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Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Part 2: Access profile

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# ETSI EN 300 434-2 V1.2.1 (2001-08)

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*European Standard (Telecommunications series)*

**Digital Enhanced Cordless Telecommunications (DECT);  
Integrated Services Digital Network (ISDN);  
DECT/ISDN interworking for end system configuration;  
Part 2: Access profile**

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# Contents

Intellectual Property Rights .....	6
Foreword .....	6
1 Scope .....	7
2 References .....	7
3 Definitions and abbreviations .....	7
3.1 Definitions .....	7
3.2 DECT abbreviations and acronyms .....	9
3.3 ISDN abbreviations and acronyms .....	10
4 Features for the ISDN-DECT access service .....	11
4.1 Description of the features .....	11
4.1.1 Outgoing call (feature 0) .....	11
4.1.2 Speech (feature 1) .....	11
4.1.3 Off-hook (feature 4) .....	11
4.1.4 On-hook - full release (feature 5) .....	11
4.1.5 Dialed digits - basic (feature 7) .....	11
4.1.6 Dialed digits - additional (feature 8) .....	11
4.1.7 Dialling delimiter (feature 9) .....	11
4.1.8 Incoming call (feature 16) .....	11
4.1.9 Control of supervisory tones (feature 26) .....	11
4.1.10 Signalling of display characters (feature 28) .....	11
4.1.11 Selection of required teleservice (feature 52) .....	11
4.1.12 Selection of bearer service (feature 53) .....	12
4.1.13 Voice band data capability (feature 60) .....	12
4.1.14 Keypad protocol for supplementary services (feature 61) .....	12
4.1.15 64 kbit/s unrestricted digital information (feature 75) .....	12
4.1.16 Overlap sending - outgoing call (feature 77) .....	12
4.1.17 Functional supplementary service Calling Line Identification Presentation (CLIP) (feature 101) .....	12
4.1.18 Functional supplementary service Calling Line Identification Restriction (CLIR) (feature 102) .....	12
4.1.19 Functional supplementary service COConnected Line identification Presentation (COLP) (feature 103) .....	12
4.1.20 Functional supplementary service COConnected Line identification Restriction (COLR) (feature 104) .....	12
4.1.21 Functional supplementary service Multiple Subscriber Number (MSN) (feature 105) .....	12
4.1.22 Functional supplementary service Direct Dialling In (DDI) (feature 106) .....	12
4.1.23 Functional supplementary service SUBaddressing (SUB) (feature 107) .....	13
4.1.24 Functional supplementary service Call Waiting (CW) (feature 108) .....	13
4.1.25 Functional supplementary service HOLD (feature 109) .....	13
4.1.26 Functional supplementary service Closed User Group (CUG) (feature 110) .....	13
4.1.27 Functional supplementary service Advice Of Charge (AOC) (feature 111) .....	13
4.1.28 Functional supplementary service Malicious Call IDentification (MCID) (feature 112) .....	13
4.1.29 Functional supplementary service Conference call, add-on (CONF) (feature 113) .....	13
4.1.30 Functional supplementary service Three party (3PTY) (feature 114) .....	13
4.1.31 Functional supplementary service Call Deflection (CD) (feature 115) .....	13
4.1.32 Functional supplementary service UUS service 1 (UUS1) (feature 116) .....	13
4.1.33 Functional supplementary service UUS service 2 (UUS2) (feature 117) .....	13
4.1.34 Functional supplementary service UUS service 3 (UUS3) (feature 118) .....	14
4.1.35 Functional supplementary service Explicit Call Transfer (ECT) (feature 119) .....	14
4.1.36 Functional supplementary service Completion of Calls to Busy Subscriber (CCBS) (feature 120) .....	14
4.1.37 Functional supplementary service Free Phone (FPH) (feature 121) .....	14
4.1.38 Functional supplementary service Meet-Me Conference (MMC) (feature 122) .....	14
4.1.39 Functional supplementary service "Call Forwarding" (CF) (feature 123) .....	14
5 Requirements regarding the Network (NWK) layer .....	14
5.1 Summary of features and related procedures .....	15
5.2 Procedures .....	16
5.3 Mapping of the features onto the procedures .....	18

5.3.1	Outgoing call (feature 0) .....	18
5.3.2	Duplex speech (feature 1).....	18
5.3.3	Off-hook (feature 4).....	18
5.3.4	On-hook - full release (feature 5).....	18
5.3.5	Dialled digits - basic (feature 7).....	19
5.3.6	Dialled digits - additional (feature 8) .....	19
5.3.7	Dialling delimiter (feature 9).....	19
5.3.8	Incoming call (feature 16) .....	19
5.3.9	Control of supervisory tones (feature 26).....	19
5.3.10	Signalling of display characters (feature 28) .....	19
5.3.11	Selection of required teleservice (feature 52) .....	19
5.3.12	Selection of bearer service (feature 53).....	19
5.3.13	Voice band data capability (feature 60).....	19
5.3.14	Keypad protocol for supplementary services - CRSS (feature 61a).....	20
5.3.15	64 kbit/s unrestricted digital information (feature 75).....	20
5.3.16	Overlap sending - outgoing call (feature 77) .....	20
5.3.17	Functional supplementary service CLIP (feature 101).....	20
5.3.18	Functional supplementary service CLIR (feature 102).....	20
5.3.19	Functional supplementary service COLP (feature 103).....	20
5.3.20	Functional supplementary service COLR (feature 104).....	20
5.3.21	Functional supplementary service MSN (feature 105).....	20
5.3.22	Functional supplementary service DDI (feature 106).....	20
5.3.23	Functional supplementary service SUB (feature 107).....	20
5.3.24	Functional supplementary service CW (feature 108) .....	21
5.3.25	Functional supplementary service HOLD (feature 109).....	21
5.3.26	Functional supplementary service CUG (feature 110) .....	21
5.3.27	Functional supplementary service AOC (feature 111) .....	21
5.3.28	Functional supplementary service MCID (feature 112) .....	21
5.3.29	Functional supplementary service CONF (feature 113).....	21
5.3.30	Functional supplementary service 3PTY (feature 114).....	21
5.3.31	Functional supplementary service CD (feature 115).....	21
5.3.32	Functional supplementary service UUS1 (feature 116).....	21
5.3.33	Functional supplementary service UUS2 (feature 117).....	21
5.3.34	Functional supplementary service UUS3 (feature 118).....	22
5.3.35	Functional supplementary service ECT (feature 119).....	22
5.3.36	Functional supplementary service CCBS (feature 120).....	22
5.3.37	Functional supplementary service FPH (feature 121).....	22
5.3.38	Functional supplementary service MMC (feature 122).....	22
5.3.39	Functional supplementary service CF (feature 123).....	22
6	Requirements regarding the DLC layer .....	22
6.1	Control plane.....	22
6.1.1	Minimum requirements .....	22
6.1.2	Incoming call (feature 16) .....	22
6.2	User plane.....	23
7	MAC layer requirements.....	23
7.1	MAC layer services .....	23
7.1.1	Connection oriented services .....	23
7.1.2	Broadcast services.....	23
7.2	MAC layer procedures.....	23
7.2.1	Connection oriented service procedures .....	23
7.2.1.1	General.....	23
7.3	Required messages .....	24
7.3.1	Header field.....	24
7.3.2	Messages in the tail field.....	24
7.3.2.1	Identities information (N <sub>T</sub> tail).....	24
7.3.2.2	System information and multiframe marker (Q <sub>T</sub> tail).....	24
7.3.2.3	Paging (PT tail) .....	25
7.3.2.4	MAC control (M <sub>T</sub> tails) .....	25
7.3.3	Messages in the B-field .....	25
7.4	Monitoring of speech quality .....	25

8	Requirements regarding the PHL layer.....	26
8.1	General .....	26
9	Requirements regarding the speech transmission.....	26
9.1	General .....	26
<b>Annex A (informative): Bibliography.....</b>		<b>27</b>
History .....		28

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[SIST EN 300 434-2 V1.2.1:2003](https://standards.iteh.ai/catalog/standards/sist/82d327b1-299a-4597-b1ee-2c0a91312e3c/sist-en-300-434-2-v1-2-1-2003)

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## Foreword

This European Standard (Telecommunications series) has been produced by ETSI Project Digital Enhanced Cordless Telecommunications (DECT).

Further details of the DECT system may be found in ETR 043 and TR 101 178.

The present document is part 2 of a multi-part deliverable covering the Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN) interworking for end system configuration, as identified below:

Part 1: "Interworking specification";

Part 2: "Access profile".

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# 1 Scope

The present document specifies the set of technical requirements for DECT Fixed Parts (FPs) and Portable Parts (PPs) necessary for the support of the ISDN-DECT Access Service (IAS).

Apparatus claiming interoperability based upon this IAP has to fully comply with the process mandatory technical requirements, and those for optional features so far as they are provided for in the present document.

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# 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 300 175-2: "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 300 175-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) layer".
- [4] ETSI EN 300 175-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [5] ETSI EN 300 175-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech coding and transmission".
- [6] ITU-T Recommendation G.726 (1990): "40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)".
- [7] ETSI EN 300 176: "Digital Enhanced Cordless Telecommunications (DECT); Approval test specification".
- [8] ETSI EN 300 434-1: "Digital Enhanced Cordless Telecommunications (DECT); Integrated Services Digital Network (ISDN); DECT/ISDN interworking for end system configuration; Part 1: Interworking specification".

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# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the following terms and definitions apply:

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

**broadcast:** simplex point-to-multipoint mode of transmission

**C-plane:** 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 1: The C-plane stack always contains protocol entities up to and including the Network (NWK) layer.

**call:** all of the NWK layer processes involved in one NWK layer peer-to-peer association

NOTE 2: Call may sometimes be used to refer to processes of all layers, since lower layer processes are implicitly required.

**DECT Fixed System (DFS):** logical grouping that contains all the functions between the DECT D reference point and the reference point on the fixed side of the DECT air interface

NOTE 3: The DECT Fixed System (DFS) = FT + (local network up to the fixed side ISDN reference point (including fixed side IWU)).

**DECT Network (DNW):** 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 NWK layer

NOTE 4: A DNW is a logical grouping that contains one or more fixed radio terminations plus their associated PT. The boundaries of the DECT network are not physical boundaries.

**DECT Portable System (DPS):** logical grouping that contains all the functions between the DECT D reference point and the user interface on the portable side of the DECT air interface

NOTE 5: The DPS = PT + (Portable Application (PA)).

**End System (ES):** logical grouping that contains application processes and supports telecommunication services

NOTE 6: From the OSI point of view, end systems are considered as sources and sinks of information.

**Fixed Part (DECT Fixed Part) (FP):** 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 FT, plus additional implementation specific elements.

**Fixed radio Termination (FT):** 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.

**Global Network (GNW):** telecommunication network capable of offering a long distance telecommunication service

NOTE 9: The term does not include legal or regulatory aspects, neither does it indicate if the network is a public or a private network.

**incoming call:** call received at a PP

**inter-operability:** capability of FPs and PPs, that enable a PP to obtain access to teleservices in more than one location area and/or from more than one operator (more than one service provider)

**Interworking Unit (IWU):** unit that is used to interconnect sub-networks

NOTE 10: The IWU contains the interworking functions necessary to support the required sub-network interworking.

**ISDN Access Profile (IAP):** defined part of the DECT/ISDN interworking standard that ensures inter-operability between FPs and PPs for the access of ISDN services

**Local Network (LNW):** telecommunication network capable of offering local telecommunication services

NOTE 11: The term does not include legal or regulatory aspects, nor does it indicate if the network is a public network or a private network.

**MAC Connection (CONNECTION):** association between one source MAC Multi-Bearer Control (MBC) entity and one destination MAC MBC entity.

This provides a set of related MAC services (a set of logical channels), and it can involve one or more underlying MAC bearers

**outgoing call:** call originating from a PP

**paging:** process of broadcasting a message from a DECT FP to one or more DECT PPs

NOTE 12: Different types of paging message are possible. For example, the {LCE\_REQUEST-PAGE} message orders the recipient to respond with a call set-up attempt.

**Portable Application (PA):** logical grouping that contains all the elements that lie beyond the DECT network boundary on the portable side

NOTE 13: The functions contained in the portable application may be physically distributed, but any such distribution is invisible to the DECT network.

**Portable Part (DECT Portable Part) (PP):** physical grouping that contains all elements between the user and the DECT air interface.

PP is a generic term that may describe one or several physical pieces

NOTE 14: A DECT PP is logically divided into one PT plus one or more PAs.

**Portable radio Termination (PT):** logical group of functions that contains all of the DECT processes and procedures on the portable side of the DECT air interface

NOTE 15: A PT only includes elements that are defined in the DECT CI standard. This includes radio transmission elements (layer 1) together with a selection of layer 2 and layer 3 elements.

**Public Access Profile (PAP):** defined part of the DECT Common Interface (DECT CI) standard that ensures inter-operability between FPs and PPs for public access services

**Radio Fixed Part (RFP):** one physical sub-group of a FP that contains all the radio end points (one or more) that are connected to a single system of antennas

**segment:** one of the pieces of data that is produced by the process of segmentation

NOTE 16: In general, one segment only represents a portion of a complete message.

**segmentation:** process of partitioning one Service Data Unit (SDU) from a higher layer into more than one Protocol Data Unit (PDU).

The reverse process is assembly

**supplementary service:** service that modifies or supplements a basic telecommunication service

**teleservice:** type of telecommunication service that provides the complete capability, including terminal equipment functions, for communication between users, according to protocols that are established by agreement

**U-plane:** user plane of the DECT protocol stacks.

This plane contains most of the end-to-end (external) user information and user control

NOTE 17: The U-plane protocols do not include any internal DECT protocol control, and it may be null at the NWK layer and at the DLC layers for some services.

## 3.2 DECT abbreviations and acronyms

For the purposes of the present document the following DECT abbreviations and acronyms apply:

3PTY	Three party
AOC	Advice Of Charge
CCBS	Completion of Calls to Busy Subscriber
CC	Call Control
CCITT	(The) International Telegraph and Telephone Consultative Committee
CD	Call Deflection

CF	Call Forwarding (supplementary service)
HOLD	Call HOLD
CI	Common Interface
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
COLP	COnnected Line identification Presentation
COLR	COnnected Line identification Restriction
CONF	Conference call, add-on
CRSS	Call Related Supplementary Services
CUG	Closed User Group
CW	Call Waiting
D	DECT reference point for end system
DDI	Direct Dialling In
DECT	Digital Enhanced Cordless Telecommunication
DFS	DECT Fixed System
DLC	Data Link Control
DPS	DECT Portable System
FP	Fixed Part
FPH	Free Phone
FT	Fixed radio Termination
IAP	ISDN Access Profile
IWU	InterWorking Unit
LCE	Link Control Entity
MAC	Medium Access Control
MCID	Malicious Call IDentification
MMC	Meet-Me Conference
MSN	Multiple Subscriber Number
NWK	Network
PAP	Public Access Profile
PDU	Protocol Data Unit
PP	Portable Part
PT	Portable radio Termination
RFP	Radio Fixed Part
SUB	SUBaddressing
SDU	Service Data Unit
UUS	User-to-User Signalling
UUS1	UUS service 1
UUS2	UUS service 2
UUS3	UUS service 3

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### 3.3 ISDN abbreviations and acronyms

For the purpose of the present document, the following ISDN abbreviations and acronyms apply:

C	C reference point
ISDN	Integrated Services Digital Network
P	P reference point
R	R reference point
S	S reference point
S/T	S/T reference point
T	T reference point