



SLOVENSKI STANDARD
SIST EN 300 444 V2.4.1:2013

01-oktober-2013

Digitalne izboljšane brezvrvične telekomunikacije (DECT) - Profil generičnega dostopa (GAP)

Digital Enhanced Cordless Telecommunications (DECT) - Generic Access Profile (GAP)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Ta slovenski standard je istoveten z: EN 300 444 Version 2.4.1

SIST EN 300 444 V2.4.1:2013
<https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013>

ICS:

33.070.30	Digitalne izboljšane brezvrvične telekomunikacije (DECT)	Digital Enhanced Cordless Telecommunications (DECT)
-----------	--	---

SIST EN 300 444 V2.4.1:2013

en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 300 444 V2.4.1:2013](https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013>

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



Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP) (standards.iteh.ai)

[SIST EN 300 444 V2.4.1:2013
https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013](https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013)

Reference

REN/DECT-000299

Keywordsaccess, 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

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 300 444 V2.4.1:2013<https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad26977/sist-en-300-444-v2-4-1-2013>
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

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 _s 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 _T message	128
10.2.2	Q _T - static system information	128
10.2.3	Q _T - FP capabilities.....	129
10.2.3.1	Q _T - Extended FP capabilities	129
10.2.3.2	Q _T - Extended FP capabilities (part 2)	130
10.2.4	Q _T - 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 _T 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 _T message.....	136
10.6	Bearer handover request.....	136
10.6.1	M _T message.....	136
10.7	Connection handover request.....	136
10.7.1	M _T message.....	137
10.8	C _S 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 _T 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
Annex A (informative):	PP locking procedure for on-air subscription	147
Annex B (informative):	Tones, progress indicator and U-plane connection.....	149
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
Annex C (normative):	Synchronization requirements for fixed parts	151
Annex D (informative):	Change history	152
History	153

[SIST EN 300 444 V2.4.1:2013](https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013)

<https://standards.iteh.ai/catalog/standards/sist/b6d69ebb-f9cc-4bb2-84b6-bd10ad269793/sist-en-300-444-v2-4-1-2013>

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].

iTeh STANDARD PREVIEW

(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)