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Technical Specification

Digital Enhanced Cordless Telecommunications (DECT); DECT/UMTS Interworking Profile (IWP); Part 2: CN-FP interworking



Reference

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Foreword

This Technical Specification (TS) has been produced by ETSI Project Digital Enhanced Cordless Telecommunications (DECT).

The present document is based on DECT Common Interface (CI) specification EN 300 175, parts 1 [1] to 8 [8] to enable DECT terminals to interwork in the public and private environment with DECT systems which are connected to a UMTS core infrastructure.

In addition, the present document is based on the DECT Generic Access Profile (GAP), EN 300 444 [10] to enable the same DECT/UMTS terminal to interwork with a DECT FP complying to the GAP requirements, irrespective of whether this FP provides residential, business or public access services. General attachment requirements and speech attachment requirements are based on EN 301 406 [11].

The present document is part 2 of a multi-part deliverable covering the DECT/UMTS Interworking Profile (IWP), as identified below:

- Part 1: "General description and overview";
- Part 2: "CN-FP interworking";**
- Part 3: "3,1 kHz speech service";
- Part 4: "Supplementary services";
- Part 5: "SMS point-to-point and cell broadcast";
- Part 6: "Packet switched data".

The present document defines a general purpose, but strict, mobility profile in terms of features, procedures, data structures, information elements and fields within the information elements at the DECT air interface in order to achieve full inter-operability between equipment, i.e. DECT systems and terminals, which fulfil the requirements of the present document. The present document also fulfils the minimum requirements of the GAP enabling backwards compatibility with the respective equipment.

Further details on the DECT system may be found in TR 101 178 [12], ETR 043 [13], EN 300 176-1 [14] and EN 300 176-2 [15].

1 Scope

The present document specifies the Digital Enhanced Cordless Telecommunications (DECT) access protocols and Fixed Part (FP) and Portable Part (PP) interworking/mappings necessary to ensure that the Universal Mobile Telecommunication System (UMTS) services can be provided over DECT. To enable DECT terminals to interwork with DECT systems which are connected to the UMTS infrastructure, from the DECT side of the present document is based on EN 300 444 [10] and on the DECT Common Interface specification EN 300 175 parts 1 [1] to 8 [8] (for the cases not covered by Generic Access Profile (GAP)), from UMTS side the present document assumes interworking with UMTS specification release 1999+.

An air-interface profile is specified for a particular set of UMTS services so that inter-operability of DECT equipment for these services can be achieved. Interworking functions/mappings are specified for Mobile Switching Centre (MSC) attachment for the DECT FP as the FP is using the Iu-interface towards the UMTS core network in the respect that the FP emulates a UTRAN Radio Network Controller (RNC) with regards to the UTRAN messages which are relevant to the present document. Interworking functions/mappings for the PP are specified for MSC environment.

The provision of the (UMTS) Subscriber Identity Module (SIM, USIM) and DECT Authentication Module (DAM) within the DECT portable are also considered.

UMTS interfaces to non-UMTS networks are out of the scope of the present document.

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 and/or edition number or version number) 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 300 175-4: "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 coding and transmission".
- [9] ETSI ETS 300 499: "Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Mobile services Switching Centre (MSC) - Fixed Part (FP) interconnection".

- [10] ETSI EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [11] ETSI EN 301 406: "Digital Enhanced Cordless Telecommunications (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering essential requirements under article 3.2 of the R&TTE Directive; Generic radio".
- [12] ETSI TR 101 178: "Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standardization".
- [13] ETSI ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".
- [14] ETSI EN 300 176-1: "Digital Enhanced Cordless Telecommunications (DECT); Approval test specification; Part 1: Radio".
- [15] ETSI EN 300 176-2: "Digital Enhanced Cordless Telecommunications (DECT); Approval test specification; Part 2: Speech".
- [16] ETSI TR 121 905: "Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905)".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in EN 300 175-1 [1] and in TR 121 905 [16] apply.

3.2 Symbols

For the purposes of the present document, the symbols given in EN 300 175-1 [1] and in TR 121 905 [16] apply.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in EN 300 175-1 [1], in TR 121 905 [16] and the following apply:

DECT	Digital Enhanced Cordless Telecommunications
GSM	Global System for Mobile communications
UMTS	Universal Mobile Telecommunications System

4 General

Interworking between FP IWU and the 3G core network using the Iu-interface shall be based on the principles defined in ETS 300 499 [9] for DECT/GSM interworking via the A-interface. All references to A-interface shall be replaced by Iu-interface, all references to BSS shall be replaced by UTRAN.

History

Document history		
V1.1.1	April 2001	Publication
V1.1.2	November 2001	Publication