

# ETSI EN 300 444 V2.4.1 (2013-07)



## Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)

**ITeH STANDARD PREVIEW**  
(standards.iteh.ai)  
Full standard:  
<https://standards.iteh.ai/catalog/standards/sist/3f-8744-4487-a2e3-1e1a634bbb18/etsi-en-300-444-v2.4.1-2013-07>

---

**Reference**REN/DECT-000299

---

---

**Keywords**access, DECT, generic, IMT-2000, mobility,  
profile, radio, synchronization, TDD, TDMA**ETSI**650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

---

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88

---

**Important notice**

---

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

[http://portal.etsi.org/chaicor/ETSI\\_support.asp](http://portal.etsi.org/chaicor/ETSI_support.asp)

---

**Copyright Notification**

---

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2013.  
All rights reserved.

**DECT™**, **PLUGTESTS™**, **UMTS™** and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.  
**3GPP™** and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and  
of the 3GPP Organizational Partners.  
**GSM®** and the GSM logo are Trade Marks registered and owned by the GSM Association.

# Contents

Intellectual Property Rights .....	10
Foreword.....	10
1 Scope .....	11
2 References .....	11
2.1 Normative references .....	11
2.2 Informative references.....	12
3 Definitions, symbols and abbreviations .....	12
3.1 Definitions.....	12
3.2 Symbols.....	15
3.3 Abbreviations .....	15
4 Feature definitions.....	17
4.1 NetWorK (NWK) features .....	17
4.2 Speech coding and audio features .....	19
4.3 Application features .....	20
5 Service definitions.....	20
5.1 DLC service definitions.....	20
5.2 MAC service definitions .....	21
6 Inter-operability requirements.....	22
6.1 General .....	22
6.2 NWK features.....	22
6.3 DLC services .....	23
6.4 MAC services.....	24
6.5 PHysical Layer (PHL) services .....	24
6.6 Application features .....	24
6.7 Speech coding and audio features .....	25
6.8 Feature/service to procedure mapping.....	25
6.8.1 NWK feature to procedure mapping.....	25
6.8.2 DLC service to procedure mapping .....	28
6.8.3 MAC service to procedure mapping.....	29
6.8.4 Application feature to procedure mapping.....	30
6.8.5 Speech coding and audio feature to procedure mapping.....	30
6.9 General requirements .....	30
6.9.1 NWK layer message contents .....	30
6.9.2 Transaction identifier.....	30
6.9.3 Length of a NWK layer message .....	30
6.9.4 Handling of error and exception conditions.....	30
6.9.5 GAP default setup attributes .....	31
6.9.6 Coexistence of MM and CC procedures .....	31
6.9.7 Coding rules for information elements .....	31
7 Procedure description.....	32
8 NWK layer procedures.....	32
8.1 Summary of outgoing call messages, normal cases.....	32
8.2 Outgoing call request.....	34
8.2.1 Associated procedures .....	34
8.2.1.1 Timer P-<CC.03> management .....	34
8.2.2 Exceptional cases.....	35
8.2.2.1 Timer P-<CC.03> expiry .....	35
8.2.2.2 PT releases the outgoing call request .....	35
8.2.2.3 FT rejects the outgoing call request .....	36
8.3 Overlap sending.....	36
8.3.1 Associated procedure.....	37

8.3.1.1	Timer F-<CC.01> management .....	37
8.3.2	Exceptional cases .....	37
8.3.2.1	PT releases the outgoing call request .....	37
8.3.2.2	FT rejects the outgoing call request .....	37
8.3.2.3	Timer F-<CC.01> expiry .....	38
8.3.2.4	FT releases the outgoing call request .....	38
8.4	Outgoing call proceeding .....	38
8.4.1	Exceptional cases .....	39
8.4.1.1	PT releases the outgoing call request .....	39
8.4.1.2	FT releases the outgoing call request .....	39
8.5	Outgoing call confirmation .....	40
8.5.1	Exceptional cases .....	40
8.5.1.1	PT releases the outgoing call request .....	40
8.5.1.2	FT releases the outgoing call request .....	41
8.6	Outgoing call connection .....	41
8.7	Normal call release .....	42
8.7.1	Associated procedures .....	42
8.7.1.1	Timer P-<CC.02> management .....	42
8.7.1.2	Timer F-<CC.02> management .....	43
8.7.2	Exceptional cases .....	43
8.7.2.1	Release collisions .....	43
8.7.2.2	Timer F-<CC.02> expiry .....	44
8.7.2.3	Timer P-<CC.02> expiry .....	44
8.8	Abnormal call release .....	44
8.9	Partial release .....	45
8.10	Sending keypad information .....	46
8.11	Summary of incoming call related messages, normal cases .....	47
8.12	Incoming call request .....	48
8.12.1	Associated procedure .....	49
8.12.1.1	Timer F-<CC.03> management .....	49
8.12.2	Exceptional cases .....	50
8.12.2.1	FT releases the incoming call request .....	50
8.12.2.2	PT rejects the incoming call request .....	50
8.12.2.3	Timer F-<CC.03> expiry .....	51
8.12.3	Collective and group ringing .....	51
8.13	Incoming call confirmation .....	51
8.13.1	Exceptional cases .....	52
8.13.1.1	FT releases the incoming call transaction .....	52
8.13.1.2	PT releases the incoming call transaction .....	52
8.14	PT alerting .....	53
8.15	Incoming call connection .....	53
8.15.1	Associated procedure .....	54
8.15.1.1	Timer P-<CC.05> management .....	54
8.15.2	Exceptional cases .....	54
8.15.2.1	FT releases the incoming call transaction .....	54
8.15.2.2	PT releases the incoming call transaction .....	55
8.15.2.3	Timer P-<CC.05> expiry .....	55
8.16	Display .....	56
8.17	Terminal capability indication .....	56
8.18	Internal call setup .....	57
8.19	Internal call keypad .....	58
8.20	Service call setup .....	58
8.21	Service call keypad .....	58
8.22	Identification of PP .....	58
8.22.1	Associated procedure .....	60
8.22.1.1	Timer F-<MM_ident.2> management .....	60
8.22.2	Exceptional cases .....	60
8.22.2.1	Identity not existing in the PT .....	60
8.22.2.2	Timer F-<MM_ident.2> expiry .....	60
8.23	Authentication of FT using DSAA .....	60
8.23.1	Associated procedure .....	61
8.23.1.1	Timer P-<MM_auth.1> management .....	61

8.23.2	Exceptional cases.....	61
8.23.2.1	Authentication algorithm/key not supported.....	61
8.23.2.2	FT Authentication failure (authentication challenge RES2 has wrong value).....	62
8.23.2.3	Timer P-<MM_auth.1> expiry.....	62
8.24	Authentication of PP using DSAA.....	62
8.24.1	Associated procedure.....	64
8.24.1.1	Timer F-<MM_auth.1> management.....	64
8.24.2	Exceptional cases.....	64
8.24.2.1	Authentication algorithm/key not supported.....	64
8.24.2.2	Timer F-<MM_auth.1> expiry.....	64
8.23.2.3	PP Authentication failure (authentication challenge RES1 has wrong value).....	64
8.25	Authentication of user using DSAA.....	65
8.25.1	Associated procedure.....	65
8.25.1.1	Timer F-<MM_auth.2> management.....	65
8.25.2	Exceptional cases.....	66
8.25.2.1	Authentication algorithm/key not supported.....	66
8.25.2.2	Timer F-<MM_auth.2> expiry.....	66
8.26	Incrementing the ZAP value.....	66
8.27	Storing the DCK.....	67
8.28	Location registration.....	67
8.28.1	Associated procedures.....	69
8.28.1.1	Timer P-<MM_locate.1> management.....	69
8.28.1.2	Timer F-<MM_ident.1> management.....	69
8.28.2	Exceptional cases.....	69
8.28.2.1	FT rejects the location registration procedure.....	69
8.28.2.2	Failure of location registration procedure.....	70
8.28.2.3	PT rejects the identity assignment.....	70
8.28.2.4	Timer F-<MM_identity.1> expiry.....	70
8.29	Location update.....	70
8.30	Obtaining access rights.....	71
8.30.1	Associated procedure.....	73
8.30.1.1	Timer P-<MM_access.1> management.....	73
8.30.2	Exceptional cases.....	73
8.30.2.1	FT rejects the access rights.....	73
8.30.2.2	Timer P-<MM_access.1> expiry.....	74
8.31	FT terminating access rights.....	74
8.31.1	Associated procedure.....	75
8.31.1.1	Timer F-<MM_access.2> management.....	75
8.31.2	Exceptional cases.....	75
8.31.2.1	PT rejects the termination request.....	75
8.31.2.2	Timer F-<MM_access.2> expiry.....	75
8.32	Key allocation.....	76
8.32.1	Associated procedures.....	77
8.32.1.1	Timer F-<MM_key.1> management.....	77
8.32.1.2	Timer P-<MM_auth.1> management.....	78
8.32.2	Exceptional cases.....	78
8.32.2.1	Timer F-<MM_key.1> expiry.....	78
8.32.2.2	Timer P-<MM_auth.1> expiry.....	78
8.32.2.3	Allocation-type element is unacceptable.....	78
8.32.2.4	Authentication of PT fails.....	79
8.32.2.5	Authentication of FT fails.....	79
8.33	Cipher-switching initiated by FT using DSC.....	79
8.33.1	Associated procedure.....	81
8.33.1.1	Timer F-<MM_cipher.1> management.....	81
8.33.2	Exceptional cases.....	81
8.33.2.1	PT rejects the cipher request.....	81
8.33.2.2	Timer F-<MM_cipher.1> expiry.....	81
8.34	Cipher-switching initiated by PT using DSC.....	82
8.34.1	Associated procedure.....	83
8.34.1.1	Timer P-<MM_cipher.2> management.....	83
8.34.2	Exceptional cases.....	83
8.34.2.1	FT rejects the cipher request.....	83

8.34.2.2	Timer P-<MM_cipher.2> expiry .....	84
8.35	Indirect FT initiated link establishment .....	84
8.35.1	Associated procedure .....	85
8.35.1.1	Timer F-<LCE.03> management .....	85
8.35.2	Exceptional cases .....	85
8.35.2.1	The IPUI received in the {LCE-PAGE-RESPONSE} does not match .....	85
8.35.2.2	Timer <LCE.03> expiry .....	86
8.35.2.3	Release from the higher entity .....	86
8.36	Direct PT initiated link establishment .....	86
8.36.1	Exceptional case .....	88
8.36.1.1	Link establishment failure .....	88
8.37	Link release "normal" .....	88
8.37.1	Associated procedure .....	90
8.37.1.1	Timer <LCE.01> management .....	90
8.37.2	Exceptional cases .....	90
8.37.2.1	Timer <LCE.01> expiry .....	90
8.37.2.2	Outstanding data has been discarded .....	90
8.38	Link release "abnormal" .....	91
8.39	Link release "maintain" .....	91
8.39.1	Associated procedure .....	91
8.39.1.1	Timer <LCE.02> management .....	91
8.40	Enhanced FT initiated U- plane connection .....	92
8.41	Calling Line Identification Presentation (CLIP) Indication .....	92
8.42	Calling Name Identification Presentation (CNIP) Indication .....	93
8.43	Internal Call Calling Line Identification Presentation (CLIP) .....	93
8.44	Internal Call Calling Name Identification Presentation (CNIP) .....	94
8.45	Enhanced security procedures .....	96
8.45.1	Encryption of all calls .....	96
8.45.2	Re-keying during a call .....	96
8.45.3	Early encryption .....	97
8.45.4	Subscription requirements .....	98
8.45.5	Enhanced security regarding legacy devices .....	98
8.45.5.1	Behaviour of FPs regarding legacy PPs .....	99
8.45.5.2	Behaviour of PPs regarding legacy FPs .....	99
8.45.5.3	Behaviour regarding legacy 'repeater' devices .....	100
8.45.6	Authentication of FT using DSAA2 .....	100
8.45.6.1	Associated procedure .....	102
8.45.6.1.1	Timer P-<MM_auth.1> management .....	102
8.45.6.2	Exceptional cases .....	102
8.45.6.2.1	Authentication algorithm/key not supported .....	102
8.45.6.2.2	FT Authentication failure (authentication challenge RES2 has wrong value) .....	102
8.45.6.2.3	Timer P-<MM_auth.1> expiry .....	103
8.45.7	Authentication of PP using DSAA2 .....	103
8.45.7.1	Associated procedure .....	105
8.45.7.1.1	Timer F-<MM_auth.1> management .....	105
8.45.7.2	Exceptional cases .....	105
8.45.7.2.1	Authentication algorithm/key not supported .....	105
8.45.7.2.2	Timer F-<MM_auth.1> expiry .....	105
8.45.7.2.3	PP Authentication failure (authentication challenge RES1 has wrong value) .....	105
8.45.8	Authentication of user using DSAA2 .....	106
8.45.8.1	Associated procedure .....	106
8.45.8.1.1	Timer F-<MM_auth.2> management .....	106
8.45.8.2	Exceptional cases .....	106
8.45.8.2.1	Authentication algorithm/key not supported .....	106
8.45.8.2.2	Timer F-<MM_auth.2> expiry .....	107
8.45.9	Key allocation using DSAA2 .....	107
8.45.9.1	Associated procedures .....	109
8.45.9.1.1	Timer F-<MM_key.1> management .....	109
8.45.9.1.2	Timer P-<MM_auth.1> management .....	109
8.45.9.2	Exceptional cases .....	110
8.45.9.2.1	Timer F-<MM_key.1> expiry .....	110
8.45.9.2.2	Timer P-<MM_auth.1> expiry .....	110

8.45.9.2.3	Allocation-type element is unacceptable .....	110
8.45.9.2.4	Authentication of PT fails.....	110
8.45.9.2.5	Authentication of FT fails.....	111
8.45.10	Cipher-switching initiated by FT using DSC2.....	111
8.45.10.1	Associated procedure .....	112
8.45.10.1.1	Timer F-<MM_cipher.1> management .....	112
8.45.10.2	Exceptional cases .....	112
8.45.10.2.1	PT rejects the cipher request.....	112
8.45.10.2.2	Timer F-<MM_cipher.1> expiry .....	113
8.45.11	Cipher-switching initiated by PT using DSC2.....	113
8.45.11.1	Associated procedure .....	115
8.45.11.1.1	Timer P-<MM_cipher.2> management .....	115
8.45.11.2	Exceptional cases .....	115
8.45.11.2.1	FT rejects the cipher request.....	115
8.45.11.2.2	Timer P-<MM_cipher.2> expiry .....	115
9	DLC layer procedures .....	116
9.1	Class A link establishment .....	116
9.1.1	Associated procedures .....	117
9.1.1.1	Timer P<DL.07> management.....	117
9.1.1.2	Re-transmission counter management.....	117
9.1.1.3	Multiple frame operation variables management .....	117
9.1.1.4	Lower Layer Management Entity (LLME) establishment of a MAC connection.....	117
9.1.2	Exceptional cases.....	119
9.1.2.1	Timer P<DL.07> expiry.....	119
9.1.2.2	Receipt of a request for link release .....	119
9.1.2.3	Receipt of an indication for a connection release .....	119
9.2	Class A Acknowledged Information transfer .....	119
9.2.1	Acknowledgement with an I_frame.....	120
9.2.2	Acknowledgement with a RR_frame .....	121
9.2.3	Class A acknowledged information transfer with segment reassemble .....	121
9.2.4	Associated procedures .....	122
9.2.4.1	Timer <DL.04> management.....	122
9.2.4.2	Re-transmission counter management.....	122
9.2.4.3	Multiple frame operation variables management .....	122
9.2.5	Exceptional cases.....	122
9.2.5.1	Timer <DL.04> expiry .....	122
9.2.5.2	Receipt of a request for link release .....	123
9.2.5.3	Receipt of an indication for a connection release.....	123
9.2.5.4	DLC wants to make a connection handover.....	123
9.3	Class A link release .....	123
9.3.1	Associated procedures .....	123
9.3.1.1	LLME U-plane release.....	123
9.3.1.2	LLME release a MAC connection .....	123
9.4	Class A link re-establishment.....	123
9.5	C <sub>s</sub> channel fragmentation and recombination .....	124
9.6	Normal broadcast .....	124
9.7	Class A basic connection handover .....	125
9.7.1	Voluntary handover .....	125
9.7.2	Associated procedure.....	125
9.7.2.1	LLME connection handover management .....	125
9.7.3	Exceptional case .....	125
9.7.3.1	Receipt of a request for link release .....	125
9.8	Encryption switching.....	126
9.8.1	Associated procedure.....	126
9.8.1.1	Providing Encryption key to the MAC layer.....	126
9.8.2	Exceptional cases.....	126
9.8.2.1	Encryption fails .....	126
9.8.2.2	Connection handover of ciphered connections.....	126
9.9	U-plane class 0/min delay .....	126
9.9.1	Associated procedure.....	127
9.9.1.1	LLME U-plane establishment .....	127

9.10	FU1 frame operation .....	127
10	MAC layer procedures .....	127
10.1	General .....	127
10.2	Downlink broadcast.....	128
10.2.1	N <sub>T</sub> message .....	128
10.2.2	Q <sub>T</sub> - static system information .....	128
10.2.3	Q <sub>T</sub> - FP capabilities.....	129
10.2.3.1	Q <sub>T</sub> - Extended FP capabilities .....	129
10.2.3.2	Q <sub>T</sub> - Extended FP capabilities (part 2) .....	130
10.2.4	Q <sub>T</sub> - SARI list contents .....	130
10.3	Paging broadcast .....	131
10.3.1	Short page, normal/extended paging.....	131
10.3.2	Zero page, normal/extended paging.....	131
10.3.3	Blind slot information.....	132
10.3.4	Bearer handover information .....	132
10.4	Setup of basic connection, basic bearer setup (A-field) .....	132
10.4.1	M <sub>T</sub> message.....	133
10.4.2	Associated procedures .....	133
10.4.2.1	Timer T200 management .....	133
10.4.2.2	Counter N200 management.....	133
10.4.3	Exceptional cases.....	134
10.4.3.1	Bearer setup attempt fails N200+1 times .....	134
10.4.3.2	Timer T200 expiry .....	135
10.5	Connection/bearer release .....	135
10.5.1	M <sub>T</sub> message.....	136
10.6	Bearer handover request.....	136
10.6.1	M <sub>T</sub> message.....	136
10.7	Connection handover request .....	136
10.7.1	M <sub>T</sub> message.....	137
10.8	C <sub>S</sub> channel data.....	137
10.9	Q2 bit setting .....	137
10.10	RFPI handshake.....	137
10.11	Antenna diversity .....	137
10.12	Sliding collision.....	137
10.13	Encryption process - initialization and synchronization.....	137
10.14	Encryption mode control .....	138
10.14.1	M <sub>T</sub> message.....	138
10.15	Handover encryption process .....	138
10.16	Extended frequency allocation .....	138
10.17	Re-keying .....	139
10.18	Early Encryption .....	139
10.19	AES/DSC2 Encryption.....	139
11	Physical Layer (PHL) requirements .....	139
11.1	General .....	139
11.2	Minimum Normal Transmit Power (NTP) .....	139
11.3	Radio receiver sensitivity .....	139
11.4	Z-field.....	139
11.5	Sliding collision detection .....	140
11.6	Physical channel availability .....	140
11.7	Synchronization window .....	140
12	Requirements regarding the speech transmission.....	140
12.1	General .....	140
12.2	User controlled volume control .....	140
13	Management procedures.....	140
13.1	Management of MM procedures .....	140
13.2	Location registration initiation .....	141
13.3	Assigned individual TPUI management.....	141
13.4	PMID management.....	141
13.5	DCK management .....	141



13.6	Broadcast attributes management.....	142
13.6.1	Higher layer capabilities .....	142
13.6.2	Extended higher layer capabilities .....	142
13.6.3	Extended higher layer capabilities (part 2) .....	142
13.7	Storage of subscription related data .....	143
14	Application procedures.....	143
14.1	Subscription control .....	143
14.2	AC to bitstring mapping .....	143
14.3	Manual entry of the PARK.....	144
14.4	Terminal Identity number assignment in mono cell system.....	145
14.4.1	General.....	145
14.4.2	Procedure description .....	145
14.4.3	Related Procedures .....	146
<b>Annex A (informative): PP locking procedure for on-air subscription .....</b>		<b>147</b>
<b>Annex B (informative): Tones, progress indicator and U-plane connection.....</b>		<b>149</b>
B.1	General .....	149
B.2	Connection of U-plane and provision of tones.....	149
B.3	Provision of tones before connection of the U-plane .....	149
B.4	Provision of tones and <<Progress indicator>> information element.....	149
B.5	Summary .....	150
<b>Annex C (normative): Synchronization requirements for fixed parts .....</b>		<b>151</b>
<b>Annex D (informative): Change history.....</b>		<b>152</b>
History .....		153

iTeh STANDARD PREVIEW  
 (standards.iteh.ai)  
 Full standard:  
<https://standards.iteh.ai/catalog/standards/sis/78e2b3f-8744-4487-a2e3-1e1a634bbb18/etsi-en-300-444-v2-4-1-2013-07>

---

## Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://ipr.etsi.org>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

---

## Foreword

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

The present document is based on EN 300 175, parts 1 [1] to 8 [8]. General attachment requirements and speech attachment requirements are based on EN 301 406 [11] (replacing TBR 006 [i.1]) and EN 300 176-2 [10] (previously covered by TBR 010 [i.2]).

The present document has been developed in accordance to the rules of documenting a profile specification as described in ISO/IEC 9646-6 [i.4].

National transposition dates	
Date of adoption of this EN:	22 July 2013
Date of latest announcement of this EN (doa):	31 October 2013
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2014
Date of withdrawal of any conflicting National Standard (dow):	30 April 2014

---

# 1 Scope

The present document specifies that set of technical requirements for Digital Enhanced Cordless Telecommunications (DECT) Fixed Part (FP) and DECT Portable Part (PP) necessary for the support of the Generic Access Profile (GAP).

The GAP is applicable to all DECT Portable radio Terminations (PT) and Fixed radio Terminations (FT) which under the scope of EN 300 176-2 [10] (i.e. 3,1 kHz telephony teleservice) and specifies the minimum functionality that is supported by all other 3,1 kHz voice profiles.

The objective of the present document is to ensure the Air Interface (AI) inter-operability of DECT equipment capable of 3,1 kHz telephony applications, in such a way that any DECT PT conforming to the procedures described in the present document is inter-operable with any DECT FT conforming to the procedures described in the present document.

The profile consists of the minimum mandatory requirements that allow a 3,1 kHz teleservice connection to be established, maintained and released between a FT and a PT with the appropriate access rights, irrespective of whether the FP provides residential, business or public access services.

In addition, the present document defines the features, services, procedures etc. for both the FT and the PT, which are provision mandatory either in the PT or in the FT, as well as some elements that are provision optional but still process mandatory.

Mobility Management (MM) procedures at the DECT AI to support incoming calls and outgoing calls are included.

Inter-working between the FT and the attached network is outside the scope of the present document.

---

## 2 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.

### 2.1 Normative references

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 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".

## 2.2 Informative references

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 TBR 006: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements".
- [i.2] ETSI TBR 010: "Digital Enhanced Cordless Telecommunications (DECT); General Terminal Attachment Requirements; Telephony Applications".
- [i.3] ETSI TS 102 527-3: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services".
- [i.4] ISO/IEC 9646-6: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".
- [i.5] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [i.6] ISO/IEC 8073 (1997): "Information technology - Open Systems Interconnection - Protocol for providing the connection-mode transport service".
- [i.7] Recommendation ITU-T G.726: "40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)".

---

## 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 the following apply:

**attach:** process whereby a PP within the coverage area of a FP to which it has access rights, notifies this FP that it is operative

NOTE 1: The reverse process is detach, which reports the PP as inoperative.

NOTE 2: An operative PP is assumed to be ready to receive calls.

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

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

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

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

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

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

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

**DECT network:** network that uses the DECT AI 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: A DECT network is a logical grouping that contains one or more FTs plus their associated PT. The boundaries of the DECT network are not physical boundaries.

**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 AI

NOTE: 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 AI

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

**geographically unique identity:** related to FP identities, PARIs and RFPIs, it indicates that two systems with the same PARI, or respectively two RFPs with the same RFPI, cannot be reached or listened to at the same geographical position

NOTE: For PARI and RFPI, see abbreviations clause.

**global network:** telecommunication network capable of offering a long distance telecommunication service

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

**globally unique identity:** identity is unique within DECT (without geographical or other restrictions)

**handover:** process of switching a call in progress from one physical channel to another physical channel

NOTE: There are two physical forms of handover, intra-cell handover and inter-cell handover.

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

**inter-cell handover:** switching of a call in progress from one cell to another cell

**internal general call:** internal call setup by a PP to ring all other PPs (i.e. excluding the initiator) and FP (when capable of)

NOTE: This is typically useful in residential environments when transferring a call.

**internal handover:** handover processes that are completely internal to one FT. Internal handover reconnects the call at the lower layers, while maintaining the call at the NWK layer

NOTE: The lower layer reconnection can either be at the Data Link Control (DLC) layer (connection handover) or at the Medium Access Control (MAC) layer (bearer handover).

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