and repealing Directive 89/336/EEC.

[i.19] ETSI EN 301 406: "Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".

[i.20] ETSI TS 102 939-1: "Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 1: Home Automation Network (phase 1)".

[i.21] ETSI TS 102 939-2: "Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 2: Home Automation Network (phase 2)".

[i.22] ETSI TR 100 028: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

[i.23] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.