



**Digital Enhanced Cordless Telecommunications (DECT);
New Generation DECT;
Part 5: Additional feature set nr. 1
for extended wideband speech services**

Standard PREVIEW
(Standard ID: 102-527-5-V1-3-1-19-08)
Full standards catalog: <https://standards.iteh.ai/catalog/standards/sls/40063366-2296-492e-9093-2db729b69057/etsi-ts-102-527-5-v1-3-1-19-08>

Reference

RTS/DECT-00333

Keywords

audio, DECT, radio, security

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

The present document can be downloaded from:

<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

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

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

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

<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2019.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M™ logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	9
Foreword.....	9
Modal verbs terminology.....	10
1 Scope	11
2 References	12
2.1 Normative references	12
2.2 Informative references.....	13
3 Definition of terms, symbols and abbreviations.....	14
3.1 Terms.....	14
3.2 Symbols.....	15
3.3 Abbreviations	15
4 Description of Services	17
4.1 Additional feature set nr.1 for extended wideband speech services	17
4.1.0 General.....	17
4.1.1 Back-compatibility with GAP.....	17
4.1.2 Back-compatibility with New Generation DECT; part 1: wideband speech	17
4.1.3 Back-compatibility with New Generation DECT; part 3: extended wideband speech services	18
4.2 Additional features for extended wideband speech services defined in the present document	19
5 Service and feature definitions	19
5.1 New Generation DECT Speech Services	19
5.2 Network (NWK) features	19
5.3 Data Link Control (DLC) service definitions	20
5.4 Medium Access Control (MAC) service definitions.....	20
5.5 Physical Layer (PHL) service definitions.....	20
5.6 Speech coding and audio feature definitions.....	20
5.7 Application features	20
6 Inter-operability requirements.....	20
6.1 General	20
6.1.0 General.....	20
6.1.1 Editorial conventions.....	20
6.1.2 Radio and audio conformance requirements.....	21
6.2 New Generation DECT Speech Services support status	21
6.3 Services to DECT feature implementation mappings.....	22
6.4 NWK features.....	32
6.5 Data Link Control (DLC) services	33
6.6 Medium Access Control (MAC) services	35
6.7 Physical layer (PHL) services	35
6.8 Speech coding and audio features	36
6.9 Application features	37
6.10 Network (NWK) feature to procedure mapping.....	38
6.11 Data Link Control (DLC) Service to procedure mapping	46
6.12 Medium Access Control (MAC) service to procedure mapping	47
6.13 Application feature to procedure mapping	49
6.14 General requirements	49
6.14.1 Network (NWK) layer message contents.....	49
6.14.2 Transaction identifier.....	49
6.14.3 Length of a Network (NWK) layer message	49
6.14.4 Handling of error and exception conditions.....	50
6.14.5 Generic Access Profile (GAP) default setup attributes	50
6.14.6 Coexistence of Mobility Management (MM) and Call Control (CC) procedures	50
6.14.7 Coding rules for information elements	50

7	Procedure description	50
7.0	General	50
7.1	Backward compatibility with Generic Access Profile (GAP), New Generation DECT part 1 (wideband speech) and with New Generation DECT part 3 (extended wideband speech services) equipment.....	51
7.1.1	Backward compatibility with Generic Access Profile (GAP); Requirements for NG-DECT, part 5 Fixed Parts (FPs).....	51
7.1.2	Backward compatibility with Generic Access Profile (GAP); Requirements for NG-DECT, part 5 Portable Parts (PPs) registered on GAP compliant FPs	51
7.1.3	Backward compatibility with New Generation DECT, part 1; Requirements for NG-DECT, part 5 Fixed Parts (FPs).....	51
7.1.4	Backward compatibility with New Generation DECT, part 1; Requirements for NG-DECT, part 5 Portable Parts (PPs) registered on NG DECT Part 1 FPs	51
7.1.5	Backward compatibility with New Generation DECT, part 3; Requirements for NG-DECT, part 5 Fixed Parts (FPs).....	52
7.1.6	Backward compatibility with New Generation DECT, part 3; Requirements for NG-DECT, part 5 Portable Parts (PPs) registered on NG DECT Part 3 FPs	52
7.2	Generic Access Profile (GAP) procedures	52
7.3	New Generation DECT; part 1: Wideband Speech and New Generation DECT; part 3: Extended Wideband Speech Services procedures	52
7.3.0	General.....	52
7.3.1	Implementation examples of part 1: Wideband Speech specific procedures	53
7.3.2	Implementation examples of part 3: Extended Wideband Speech Services specific procedures.....	53
7.4	Network (NWK) layer procedures specific to part 5.....	53
7.4.0	General.....	53
7.4.1	Generic events notification	53
7.4.1.1	General	53
7.4.1.2	Voice Message waiting notification	53
7.4.1.3	Missed call notifications	55
7.4.1.4	List change notification.....	55
7.4.1.5	Line and diagnostic statuses notifications.....	55
7.4.1.5.1	General requirements.....	55
7.4.1.5.2	Events triggering 'Line and diagnostic status' list related indications.....	56
7.4.1.6	SMS Message notification	59
7.4.2	Date and Time synchronization	61
7.4.3	Handling of parallel calls	61
7.4.3.1	Parallel call common requirements	61
7.4.3.2	Control messages	61
7.4.3.3	Codec change for parallel calls.....	62
7.4.3.4	Sending negative acknowledgement	62
7.4.3.5	Common parallel call procedures (external or internal).....	62
7.4.3.6	Call transfer.....	62
7.4.3.7	3-party conference with established external and/or internal calls.....	62
7.4.3.8	Intrusion call (from PP to FP)	62
7.4.3.9	Internal call codec priority	62
7.4.3.10	Handling of lines where second calls are signalled in-band.....	62
7.4.4	Handling of single call services	63
7.4.5	Line identification.....	63
7.4.6	Call identification	63
7.4.6.1	Call identification general requirements	63
7.4.6.2	Call identifier assignment on first outgoing call (FP to PP).....	63
7.4.6.3	Call identifier assignment on first incoming call (FP to PP).....	63
7.4.6.4	Call status indication to the handset (FP to PP)	63
7.4.6.4.1	Call status indication general requirements.....	63
7.4.6.4.2	Call status indication as call information.....	63
7.4.6.4.3	Call status principles and values.....	63
7.4.6.4.4	Call status reasons summary and MMI mapping.....	66
7.4.6.4.5	Call statuses for a first "Outgoing external call"	66
7.4.6.4.6	Call statuses for a first "Outgoing external call" using early {CC-CONNECT} message	66
7.4.6.4.7	Call statuses for an "Outgoing external call" - user busy	66
7.4.6.4.8	Call statuses for an "Outgoing external call" - number not available	66
7.4.6.4.9	Call statuses for a first "Incoming external call"	66
7.4.6.4.10	Call statuses for a first "Incoming external call"	66

7.4.7	Multiple lines handling	66
7.4.8	Multiple call line handling	66
7.4.9	PP and FP capabilities indication and broadcast	67
7.4.9.1	Terminal capability indication	67
7.4.9.2	Higher layer information FP broadcast	68
7.4.9.2.0	General	68
7.4.9.2.1	Higher layer information in standard FP broadcast (Qh = 3)	68
7.4.9.2.2	Higher layer information in Extended FP broadcast (Qh = 4)	69
7.4.9.2.3	Extended Higher Layer capabilities part 2 (Qh = 11)	69
7.4.10	List access service	69
7.4.10.1	General considerations	69
7.4.10.2	List change notification	72
7.4.10.2.1	General rule	72
7.4.10.2.2	Mandatory notifications	75
7.4.10.3	List identifier codings	76
7.4.10.4	List Access Commands	77
7.4.10.4.0	General rule	77
7.4.10.4.1	Start and end session	80
7.4.10.4.2	Query supported entry fields	80
7.4.10.4.3	Read entries	80
7.4.10.4.4	Edit entry	84
7.4.10.4.5	Save entry	84
7.4.10.4.6	Delete entry	89
7.4.10.4.7	Delete list	89
7.4.10.4.8	Search entries	89
7.4.10.4.9	Negative Acknowledgement	89
7.4.10.4.10	Data packet / Data packet last	89
7.4.10.4.11	Read selected entries	89
7.4.10.4.12	Write entry	93
7.4.10.5	Lists and entry fields	96
7.4.10.5.0	Start and end session	96
7.4.10.5.1	Fields description	97
7.4.10.5.2	"List of Supported Lists" entry fields	99
7.4.10.5.3	"Missed Calls List" entry fields	100
7.4.10.5.4	"Outgoing Calls List" entry fields	100
7.4.10.5.5	"Incoming Accepted Calls List" entry fields	100
7.4.10.5.6	"All Calls List" entry fields	100
7.4.10.5.7	"Contact List" entry fields	101
7.4.10.5.8	"Internal Names List" entry fields	101
7.4.10.5.9	"DECT System Settings List" entry fields	102
7.4.10.5.10	"Line Settings List" entry fields	102
7.4.10.5.11	"All Incoming Calls List" entry fields	102
7.4.10.5.12	"Line and Diagnostic Statuses List" entry fields	102
7.4.10.6	List access service call and interactions with voice calls	102
7.4.10.7	Generic sequence charts for list access	102
7.4.10.8	Use case examples for list access	102
7.4.10.9	Extended list change notification	102
7.4.10.9.1	General requirements	102
7.4.10.9.2	Sending rules	109
7.4.10.10	Log management in case of user interaction	115
7.4.10.10.1	Definitions and applicability of procedure	115
7.4.10.10.2	Maximum partial synchronization time of a local log	115
7.4.10.10.3	Maximum partial access time to a remote list	116
7.4.11	DECT system and line settings	117
7.4.11.1	DECT system and line settings considerations	117
7.4.11.2	Interactions between registration, attachments of handsets and lists	117
7.4.11.3	DECT System Settings List	117
7.4.11.3.0	General rule	117
7.4.11.3.1	Field 'Current PIN code'	118
7.4.11.3.2	Field 'Clock master'	118
7.4.11.3.3	Field 'Base reset'	118
7.4.11.3.4	Field 'FP IP address / type'	118

7.4.11.3.5	Field 'FP IP address / value'	118
7.4.11.3.6	Field 'FP IP address / subnet mask'	118
7.4.11.3.7	Field 'FP IP address / gateway'	118
7.4.11.3.8	Field 'FP IP address / DNS server'	118
7.4.11.3.9	Field 'FP version / Firmware version'	118
7.4.11.3.10	Field 'FP version / Eeprom version'	118
7.4.11.3.11	Field 'FP version / Hardware version' field	119
7.4.11.3.12	Field 'Emission mode'	119
7.4.11.3.13	Field 'New PIN code'	119
7.4.11.3.14	Field 'FP power level'	119
7.4.11.4	Line Settings List	119
7.4.11.5	Virtual Contact List and Call List per Line	119
7.4.12	Calling line identity restriction (CLIR)	120
7.4.13	Call forwarding (external calls)	120
7.4.14	DTMF handling	120
7.4.15	Tones provision	120
7.4.16	Headset management	120
7.4.17	UTF-8 CNIP	120
7.4.18	Location registration after re-lock	120
7.4.19	PT alerting using pattern signalling	120
7.4.20	Date and Time recovery	120
7.4.21	Void	120
7.4.22	Void	121
7.4.23	Void	121
7.4.24	Void	121
7.4.25	Void	121
7.4.26	Void	121
7.4.27	Void	121
7.4.28	Void	121
7.4.29	Void	121
7.4.30	Void	122
7.4.31	Void	122
7.4.32	Contact number and name matching on outgoing call	122
7.4.32.1	Contact number and name matching on outgoing call	122
7.4.33	Contact number and name matching on incoming call	124
7.4.34	Line and diagnostic information	125
7.4.34.1	General requirements	125
7.4.34.2	Exposed diagnostic information	126
7.4.34.3	Line and Diagnostic Statuses List	128
7.4.34.3.0	General	128
7.4.34.3.1	Field 'Line id'	128
7.4.34.3.2	Field 'OK status'	128
7.4.34.3.3	Field 'Line use status'	129
7.4.34.3.4	Field 'Handset use status'	130
7.4.34.3.5	Field 'Call Forwarding status'	130
7.4.34.3.6	Field 'Diagnostic error status'	131
7.4.34.4	Diagnostic indication	134
7.4.35	Short Message Service	134
7.4.35.1	General requirements	134
7.4.35.2	Incoming SMS handling	135
7.4.35.3	Outgoing SMS handling	135
7.4.35.4	SMS settings	138
7.4.35.4.1	SMS Settings List	138
7.4.35.4.2	SMS settings fields	139
7.4.35.5	SMS related entry fields and lists	143
7.4.35.5.1	SMS related entry fields	143
7.4.35.5.2	Incoming SMS List entry fields	146
7.4.35.5.3	Sent SMS List entry fields	146
7.4.35.5.4	Outgoing SMS List entry fields	147
7.4.35.5.5	Draft SMS List entry fields	147
7.4.36	(Digital) Telephone Answering Machine (DTAM)	147
7.4.36.1	DTAM description	147

7.4.36.1.1	General requirements.....	147
7.4.36.1.2	DTAM settings management.....	148
7.4.36.1.3	DTAM incoming and welcome messages management.....	149
7.4.36.2	DTAM profiles.....	151
7.4.36.2.0	General.....	151
7.4.36.2.1	Voice oriented DTAM.....	151
7.4.36.2.2	Visual DTAM.....	153
7.4.36.3	DTAM consulting call.....	155
7.4.36.3.1	General description.....	155
7.4.36.3.2	Parallel call during active DTAM consulting call.....	158
7.4.36.4	DTAM commands.....	159
7.4.36.4.1	DTAM commands general requirements.....	159
7.4.36.4.2	Start DTAM session.....	160
7.4.36.4.3	Select neighbour message.....	161
7.4.36.4.4	Play message.....	162
7.4.36.4.5	Delete message.....	164
7.4.36.4.6	Pause/resume playing of message.....	165
7.4.36.4.7	Stop playing message.....	166
7.4.36.4.8	Record welcome message.....	167
7.4.36.4.9	Stop recording welcome message.....	168
7.4.36.4.10	Negative acknowledgement.....	169
7.4.36.4.11	DTAM status command.....	170
7.4.36.5	DTAM related lists.....	170
7.4.36.5.1	DTAM specific fields description.....	170
7.4.36.5.2	DTAM Settings List.....	175
7.4.36.5.3	DTAM Incoming Messages List.....	176
7.4.36.5.4	DTAM Welcome Message List.....	177
7.4.36.5.5	List Access service call transformation into a DTAM consulting call.....	177
7.4.36.5.6	Local DTAM PIN code management.....	180
7.4.36.6	Call Screening.....	181
7.4.36.6.1	Screening general requirements.....	181
7.4.36.6.2	Call screening indication (FP to PP).....	182
7.4.36.6.3	Call screening acceptance (PP to FP).....	183
7.4.36.6.4	Call screening rejection (PP to FP).....	184
7.4.36.6.5	Call screening interception (PP to FP).....	185
7.4.36.6.6	FP initiated call screening release (FP to PP).....	186
7.4.36.6.7	Parallel call during active call screening.....	187
7.4.36.6.8	Call screening of a waiting call.....	187
7.4.36.6.9	Call screening with screening and non-screening PPs.....	188
7.4.36.6.10	Single/Multiple PP(s) call screening mode.....	190
7.5	Data Link Control (DLC) layer procedures.....	191
7.6	Medium Access Control (MAC) layer procedures.....	191
7.7	Physical layer (PHL) requirements.....	191
7.8	Requirements regarding the speech transmission.....	191
7.9	Management procedures.....	191
7.10	Application procedures.....	191
7.10.1	Easy PIN code and easy pairing registration.....	191
7.10.2	Handset locator.....	191
7.10.3	Transmit power control.....	191
7.10.3.0	General.....	191
7.10.3.1	Base manual transmit power control.....	191
7.10.3.2	Handset adaptive transmit power control.....	192
Annex A (normative):	System parameters.....	193
A.1	CC timers.....	193
A.2	MM timers.....	194
A.3	Application timers.....	194
A.4	Constants.....	194

Annex B (informative):	Recommended implementation of A-field data procedures.....	195
Annex C (informative):	Recommended implementation of telephony procedures	196
Annex D (informative):	Guidelines for implementation of DTMF	197
Annex E (informative):	Tones format in Recommendations ITU-T.....	198
Annex F (normative):	Void	199
Annex G (informative):	DTAM service use case examples	200
G.1	Voice oriented remote DTAM with a DTAM number.....	200
G.1.1	DTAM incoming messages management.....	200
G.1.2	Welcome messages management	201
G.2	Local or remote (visual) DTAM without DTAM number	202
G.2.1	DTAM incoming/Welcome messages management	202
G.3	DTAM message deletion via Delete entry	204
Annex H (normative):	Editable fields.....	205
Annex I (informative):	Use cases for concurrent access to lists	210
I.0	General	210
I.1	Use case 1 - Indices misinterpreted.....	210
I.1.0	General	210
I.1.1	Use case 1a - Read entries with pending notification	210
I.1.2	Use case 1b - Read entries crosses notification	211
I.2	Use case 2 - Position indicators misinterpreted.....	212
I.2.0	General	212
I.2.1	Use case 2a - Delete entry (by disturbed party) with pending notifications	212
I.2.2	Use case 2b - Delete entry crosses notification	215
I.2.3	Use case 2c - Save entry (by disturbed party) with pending notifications.....	215
Annex J (informative):	Bibliography.....	218
History		219

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables 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 (<https://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.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

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

The present document is based on ETSI EN 300 175 parts 1 to 8 ([1], [2], [3], [4], [5], [6], [7] and [8]) and ETSI EN 300 444 [11]. General attachment requirements and speech attachment requirements are based on ETSI EN 301 406 [10] (replacing ETSI TBR 006 [i.2]) and ETSI EN 300 176-2 [9] (previously covered by ETSI TBR 010 [i.3]). Further details of the DECT system may be found in ETSI TR 101 178 [i.1].

The present document has been developed in accordance to the rules of documenting a profile specification as described in ISO/IEC 9646-6 [i.12].

The information in the present document is believed to be correct at the time of publication. However, DECT standardization is a rapidly changing area, and it is possible that some of the information contained in the present document may become outdated or incomplete within relatively short time-scales.

The present document is part 5 of a multi-part deliverable covering the New Generation DECT as identified below:

- Part 1: "Wideband speech";
- Part 2: "Support of transparent IP packet data";
- Part 3: "Extended wideband speech services";
- Part 4: "Light Data Services; Software Update Over The Air (SUOTA), content downloading and HTTP based applications";
- Part 5: "Additional feature set nr. 1 for extended wideband speech services".**

The present document is defined as an extension of ETSI TS 102 527-3 [18] so the numbering and order of figures and tables in the present document is aligned with the corresponding numbering and order of figures and tables in ETSI TS 102 527-3 [18].

Modal verbs terminology

In the present document "shall", "shall not", "should", "should not", "may", "need not", "will", "will not", "can" and "cannot" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"must" and "must not" are **NOT** allowed in ETSI deliverables except when used in direct citation.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/40f353b6-2296-492e-9093-2db729b69057/etsi-ts-102-527-5-v1.3.1-2019-08>

1 Scope

The present document specifies a set of functionalities of the New Generation DECT.

The New Generation DECT provides the following basic new functionalities:

- Wideband speech service (part 1).
- Packet-mode data service supporting Internet Protocol with efficient spectrum usage and [18] high data rates (part 2).
- Extended wideband speech services (part 3).
- Light Data Services: Software Update Over The Air (SUOTA), Content Downloading and HTTP based applications (part 4).
- Additional feature set nr. 1 for extended wideband speech services (part 5).

All New Generation DECT devices will offer at least one or several of these services.

The present document describes the part 5: Additional feature set nr. 1 for extended wideband speech services.

- For the description of the wideband speech service, see ETSI TS 102 527-1 [17].
- For the description of the support of transparent IP packet data, see ETSI TS 102 527-2 [i.4].
- For the description of the Extended wideband speech services, see ETSI TS 102 527-3 [18].
- For the description of the Light Data Services: Software Update Over The Air (SUOTA), Content Downloading and HTTP based applications, see ETSI TS 102 527-4 [i.5].

Part 5 ("Additional feature set nr. 1 for extended wideband speech services") is defined as an extension of part 3 ("Extended wideband speech services" [18]) which is itself an extension of part 1 ("Wideband speech service" [17]). Consequently, this means that all devices compliant to the present document will also implement at least all mandatory features and may implement the optional features defined in part 3 and part 1. In addition to that, the present document defines additional mandatory or optional features.

Part 1, and therefore also part 3 and part 5, are defined as extensions of the "Generic Access Profile (GAP)" [11]. All DECT devices offering Wideband speech services (part 1, or part 1 plus part 3, or part 1 plus part 3 plus part 5) are also compliant with the "Generic Access Profile (GAP)" [11], and offer the DECT standard 32 kbit/s voice service according to GAP [11].

All DECT devices claiming to be compliant with this Application Profile will offer at least the basic services defined as mandatory. In addition to that, optional features can be implemented to offer additional DECT services.

The aim of the present document is to guarantee a sufficient level of interoperability and to provide an easy route for development of DECT wideband speech applications, with the features of the present document being a common fall-back option available in all compliant to this profile equipment.

2 References

2.1 Normative 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 referenced document (including any amendments) applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://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.

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 300 176-2: "Digital Enhanced Cordless Telecommunications (DECT); Test specification; Part 2: Audio and speech".
- [10] ETSI EN 301 406: "Digital Enhanced Cordless Telecommunications (DECT); Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".
- [11] ETSI EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [12] Recommendation ITU-T G.726 (1990): "40, 32, 24, 16 kbit/s Adaptive Differential Pulse Code Modulation (ADPCM)".
- [13] Recommendation ITU-T G.711 (1988): "Pulse code modulation (PCM) of voice frequencies".
- [14] Recommendation ITU-T G.722 (2012): "7 kHz audio-coding within 64 kbit/s".
- [15] Recommendation ITU-T G.729.1 (2006): "G.729-based embedded variable bit-rate coder: An 8-32 kbit/s scalable wideband coder bitstream interoperable with G.729".
- [16] Void.
- [17] ETSI TS 102 527-1: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; part 1: Wideband Speech".

- [18] ETSI TS 102 527-3: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; part 3: Extended Wideband Speech Services".
- [19] ETSI TS 123 038 (V11.0.0) (2012-10): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; Alphabets and language-specific information (3GPP TS 23.038 version 11.0.0 Release 11)".

2.2 Informative 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 referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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 TR 101 178: "Digital Enhanced Cordless Telecommunications (DECT); A high Level Guide to the DECT Standardization".
- [i.2] ETSI TBR 006: "Digital Enhanced Cordless Telecommunications (DECT); General terminal attachment requirements".
- [i.3] ETSI TBR 010: "Digital Enhanced Cordless Telecommunications (DECT); General Terminal Attachment Requirements; Telephony Applications".
- [i.4] ETSI TS 102 527-2: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; part 2: Support of transparent IP packet data".
- [i.5] ETSI TS 102 527-4: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; part 4: Light Data Services; Software Update Over The Air (SUOTA), content downloading and HTTP based applications".
- [i.6] Recommendation ITU-T P.311 (2005): "Transmission characteristics for wideband (150-7000 Hz) digital handset telephones".
- [i.7] Void.
- [i.8] Recommendation ITU-T Q.23 (1988): "Technical features of push-button telephone sets".
- [i.9] Recommendation ITU-T Q.24 (1988): "Multifrequency push-button signal reception".
- [i.10] Recommendation ITU-T E.180: "Technical characteristics of tones for the telephone service".
- [i.11] Recommendation ITU-T E.180 Supplement 2 (1994): "Various tones used in national networks".
- [i.12] ISO/IEC 9646-6: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 6: Protocol profile test specification".
- [i.13] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [i.14] ETSI TS 123 040 (V11.3.0) (2012-10): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); Technical realization of the Short Message Service (SMS) (3GPP TS 23.040 version 11.3.0 Release 11)".
- [i.15] ETSI ES 201 912 (V1.2.1) (2004-08): "Access and Terminals (AT); Short Message Service (SMS) for PSTN/ISDN; Short Message Communication between a fixed network Short Message Terminal Equipment and a Short Message Service Centre".
- [i.16] Recommendation ITU-T P.10: "Vocabulary for performance, quality of service and quality of experience".