



**Digital Enhanced Cordless Telecommunications (DECT);
Common Interface (CI);
Part 1: Overview**

(<https://standards.iteh.ai>)
Document Preview

[ETSI EN 300 175-1 V2.9.1 \(2022-03\)](https://standards.iteh.ai/catalog/standards/sist/cd572085-33eb-4228-9d08-e16af04213fd/etsi-en-300-175-1-v2-9-1-2022-03)

<https://standards.iteh.ai/catalog/standards/sist/cd572085-33eb-4228-9d08-e16af04213fd/etsi-en-300-175-1-v2-9-1-2022-03>

Reference

REN/DECT-00351

Keywords

7 kHz, audio, broadband, codec, DECT, handsfree, IMT-2000, loudspeaking, mobility, narrowband, quality, radio, speech, TDD, TDMA, telephony, terminal

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 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

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/CommitteeSupportStaff.aspx>

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

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 2021.
All rights reserved.

Contents

Intellectual Property Rights	5
Foreword.....	5
Modal verbs terminology.....	6
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references.....	8
3 Definition of terms, symbols and abbreviations.....	9
3.1 Terms.....	9
3.2 Symbols.....	19
3.3 Abbreviations	20
4 Structure	26
4.0 General	26
4.1 Part 1: Overview.....	26
4.2 Part 2: Physical Layer (PHL)	26
4.3 Part 3: Medium Access Control (MAC) layer.....	26
4.4 Part 4: Data Link Control (DLC) layer.....	26
4.5 Part 5: Network (NWK) layer	26
4.6 Part 6: Identities and addressing.....	27
4.7 Part 7: Security features	27
4.8 Part 8: Speech and audio coding and transmission.....	27
5 The objectives of the CI standard.....	27
6 General description of the system	28
7 Description of the protocol architecture.....	30
7.1 General	30
7.2 The DECT layered structure.....	30
7.3 Physical Layer (PHL).....	31
7.4 MAC layer.....	31
7.5 DLC layer.....	31
7.6 Network (NWK) layer.....	31
7.7 Lower Layer Management Entity (LLME)	32
7.8 Interworking Units (IWU).....	32
8 Proprietary escapes within the CI.....	32
8.0 General	32
8.1 Primary escape routes.....	33
8.2 Secondary escape routes.....	33
9 Levels of conformance	34
10 Further development of the DECT standard	34
10.1 IMT-2000	34
10.2 The DECT Packet Radio Service (DPRS).....	34
10.3 DECT in international markets.....	34
10.3.0 General.....	34
10.3.1 United States of America	35
10.3.2 Japan	35
10.4 The New Generation DECT (NG-DECT).....	35
10.5 DECT Ultra Low Energy (ULE)	36
10.6 DECT Evolution.....	37
10.7 DECT-2020 NR.....	38
Annex A (informative): Bibliography	39

Annex B (informative):	Change history	40
History		41

iTeh Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI EN 300 175-1 V2.9.1 \(2022-03\)](https://standards.iteh.ai/catalog/standards/sist/cd572085-33eb-4228-9d08-e16af04213fd/etsi-en-300-175-1-v2-9-1-2022-03)

<https://standards.iteh.ai/catalog/standards/sist/cd572085-33eb-4228-9d08-e16af04213fd/etsi-en-300-175-1-v2-9-1-2022-03>

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, 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.

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.

Foreword

This draft European Standard (EN) has been produced by ETSI Technical Committee Digital Enhanced Cordless Telecommunications (DECT), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI standards EN Approval Procedure.

The present document is part 1 of a multi-part deliverable covering the Common Interface (CI) for the Digital Enhanced Cordless Telecommunications (DECT), as identified below:

- Part 1: "Overview";**
- Part 2: "Physical Layer (PHL)";
- Part 3: "Medium Access Control (MAC) layer";
- Part 4: "Data Link Control (DLC) layer";
- Part 5: "Network (NWK) layer";
- Part 6: "Identities and addressing";
- Part 7: "Security features";
- Part 8: "Speech and audio coding and transmission".

The following aspects of the present document are subject to controlled distribution:

- a) DECT identities, as defined in ETSI EN 300 175-6 [6];
- b) some DECT cryptographic algorithms.

The cryptographic algorithms subjected to controlled distribution specify the details of the DECT Standard Authentication Algorithm (DSAA) and the DECT Standard Cipher (DSC). The cryptographic algorithms DECT Standard Authentication Algorithm #2 (DSAA2) and DECT Standard Cipher #2 (DSC2) are not subjected to controlled distribution.

These aspects are distributed on an individual basis. Further information and details of the current distribution procedures can be obtained from the ETSI Secretariat at the address on the second page of the present document.

Further details of the DECT system may be found in ETSI TR 101 178 [i.4], ETSI ETR 043 [i.5] and ETSI TR 102 185 [i.6].

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	18 months after doa

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 Standards
(<https://standards.iteh.ai>)
Document Preview

[ETSI EN 300 175-1 V2.9.1 \(2022-03\)](#)

<https://standards.iteh.ai/catalog/standards/sist/cd572085-33eb-4228-9d08-e16af04213fd/etsi-en-300-175-1-v2-9-1-2022-03>

1 Scope

The present document gives an introduction and overview of the complete Digital Enhanced Cordless Telecommunications (DECT) Common Interface (CI).

The present document contains an abstract of the other parts of the DECT standard together with a general description of:

- the objectives of the present document;
- the DECT Common Interface;
- the protocol architecture of DECT.

The present document also provides an extensive vocabulary; in particular it contains the common definitions of all the technical terms used in different parts of the present document.

The present document includes New Generation DECT, a further development of the DECT standard introducing wideband speech, improved data services, new slot types and other technical enhancements.

The present document includes DECT Evolution.

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] | Void. |
| [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 (all parts): "Digital Enhanced Cordless Telecommunications (DECT); Test specification".
- [10] Recommendation ITU-R M.1457-15: "Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)".
- [11] ETSI EN 301 649: "Digital Enhanced Cordless Telecommunications (DECT); DECT Packet Radio Service (DPRS)".
- [12] ETSI TS 102 497: "Digital Enhanced Cordless Telecommunications (DECT); DECT in the 1 920 MHz to 1 930 MHz Unlicensed Personal Communications Services (UPCS) frequency band; Specific requirements".

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 EN 300 403-1: "Integrated Services Digital Network (ISDN); Digital Subscriber Signalling System No. one (DSS1) protocol; Signalling network layer for circuit-mode basic call control; Part 1: Protocol specification [ITU-T Recommendation Q.931 (1993), modified]".
- [i.2] Recommendation ITU-R SM.1046-2: "Definition of spectrum use and efficiency of a radio system".
- [i.3] Recommendation ITU-R M.816-1: "Framework for services supported on International Mobile Telecommunications-2000 (IMT-2000)".
- [i.4] ETSI TR 101 178: "Digital Enhanced Cordless Telecommunications (DECT); A High Level Guide to the DECT Standardization".
- [i.5] ETSI ETR 043: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Services and facilities requirements specification".
- [i.6] ETSI TR 102 185: "Digital Enhanced Cordless Telecommunications (DECT); Data Services Profile (DSP); Profile overview".
- [i.7] ETSI ETR 310: "Digital Enhanced Cordless Telecommunications (DECT); Traffic capacity and spectrum requirements for multi-system and multi-service DECT applications co-existing in a common frequency band".
- [i.8] ETSI TS 102 265: "Digital Enhanced Cordless Telecommunications (DECT); DECT access to IP networks".
- [i.9] Recommendation ITU-T P.311: "Transmission characteristics for wideband (150-7000 Hz) digital handset telephones".
- [i.10] ETSI TR 102 570: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Overview and Requirements".
- [i.11] ETSI TS 102 527-1: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband Speech".
- [i.12] ETSI TS 102 527-2: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 2: Support of transparent IP packet data".
- [i.13] ETSI TS 102 527-3: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services".

- [i.14] 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.15] ETSI TS 102 527-5: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 5: Additional feature set nr. 1 for extended wideband speech services".
- [i.16] Recommendation ITU-T V.42: "Error-correcting procedures for DCEs using asynchronous-to-synchronous conversion".
- [i.17] Recommendation ITU-T V.24: "List of definitions for interchange circuits between Data Terminal Equipment (DTE) and data circuit-terminating equipment (DCE)".
- [i.18] 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.19] 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.20] IEEE 802.11-2012™: "IEEE Standard for Information technology--Telecommunications and information exchange between systems Local and metropolitan area networks--Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications".
- [i.21] Recommendation ITU-T G.722 (2012): "7 kHz audio-coding within 64 kbit/s".
- [i.22] 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".
- [i.23] ISO/IEC 14496-3:2009: "Information technology -- Coding of audio-visual objects -- Part 3: Audio" (ISO/IEC JTC1/SC29/WG11 (MPEG)).
- [i.24] IETF RFC 3261: "SIP: Session Initiation Protocol".
- [i.25] Recommendation ITU-T H.323: "Packet-based multimedia communications systems".
- [i.26] ETSI TS 103 634: "Digital Enhanced Cordless Telecommunications (DECT); Low Complexity Communication Codec plus (LC3plus)".
- [i.27] ETSI TS 103 636-1: "DECT-2020 New Radio (NR); Part 1 : Overview; Release 1".

3 Definition of terms, symbols and abbreviations

3.1 Terms

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

Access Rights Class (ARC): type of access to a DECT network, such as public, residential or private

Access Rights Details (ARD): unique number within one ARC

Access Rights Identity (ARI): globally unique identity that shows the access rights related to a service provider

NOTE: PARI = Primary ARI;
SARI = Secondary ARI;
TARI = Tertiary ARI.

algorithm: mathematical process or function that transforms an input into an output

algorithm identifier: designator to show which algorithm is in use, so that the correct one may be chosen

antenna diversity: diversity implies that the Radio Fixed Part (RFP) for each bearer independently can select different antenna properties such as gain, polarization, coverage patterns and other features that may affect the practical coverage

NOTE: A typical example is space diversity, provided by two vertically polarized antennas separated by 10 cm to 20 cm.

asymmetric algorithm: See public key algorithm.

attach: process whereby a Portable Part (PP) within the coverage area of a Fixed Part (FP) to which it has access rights, notifies the FP that it is operative

authentication: corroboration that an entity is the one that is claimed

authentication of Fixed radio Termination (FT): process whereby the identity of an FT is verified to a DECT PT

authentication of Portable radio Termination (PT): process whereby a DECT PT is positively verified to be a legitimate user of a particular FP

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

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

bearer: See Medium Access Control (MAC) bearer or bearer service.

bearer handover: internal handover process provided by the MAC layer, whereby one MAC connection can modify its underlying bearers while maintaining the service provided to the Data Link Control (DLC) layer

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

broadcast: simplex point-to-multipoint mode of transmission

C-plane: control plane of the DECT protocol stacks, which contains all of the internal DECT protocol control, but may also include some external user information

call: all of the Network (NWK) layer processes involved in one NWK layer peer-to-peer association

cell: domain served by a single antenna(e) system (including a leaky feeder) of one FP

Central Control Fixed Part (CCFP): physical grouping that contains the central elements of a FP

centrex: implementation of a private telecommunication network exchange that is not located on the premises of the private network operator

Cipher Block Chaining Message Authentication Code (CBC-MAC): cryptographic technique for constructing a message authentication code from a block cipher

Cipher Key (CK): value that is used to determine the transformation of plaintext to ciphertext in a cryptographic algorithm

Cipher Key (CK) generation: process for generating cryptographic keys

ciphertext: output of a cryptographic algorithm

channel: See physical channel.

cluster: logical grouping of one or more cells between which bearer handover is possible

confidentiality: rendering information secret as ciphertext unless the capability is possessed to recover the plaintext from ciphertext

connection: See MAC connection.

connection handover: internal handover process provided by the DLC layer, whereby one set of DLC entities (C-plane and U-plane) can re-route data from one MAC connection to a second new MAC connection, while maintaining the service provided to the NWK layer

Connection Less mode (C/L): transmission mode that transfers one packet (one self-contained unit) of data from one source point to one (or more) destination points in a single phase

Connection Oriented mode (C/O): transmission mode that transfers data from one source point to one or more destination points using a protocol based on three phases:

- "Set-up";
- "Data transfer"; and
- "Release".

Cordless Radio Fixed Part (CRFP): Wireless Relay Station (WRS) that provides independent bearer control to a PT and FT for relayed connections

Counter with CBC-MAC (CCM): authenticated encryption algorithm designed to provide both authentication and confidentiality

countermeasure: device, instrument or procedure used to counteract or defend against a threat

coverage area: area over which reliable communication can be established and maintained

cryptography: secret writing

Data Encryption Standard (DES): United States Federal data encryption standard

Data Link Control (DLC): layer 2b of the DECT protocol stack

decipherment: rendering of ciphertext into plaintext

DECT NetWork (DNW): network that uses the DECT air interface to interconnect a local network to one or more portable applications

DECT Standard Authentication Algorithm (DSAA): algorithm used for authentication in DECT

DECT Standard Authentication Algorithm #2 (DSAA2): algorithm used for authentication in DECT

DECT Standard Cipher (DSC): algorithm used for data encryption in DECT

DECT Standard Cipher #2 (DSC2): algorithm used for data encryption in DECT

Default Cipher Key (DefCK): Derived Cipher Key (DCK) that is stored in both FP and PP to be used later by MAC to immediately encrypt with connection establishment

Derived Cipher Key (DCK): Cipher Key (CK) that is established as part of the procedure used to authenticate the PT

distributed communication: ability of a DECT terminal to provide means for or assist direct communication between any two terminals, members of a "closed" local DECT network

DLC broadband data link: link that can be associated with a logical MAC connection comprising a number of MAC (physical) connections

DLC broadcast: simplex "connectionless" mode of transmission from the DLC broadcast entity of one FT to the DLC broadcast entities in one or more PT

DLC data link (DLC link): association between two DLC layer entities

DLC frame: format used to structure all messages that are exchanged between DLC layer peer entities

double duplex bearer: use of two duplex bearers (see duplex bearer) which refer to the same MAC connection, sharing their simplex bearers (see simplex bearer) for the information flow

double-simplex bearer: use of two simplex bearers operating in the same direction on two physical channels

double slot: one 12th of a TDMA frame which is used to support one high capacity physical channel

down-link: transmission in the direction FT to PT

duplex bearer: use of two simplex bearers operating in opposite directions on two physical channels

encipherment: rendering of plaintext into ciphertext

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

expedited (messages, procedures, operations): MAC C/O operations (messages, procedures, operations) intended for ultra-fast setup and release of bearers, allowing in most cases reduction in the number of messages and early or late U-plane transmission compared to regular procedures

expedited connections: advanced connections able to use the expedited messages of the advanced connection control part 2 set and their associated procedures for bearer setup and release

extended MAC control messages: MAC messages of the B-field connection control set

external handover: process of switching a call in progress from one FP to another FP

Fast Encryption Algorithm (FEAL): particular encryption algorithm in the public domain

field: continuous region of data (i.e. adjacent bits) that jointly convey information

fixed geometry Portable Part (PP): PP in which the electro-acoustic transducers and their associated acoustic components are held in fixed relative positions and/or orientations during all on-line conditions and test conditions of the PP

Fixed Part (DECT Fixed Part) (FP): physical grouping that contains all of the elements in the DECT network between the local network and the DECT air interface

Fixed radio Termination (FT): logical group of functions that contains all of the DECT processes and procedures on the fixed side of the DECT air interface

flow control: mechanism that is used to regulate the flow of data between two peer entities

fragment: one of the Service Data Units (SDUs) that is produced by the process of fragmentation

fragmentation: process of dividing a Protocol Data Unit (PDU) into more than one SDU for delivery to a lower layer

frame: See TDMA frame or DLC frame.

full slot (slot): one 24th of a TDMA frame which is used to support one physical channel

fullband speech: voice service with a nominal pass-band wider than 50 - 14 000 Hz, usually understood to be 20 - 20 000 Hz

generic: generalized set or general purpose set, often in the sense of basic or ordinary

Generic Access Profile (GAP): standard in addition to the DECT CI that ensures interoperability between FPs and PPs from different manufacturers

geographically unique: two FPs with the same PARI, or respectively two RFPs with the same RFPI, cannot be reached or listened to at the same geographical position

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

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

guard space: nominal interval between the end of a radio transmission in a given slot and the start of a radio transmission in the next successive slot

half slot: one 48th of a TDMA frame which is used to support one physical channel

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

handset echo: echo, perceptible by the far-end user, resulting from the coupling between the receiving and sending directions of the handset, mostly due to acoustic coupling between transducers