

STN	Elektromagnetická kompatibilita a záležitosti rádiového spektra (ERM). Základňové stanice (BS), opakovače a používateľské zariadenia (UE) bunkových sietí tretej generácie IMT-2000. Časť 10: Harmonizovaná norma na IMT-2000 - FDMA/TDMA (DECT) vzťahujúca sa na základné požiadavky podľa článku 3.2 smernice 2014/53/EÚ.	STN EN 301 908-10 V4.2.1 87 1908
------------	--	--

Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 10: Harmonised Standard for IMT-2000, FDMA/TDMA (DECT) covering the essential requirements of article 3.2 of the Directive 2014/53/EU

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 03/17

Obsahuje: EN 301 908-10 V4.2.1:2015

124398

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

ETSI EN 301 908-10 V4.2.1 (2015-10)



**Electromagnetic compatibility and
Radio spectrum Matters (ERM);
Base Stations (BS), Repeaters and User Equipment (UE) for
IMT-2000 Third-Generation cellular networks;
Part 10: Harmonised Standard for IMT-2000,
FDMA/TDMA (DECT) covering the essential requirements
of article 3.2 of the Directive 2014/53/EU**

Reference

REN/DECT-000302

KeywordsDECT, digital, generic, IMT-2000, radio,
regulation, testing**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 only prevailing document is the print of the Portable Document Format (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:

<https://portal.etsi.org/People/CommitteeSupportStaff.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.

© European Telecommunications Standards Institute 2015.

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
Modal verbs terminology.....	11
1 Scope	12
2 References	12
2.1 Normative references	12
2.2 Informative references.....	13
3 Definitions, symbols and abbreviations	14
3.1 Definitions.....	14
3.2 Symbols.....	16
3.3 Abbreviations	17
4 Technical requirements specifications	18
4.1 Environmental profile.....	18
4.2 Overview	18
4.2.0 General.....	18
4.2.1 Test suites	18
4.2.2 Test groups.....	18
4.2.3 Test cases	19
4.3 Applicant's declaration	19
4.4 Applicability of test suites.....	19
4.4.1 Introduction.....	19
4.4.2 Equipment that includes only a DECT RF receiver.....	19
4.4.3 Equipment that includes a radio transmitter	19
4.4.4 CTAs.....	20
4.4.5 Equipment with combined FT and PT functionality.....	20
4.4.5.1 Introduction.....	20
4.4.5.2 Wireless Relay Station	20
4.4.5.3 Direct PP to PP communication	20
4.4.5.4 Distributed communications	20
4.4.6 Equipment that is capable of using higher level modulation	20
4.4.7 Dual mode handsets	21
4.5 Conformance requirements	21
4.5.1 General.....	21
4.5.2 Accuracy and stability of RF carriers	21
4.5.2.1 Definition of nominal position of RF carriers	21
4.5.2.2 Limits	21
4.5.2.3 Conformance.....	21
4.5.3 Accuracy and stability of timing parameters	21
4.5.3.0 General	21
4.5.3.1 Definitions.....	22
4.5.3.1.1 Slot structure.....	22
4.5.3.1.2 Definition of the position of p0	22
4.5.3.2 Limits	22
4.5.3.2.1 Reference timer accuracy and stability.....	22
4.5.3.2.2 RFP transmission jitter	22
4.5.3.2.3 PP reference timer synchronization.....	22
4.5.3.3 Conformance.....	23
4.5.4 Transmission burst.....	23
4.5.4.1 Definitions.....	23
4.5.4.1.1 Introduction	23
4.5.4.1.2 Physical packets.....	23
4.5.4.1.3 Transmitted power.....	23
4.5.4.1.4 Normal Transmitted Power (NTP)	23
4.5.4.1.5 Transmitter attack time.....	23
4.5.4.1.6 Transmitter release time	23

4.5.4.1.7	Minimum power	23
4.5.4.1.8	Maximum power	24
4.5.4.1.9	Maintenance of transmission after packet end.....	24
4.5.4.1.10	Transmitter idle power output	24
4.5.4.2	Limits	24
4.5.4.2.1	Transmitter attack time.....	24
4.5.4.2.2	Transmitter release time	24
4.5.4.2.3	Minimum power	24
4.5.4.2.4	Maximum power	24
4.5.4.2.5	Maintenance of transmission after packet end.....	24
4.5.4.2.6	Transmitter idle power output	24
4.5.4.3	Conformance.....	24
4.5.5	Transmitted power	24
4.5.5.1	Definitions.....	24
4.5.5.1.1	PP and RFP with an integral antenna	24
4.5.5.1.2	PP and RFP with external connections for all antennas	25
4.5.5.1.3	PP and RFP with both integral and external antennas	25
4.5.5.2	Limits	25
4.5.5.3	Conformance.....	25
4.5.6	RF carrier modulation.....	25
4.5.6.1	Definition	25
4.5.6.2	Limits	25
4.5.6.3	Conformance.....	26
4.5.7	Unwanted RF power radiation.....	26
4.5.7.1	General	26
4.5.7.2	Emissions due to modulation	26
4.5.7.2.1	Definition.....	26
4.5.7.2.2	Limits	26
4.5.7.2.3	Conformance	26
4.5.7.3	Emissions due to transmitter transients.....	26
4.5.7.3.1	Definition.....	26
4.5.7.3.2	Limits	26
4.5.7.3.3	Conformance	27
4.5.7.4	Emissions due to intermodulation	27
4.5.7.4.1	Definition.....	27
4.5.7.4.2	Limits	27
4.5.7.4.3	Conformance	27
4.5.7.5	Spurious emissions when allocated a transmit channel.....	27
4.5.7.5.1	Definition.....	27
4.5.7.5.2	Limits	27
4.5.7.5.3	Conformance	27
4.5.8	Radio receiver testing	28
4.5.8.1	Radio receiver sensitivity.....	28
4.5.8.1.1	Definition.....	28
4.5.8.1.2	Limits	28
4.5.8.1.3	Conformance	28
4.5.8.2	Radio receiver reference BER and FER.....	28
4.5.8.2.1	Definition.....	28
4.5.8.2.2	Limits	28
4.5.8.2.3	Conformance	28
4.5.8.3	Radio receiver interference performance	28
4.5.8.3.1	Definition.....	28
4.5.8.3.2	Limits	28
4.5.8.3.3	Conformance	29
4.5.8.4	Radio receiver blocking case 1: owing to signals occurring at the same time but on other frequencies	29
4.5.8.4.1	Definition.....	29
4.5.8.4.2	Limits	29
4.5.8.4.3	Conformance	29
4.5.8.5	Radio receiver blocking case 2: owing to signals occurring at a different time	29
4.5.8.5.1	Definition.....	29
4.5.8.5.2	Limits	30

4.5.8.5.3	Conformance	30
4.5.8.6	Receiver intermodulation performance	30
4.5.8.6.1	Definition.....	30
4.5.8.6.2	Limits	30
4.5.8.6.3	Conformance	30
4.5.8.7	Spurious emissions when the PP has no allocated transmit channel	30
4.5.8.7.1	Definition.....	30
4.5.8.7.2	Limits	30
4.5.8.7.3	Conformance	30
4.5.9	Channel access.....	31
4.5.9.1	Channel selection	31
4.5.9.2	Channel confirmation.....	31
4.5.9.2.1	For the PT	31
4.5.9.2.2	For the FT	31
4.5.9.3	Channel release	31
4.5.9.4	General	32
4.5.9.5	Channel selection and confirmation for DECT ULE	32
4.5.9.5.1	General	32
4.5.9.5.2	For the PT	32
4.5.9.5.3	For the FT	32
4.5.10	WRS testing.....	32
4.5.10.1	General requirements	32
4.5.10.2	Testing as a PP	32
4.5.10.3	Testing as an RFP	33
4.5.10.4	Additional requirements.....	33
4.5.10.5	Conformance.....	37
4.5.11	Requirements for PPs with direct PP to PP communication mode	37
4.5.11.1	General requirements	37
4.5.11.2	Setting the EUT in direct communications mode.....	37
4.5.11.3	When the EUT has not initiated a call.....	37
4.5.11.4	When the EUT initiates a call	38
4.5.11.5	Conformance	38
4.5.12	Distributed communications	38
4.5.12.1	General requirements	38
4.5.12.2	Testing as a PP	38
4.5.12.3	Testing as an RFP	39
4.5.12.4	Conformance.....	39
4.5.13	Higher level modulation options.....	39
4.5.13.1	Requirements	39
4.5.13.2	Conformance.....	40
5	Testing for compliance with technical requirements.....	40
5.1	General test requirements	40
5.1.1	Test philosophy.....	40
5.1.2	Standard position	41
5.1.3	Test antenna of the LT	41
5.1.4	Substitution antenna.....	42
5.1.5	Test fixture	42
5.1.5.1	Description	42
5.1.5.2	Calibration of the test fixture for the measurement of transmitter characteristics.....	42
5.1.5.3	Calibration of the test fixture for the measurement of receiver characteristics	43
5.1.5.4	Mode of use.....	43
5.1.6	Equipment with a temporary or internal permanent antenna connector.....	44
5.1.6.1	General	44
5.1.6.2	Equipment with a temporary antenna connector	44
5.1.7	Lower Tester (LT)	44
5.1.7.1	Description	44
5.1.7.2	Connections between the EUT and the LT	45
5.1.7.3	Functions and abilities.....	45
5.1.7.4	Signal generation uncertainty.....	45
5.1.7.5	Modulated DECT-like carrier	46
5.1.7.6	CW interferers.....	46

5.1.7.7	DECT RF signal.....	46
5.1.7.8	Test modulation signals.....	46
5.1.8	Upper Tester (UT)	46
5.1.8.1	Description of the UT.....	46
5.1.8.2	The test standby mode.....	46
5.1.8.3	Test messages.....	47
5.1.8.4	Dummy setting when EUT is a RFP and it is in Test Standby Mode (TSM).....	47
5.1.9	Description of the Lower Tester FT and PT	47
5.1.10	General test methods.....	47
5.1.10.1	General	47
5.1.10.2	Sampling the RF signal	48
5.1.10.2.1	Introduction	48
5.1.10.2.2	Sampling method.....	48
5.1.10.3	Determining the reference position	48
5.1.10.3.0	General	48
5.1.10.3.1	Case 1: EUTs that cannot transmit	48
5.1.10.3.2	Case 2: EUTs that can transmit	48
5.1.10.4	Bit error rate (BER) and Frame Error Ratio (FER) measurements	48
5.1.11	Test setup	49
5.1.11.1	General	49
5.1.11.2	Test setup 1	49
5.1.11.3	Test setup 2	49
5.1.11.4	Test setup 3	50
5.1.11.5	Test setup 4	50
5.1.11.6	Test setup 5	50
5.1.12	Test arrangements for intermodulation measurements	51
5.1.12.1	PT to PT arrangement	51
5.1.12.2	FT to FT arrangement	51
5.1.12.3	FT to PT arrangement	52
5.1.13	Test conditions, power supply and ambient temperatures	52
5.1.13.1	General	52
5.1.13.2	Nominal test conditions.....	53
5.1.13.3	Extreme test conditions	53
5.1.13.4	Test power source - general requirements.....	54
5.1.13.5	Nominal test power source.....	54
5.1.13.5.1	Mains voltage	54
5.1.13.5.2	Regulated lead acid battery power sources.....	54
5.1.13.5.3	Nickel cadmium battery.....	54
5.1.13.5.4	Other power sources	54
5.1.13.6	Extreme test power source	55
5.1.13.6.1	Mains voltage	55
5.1.13.6.2	Regulated lead acid battery power sources.....	55
5.1.13.6.3	Nickel cadmium battery.....	55
5.1.13.6.4	Other power sources	55
5.1.13.7	Testing of host connected equipment and plug-in cards	55
5.1.13.7.1	Approaches	55
5.1.13.7.2	Alternative A: composite equipment.....	55
5.1.13.7.3	Alternative B: use of a test jig and three hosts	55
5.2	Interpretation of the measurement results	56
5.3	Radio test suites.....	57
5.3.1	General.....	57
5.3.2	Accuracy and stability of RF carriers	57
5.3.2.1	Test environment.....	57
5.3.2.2	Method of measurement.....	57
5.3.2.3	Verdict criteria when the EUT is a RFP.....	58
5.3.2.4	Verdict criteria when the EUT is a PP	58
5.3.3	Accuracy and stability of timing parameters	58
5.3.3.1	Measurement of packet timing jitter	58
5.3.3.1.1	Test environment.....	58
5.3.3.1.2	Method of measurement	58
5.3.3.1.3	Verdict criteria.....	59
5.3.3.2	Measurement of the reference timing accuracy of a RFP	59

5.3.3.2.1	Test environment	59
5.3.3.2.2	Method of measurement	59
5.3.3.2.3	Verdict criteria	59
5.3.3.3	Measurement of packet transmission accuracy of a PP	60
5.3.3.3.1	Test environment	60
5.3.3.3.2	Method of measurement	60
5.3.3.3.3	Verdict criteria	60
5.3.4	Transmission burst	61
5.3.4.1	Test environment	61
5.3.4.2	Method of measurement	61
5.3.4.3	Verdict criteria	61
5.3.5	Transmitted power	62
5.3.5.1	PP and RFP with an integral antenna	62
5.3.5.1.1	Test environment	62
5.3.5.1.2	Method of measurement	62
5.3.5.1.3	Verdict criteria for all EUTs	63
5.3.5.2	PP and RFP with external antenna connection(s)	63
5.3.5.2.1	Test environment	63
5.3.5.2.2	Method of measurement	63
5.3.5.2.3	Verdict criteria for all EUTs	63
5.3.6	RF carrier modulation	64
5.3.6.1	Test environment	64
5.3.6.2	Method of measurement, parts 1 and 2	64
5.3.6.2.1	Introduction	64
5.3.6.2.2	Part 1	64
5.3.6.2.3	Part 2	64
5.3.6.3	Method of measurement, Parts 3 and 4	65
5.3.6.3.1	General	65
5.3.6.3.2	Part 3	65
5.3.6.3.3	Part 4	65
5.3.6.4	Verdict criteria for Part 1	66
5.3.6.5	Verdict criteria for Part 2	66
5.3.6.6	Verdict criteria for Part 3	66
5.3.6.7	Verdict criteria for Part 4	66
5.3.7	Unwanted RF power radiation	67
5.3.7.1	General test conditions	67
5.3.7.2	Emissions due to modulation	67
5.3.7.2.1	Test environment	67
5.3.7.2.2	Method of measurement	68
5.3.7.2.3	Verdict criteria	69
5.3.7.3	Emissions due to transmitter transients	69
5.3.7.3.1	Test environment	69
5.3.7.3.2	Method of measurement	69
5.3.7.3.3	Verdict criteria	70
5.3.7.4	Emissions due to intermodulation	70
5.3.7.4.1	Test environment	70
5.3.7.4.2	Method of measurement	70
5.3.7.4.3	Verdict criteria	71
5.3.7.5	Spurious emissions when allocated a transmit channel	71
5.3.7.5.1	Radiated emissions	71
5.3.7.5.2	Conducted spurious emissions when the EUT has a permanent external antenna connector	72
5.3.8	Radio receiver testing	73
5.3.8.1	Radio receiver sensitivity	73
5.3.8.1.1	Test environment	73
5.3.8.1.2	Method of measurement	73
5.3.8.1.3	Verdict criteria	73
5.3.8.2	Radio receiver reference BER and FER	73
5.3.8.2.1	Test environment	73
5.3.8.2.2	Method of measurement	74
5.3.8.2.3	Verdict criteria	74
5.3.8.3	Radio receiver interference performance	74
5.3.8.3.1	Test environment	74

5.3.8.3.2	Method of measurement	74
5.3.8.3.3	Verdict criteria	75
5.3.8.4	Radio receiver blocking case 1: owing to signals occurring at the same time but on other frequencies	75
5.3.8.4.1	Test environment	75
5.3.8.4.2	Method of measurement	75
5.3.8.4.3	Verdict criteria	76
5.3.8.5	Radio receiver blocking case 2: owing to signals occurring at a different time	76
5.3.8.5.1	Test environment	76
5.3.8.5.2	Method of measurement	77
5.3.8.5.3	Verdict criteria	77
5.3.8.6	Receiver intermodulation performance	77
5.3.8.6.1	Test environment	77
5.3.8.6.2	Method of measurement	77
5.3.8.6.3	Verdict criteria	78
5.3.8.7	Spurious emissions when the PP has no allocated transmit channel	78
5.3.8.7.1	Test environment	78
5.3.8.7.2	Method of measurement	78
5.3.8.7.3	Verdict criteria (outside the DECT band)	78
5.3.8.7.4	Verdict criteria (inside the DECT band)	79
5.3.9	Channel access	79
5.3.10	WRS testing	79
5.3.10.1	General	79
5.3.10.2	Testing as a PP	79
5.3.10.3	Testing as an RFP	79
5.3.10.4	Additional requirements	80
5.3.11	Requirements for PPs with direct PP to PP communication mode	80
5.3.11.1	General	80
5.3.11.2	Setting the EUT in direct communications mode	80
5.3.11.3	When the EUT has not initiated a call	80
5.3.11.4	When the EUT initiates a call	81
5.3.11.5	Applicants declarations	81
5.3.12	Distributed Communications	81
5.3.12.1	General	81
5.3.12.2	Testing as a PP	82
5.3.12.3	Testing as an RFP	82
5.3.12.4	Applicants declaration	82
5.3.13	Higher level modulation options	82
5.3.13.1	General	82
5.3.13.2	Activation of higher level modulations when EUT is in Test Standby Mode	83
5.3.13.3	Applicants declaration	83

Annex A (normative):	Relationship between the present document and the essential requirements of Directive 2014/53/EU	84
-----------------------------	---	-----------

Annex B (normative):	Procedures for test fixture calibration	86
-----------------------------	--	-----------

B.1	Calibration of test fixture for receiver measurements	86
B.1.1	Procedure	86
B.1.2	Method of measurement	86

Annex C (normative):	Measurement of BER and FER	88
-----------------------------	---	-----------

Annex D (informative):	Procedures for the measurement of synchronization loss at the EUT by the LT	89
-------------------------------	--	-----------

D.1	Description	89
-----	-------------------	----

D.2	Method	89
-----	--------------	----

Annex E (informative):	DECT carrier numbers and carrier positions in the range 1 880 MHz to 2 025 MHz	90
-------------------------------	---	-----------

E.1	Introduction	90
E.2	1 880 MHz to 1 978 MHz and 2 010 MHz to 2 025 MHz RF band 00001.....	91
E.3	1 880 MHz to 1 925 MHz and 2 010 MHz to 2 025 MHz RF band 00010.....	92
Annex F (informative):	Bibliography.....	93
History		94

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

The present document is part 10 of a multi-part deliverable covering the Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks, as identified below:

- Part 1: "Harmonized EN for IMT-2000, introduction and common requirements, covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 2: "Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) User Equipment (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 3: "Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 4: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 5: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 6: "Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 7: "Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 8: "Harmonized EN for IMT-2000, TDMA Single-Carrier (UWC 136) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 9: "Harmonized EN for IMT-2000, TDMA Single-Carrier (UWC 136) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 10: "Harmonised Standard for IMT-2000, FDMA/TDMA (DECT) covering the essential requirements of article 3.2 of the Directive 2014/53/EU";**
- Part 11: "Harmonized EN for IMT-2000, CDMA Direct Spread (UTRA FDD) (Repeaters) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 12: "Harmonized EN for IMT-2000, CDMA Multi-Carrier (cdma2000) (Repeaters) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 13: "Harmonized EN for IMT-2000, Evolved Universal Terrestrial Radio Access (E-UTRA) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 14: "Harmonized EN for IMT-2000, Evolved Universal Terrestrial Radio Access (E-UTRA) (BS) covering essential requirements of article 3.2 of the R&TTE Directive";

- Part 15: "Harmonized EN for IMT-2000, Evolved Universal Terrestrial Radio Access (E-UTRA) (Repeater) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 16: "Harmonized EN for IMT-2000, Evolved CDMA Multi-Carrier Ultra Mobile Broadband (UMB) (UE) covering essential requirements of article 3.2 of the R&TTE Directive";
- Part 17: "Harmonized EN for IMT-2000, Evolved CDMA Multi-Carrier Ultra Mobile Broadband (UMB) (BS) covering essential requirements of article 3.2 of the R&TTE Directive".
- Part 18: "Harmonized EN for IMT-2000, E-UTRA, UTRA and GSM/EDGE Multi-Standard Radio (MSR) Base Station (BS), covering the essential requirements of article 3.2 of the R&TTE Directive";
- Part 19: "Harmonized EN for IMT-2000, OFDMA TDD WMAN (Mobile WiMAX) TDD User Equipment (UE), covering the essential requirements of article 3.2 of the R&TTE Directive";
- Part 20: "Harmonized EN for IMT-2000, OFDMA TDD WMAN (Mobile WiMAX) TDD Base Stations (BS), covering the essential requirements of article 3.2 of the R&TTE Directive";
- Part 21: "Harmonized EN for IMT-2000, OFDMA TDD WMAN (Mobile WiMAX) FDD User Equipment (UE), covering the essential requirements of article 3.2 of the R&TTE Directive";
- Part 22: "Harmonized EN for IMT-2000, OFDMA TDD WMAN (Mobile WiMAX) FDD Base Stations (BS), covering the essential requirements of article 3.2 of the R&TTE Directive";

National transposition dates	
Date of adoption of this EN:	12 October 2015
Date of latest announcement of this EN (doa):	31 January 2016
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 July 2016
Date of withdrawal of any conflicting National Standard (dow):	31 July 2017

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.

1 Scope

The present document applies to the following equipment types for IMT-FT. IMT-FT is the Digital Enhanced Cordless Telecommunications (DECT) system being a member of the ITU IMT-2000 family:

- a) Fixed Part (FP);
- b) Portable Part (PP);
- c) Cordless Terminal Adapter (CTA);
- d) Wireless Relay Station (WRS) (FP and PP combined);
- e) Hybrid Part (HyP) (a PP with capability to act as a FP to provide PP to PP communication).

These radio equipment types are capable of operating in all or any part of the frequency bands given in table 1.

Table 1: Radiocommunications service frequency bands

	Radiocommunications service frequency bands
Transmit	1 900 MHz to 1 980 MHz
Receive	1 900 MHz to 1 980 MHz
Transmit	2 010 MHz to 2 025 MHz
Receive	2 010 MHz to 2 025 MHz

The IMT-FT (DECT) service frequency bands for transmitting and receiving for all elements are the parts of the European UMTS spectrum applicable for TDD operation, 1 900 MHz to 1 980 MHz and 2 010 MHz to 2 025 MHz, (see ERC/DEC(99)25 [8] and ERC/DEC(00)01 [9]).

NOTE: IMT-FT equipment may have a second mode for providing operation also in the DECT band 1 880 MHz to 1 900 MHz. Application of DECT in the band 1 880 MHz to 1 900 MHz is covered by ETSI EN 301 406 [i.7].

Details of the DECT Common Interface may be found in ETSI EN 300 175-1 [i.12], ETSI EN 300 175 parts 2 to 3 [1] to [2], ETSI EN 300 175-4 [i.i.13], ETSI EN 300 175 parts 5 to 6 [3] to [4], and ETSI EN 300 175 parts 7 to 8 [i.14] to [i.15]. Further details of the DECT system may be found in ETSI TR 101 178 [i.1] and ETSI ETR 043 [i.2]. Information about ULE may be found in ETSI TS 102 939-1 [i.16] and ETSI TS 102 939-2 [i.17].

The present document contains requirements to demonstrate that radio equipment both effectively uses and supports the efficient use of radio spectrum in order to avoid harmful interference.

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 <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.

The following referenced documents are necessary for the application of the present document.

- [1] ETSI EN 300 175-2 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 2: Physical layer (PHL)".
- [2] ETSI EN 300 175-3 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 3: Medium Access Control (MAC) Layer".

- [3] ETSI EN 300 175-5 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 5: Network (NWK) layer".
- [4] ETSI EN 300 175-6 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 6: Identities and addressing".
- [5] Void.
- [6] ETSI EN 300 700 (V1.2.1) (09-2000): "Digital Enhanced Cordless Telecommunications (DECT); Wireless Relay Station (WRS)".
- [7] Recommendation ITU-T O.153 (10/1992): "Basic parameters for the measurement of error performance at bit rates below the primary rate".
- [8] ERC/DEC(99)25: "ERC Decision of 29 November 1999 on the harmonised utilisation of spectrum for terrestrial Universal Mobile Telecommunications System (UMTS) operating within the bands 1900 - 1980 MHz, 2100 - 2250 MHz and 2110 - 2170 MHz".

NOTE: Available at <http://www.ero-docdb.dk/docs/doc98/official/pdf/Dec9925.pdf>.

- [9] ERC/DEC(00)01: "ERC Decision of 28 March 2000 extending ERC/DEC/(97)07 on the frequency bands for introduction of terrestrial Universal Mobile Telecommunications System (UMTS)".

NOTE: Available at <http://www.ero-docdb.dk/docs/doc98/official/pdf/Dec0001.pdf>.

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 ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".
- [i.3] Void.
- [i.4] Void.
- [i.5] Void.
- [i.6] Void.
- [i.7] ETSI EN 301 406 (V1.4.1) (03-2001): "Digital Enhanced Cordless Telecommunications (DECT); Harmonized EN for Digital Enhanced Cordless Telecommunications (DECT) covering essential requirements under article 3.2 of the R&TTE Directive; Generic radio".
- [i.8] Void.
- [i.9] Void.
- [i.10] ETSI TR 100 028: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [i.11] ISO/IEC 9646-1 (1994): "Information technology; Open Systems Interconnection; Conformance testing methodology and framework; Part 1: General concepts".

- [i.12] ETSI EN 300 175-1 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 1: Overview".
 - [i.13] ETSI EN 300 175-4 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 4: Data Link Control (DLC) Layer".
 - [i.14] ETSI EN 300 175-7 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 7: Security features".
 - [i.15] ETSI EN 300 175-8 (V2.2.1) (11-2008): "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Part 8: Speech and audio coding and transmission".
 - [i.16] ETSI TS 102 939-1: "Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 1: Home Automation Network (phase 1)".
 - [i.17] ETSI TS 102 939-2: "Digital Enhanced Cordless Telecommunications (DECT); Ultra Low Energy (ULE); Machine to Machine Communications; Part 2: Home Automation Network (phase 2)".
 - [i.18] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
-

koniec náhľadu – text ďalej pokračuje v platenej verzii STN