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Digital Enhanced Cordless Telecommunications (DECT); Global System for Mobile communications (GSM); DECT/GSM Interworking Profile (IWP); Implementation of short message service, point-to-point and cell broadcast

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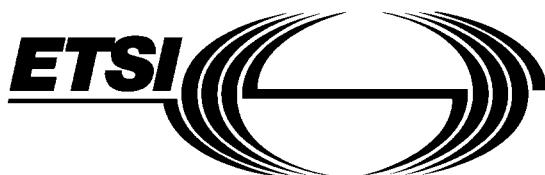
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Foreword

This European Telecommunication Standard (ETS) has been produced by the Digital Enhanced Cordless Telecommunications (DECT) Project and Global System for Mobile communications (GSM) joint working party of the European Telecommunications Standards Institute (ETSI).

Transposition dates	
Date of adoption:	18 April 1997
Date of latest announcement of this ETS (doa):	31 August 1997
Date of latest publication of new National Standard or endorsement of this ETS (dop/e):	28 February 1998
Date of withdrawal of any conflicting National Standard (dow):	28 February 1998

Introduction

This ETS is a part of a set of standards for the DECT/GSM Interworking Profile (IWP) concept that includes:

- general description of service requirements, functional capabilities and information flows, (ETS 300 466 [12]);
- access and mapping (protocol procedure description for 3,1 kHz speech service), (ETS 300 370 [10]); **iTab STANDARD PREVIEW (standards.iteh.ai)**
- GSM-Mobile Switching Centre (MSC)/DECT-FP fixed interconnection (ETS 300 499 [13]);
- GSM Phase 2 supplementary services implementation (ETS 300 703 [25]); <https://standards.iteh.ai/catalog/standards/sist/6ed2476c-2352-4689-93ac-df25dd0338d9/sist-ets-300-764-2001>
- implementation of short message services, point to point and cell broadcast (this ETS);
- implementation of facsimile group 3 (ETS 300 792 [28]);
- implementation of bearer services (ETS 300 756 [26]).

This ETS is based on Digital Enhanced Cordless Telecommunications (DECT) common interface specification ETS 300 175, Parts 1 to 8 [1] to [8] to enable DECT terminals to interwork in the public and private environment with DECT systems which are connected to a Global System for Mobile communications (GSM) core infrastructure.

In addition, this ETS is based on the DECT Generic Access Profile (GAP), ETS 300 444 [11] to enable the same DECT/GSM terminal to interwork with a DECT Fixed Part (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 TBR 6 [36] and TBR 10 [35].

Further details on the DECT system may be found in ETSI Technical Reports (ETR), ETR 015 [29], ETR 043 [30], and ETR 056 [31], and in ETS 300 176 [9].

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1 Scope

This European Telecommunication Standard (ETS) is a part of the Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) Interworking Profile (IWP) and specifies the Portable Part (PP) and Fixed Part (FP) interworking requirements/mappings necessary to ensure that the GSM short message services point-to-point and cell broadcast can be provided over DECT, as specified in ETS 300 466 [12]. To enable DECT terminals to interwork with DECT systems which are connected to the GSM infrastructure, from the DECT side this ETS is based on ETS 300 757 [27].

NOTE: For information, the DECT Data service profile is based upon the GAP, ETS 300 444 [11] and on the DECT common interface specification, ETS 300 175, Parts 1 to 8 [1] to [8].

Interworking functions/mappings are specified for Mobile Switching Centre (MSC) attachment for the DECT FP as the FP is using the A-interface towards the GSM MSC in the respect that the FP emulates a GSM Base Station Controller (BSC) with regards to the GSM messages which are relevant to this ETS. The complete interface used between the DECT FP and the GSM MSC is specified in ETS 300 499 [13]. Attachment via other interfaces to GSM networks is outside the scope of this ETS.

The DECT access protocols and FP and PP interworking/mappings necessary for the support of basic voice telephony service are specified in ETS 300 370 [10].

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2 Normative references

This 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: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".
- [2] ETS 300 175-2: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical Layer".
- [3] ETS 300 175-3: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) layer".
- [4] ETS 300 175-4: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".
- [5] ETS 300 175-5: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [6] ETS 300 175-6: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".
- [7] ETS 300 175-7: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".
- [8] ETS 300 175-8: "Digital European Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".
- [9] ETS 300 176: "Digital Enhanced Cordless Telecommunications (DECT); Approval test specification".
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- [10] ETS 300 370: "Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) inter-working profile; Access and mapping (Protocol/procedure description for 3,1 kHz speech service)".
- [11] ETS 300 444: "Digital European Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [12] ETS 300 466: "Digital European Cordless Telecommunications/Global System for Mobile Communications (DECT/GSM) interworking profile; General description of service requirements; Functional capabilities and information flows".
- [13] ETS 300 499: "Digital Enhanced Cordless Telecommunications/Global System for Mobile Communications (DECT/GSM) interworking profile; Mobile services Switching Centre (MSC) - Fixed Part (FP) interconnection".
- [14] ETS 300 522: "Digital cellular telecommunications system (Phase 2); Network architecture (GSM 03.02)".
- [15] ETS 300 536: "European digital cellular telecommunications system (Phase 2); Technical realization of the Short Message Service (SMS) Point-to-Point (PP) (GSM 03.40)".
- [16] ETS 300 537: "European digital cellular telecommunications system (Phase 2); Technical realization of Short Message Service Cell Broadcast (SMSCB) (GSM 03.41)".

- [17] ETS 300 551: "European digital cellular telecommunications system (Phase 2); GSM Public Land Mobile Network (PLMN) access reference configuration (GSM 04.02)".
 - [18] ETS 300 557: "Digital cellular telecommunications system (Phase 2); Mobile radio interface layer 3 specification (GSM 04.08)".
 - [19] ETS 300 559: "Digital cellular telecommunication system (Phase 2); Point-to-Point (PP) Short Message Service (SMS) support on mobile radio interface (GSM 04.11)".
 - [20] ETS 300 560: "European digital cellular telecommunications system (Phase 2); Short Message Service Cell Broadcast (SMSCB) support on the mobile radio interface (GSM 04.12)".
 - [21] ETS 300 585: "Digital cellular telecommunications system (Phase 2); Use of Data Terminal Equipment - Data Circuit terminating Equipment (DTE - DCE) interface for Short Message Service (SMS) and Cell Broadcast Service (CBS) (GSM 07.05)".
 - [22] ETS 300 590: "Digital cellular telecommunications system (Phase 2); Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification (GSM 08.08)".
 - [23] ETS 300 608: "European digital cellular telecommunications system (Phase 2); Specification of the Subscriber Identity Module - Mobile Equipment (SIM - ME) interface (GSM 11.11)".
 - [24] **iTeh STANDARD PREVIEW
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ETS 300 628: "European digital cellular telecommunications system (Phase 2); Alphabets and language-specific information (GSM 03.38)".
 - [25] ETS 300 703: "Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) Inter-Working Profile (IWP); GSM phase 2 supplementary services implementation"
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 - [26] ETS 300 756: "Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM) interworking profile; Implementation of bearer services".
 - [27] ETS 300 757: "Digital Enhanced Cordless Telecommunications (DECT); Data services profile; Low rate messaging service; (Service type E, class 2)".
 - [28] ETS 300 792: "Digital Enhanced Cordless Telecommunications/Global System for Mobile communications (DECT/GSM); DECT/GSM interworking profile; Implementation of facsimile group 3".
 - [29] ETR 015: "Digital European Cordless Telecommunications (DECT); Reference document".
 - [30] ETR 043: "Digital European Cordless Telecommunications (DECT); Common interface; Services and facilities requirements specification".
 - [31] ETR 056: "Digital European Cordless Telecommunications (DECT); System description document".
 - [32] ETR 100: "European digital cellular telecommunications system (Phase 2); Abbreviations and acronyms (GSM 01.04)".
 - [33] 91/263/EEC: "Council Directive of 29 April 1991 on the approximation of the laws of the Member States concerning telecommunications terminal equipment, including the mutual recognition of their conformity" (Terminal Directive).

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- [34] ISO/IEC 9646-6: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".
- [35] TBR 10: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements; Telephony applications".
- [36] TBR 6: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements".

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3 Definitions, abbreviations and symbols

3.1 DECT definitions

For the purposes of this ETS, the following definitions apply:

attach: The process whereby a PP within the coverage area of a FP to which it has access rights, notifies this FP that it is operative. The reverse process is detach, which reports the PP as inoperative.

NOTE 1: An operative PP is assumed to be ready to receive calls.

authentication: The process whereby a DECT subscriber is positively verified to be a legitimate user of a particular FP.

NOTE 2: Authentication is generally performed at call set-up, but may also be done at any other time (e.g. during a call).

bearer service: A type of telecommunication service that provides a defined capability for the transmission of signals between user-network interfaces.

NOTE 3: The DECT user-network interface corresponds to the top of the network layer (layer 3).

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

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call: All of the Network (NWK) layer processes involved in one network layer peer-to-peer association.

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NOTE 5: Call may sometimes be used to refer to processes of all layers, since lower layer processes are implicitly required.

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DECT Network (DNW): A network that uses the DECT air interface to interconnect a local network to one or more portable applications. The logical boundaries of the DECT network are defined to be at the top of the DECT network layer.

NOTE 6: A DNW is a logical grouping that contains one or more fixed radio termination plus their associated portable radio termination. The boundaries of the DECT network are not physical boundaries.

Fixed Part (FP) (DECT FP): A physical grouping that contains all of the elements in the DECT network between the local network and the DECT air interface.

NOTE 7: A DECT FP contains the logical elements of at least one fixed radio termination, plus additional implementation specific elements.

FP GSM PLMN Attachment (DECT FP Attached To A GSM MSC): A definition of a functional environment where a DECT system (FP) is attached to an GSM MSC. The MSC in this case refers to a functional entity providing the required MM and Call Control (CC) functionality defined in this ETS in order to communicate with the FP.

Fixed radio Termination (FT): A logical group of functions that contains all of the DECT processes and procedures on the fixed side of the DECT air interface.

NOTE 8: A FT only includes elements that are defined in the DECT CI standard. This includes radio transmission elements together with a selection of layer 2 and layer 3 elements.

Generic Access Profile (GAP): A defined part of the DECT Common Interface standard (DECT CI) that ensures inter-operability between FPs and PPs for public business and residential access services.