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Technical Specification

**Digital Enhanced Cordless Telecommunications (DECT);
New Generation DECT;
Extended wideband speech services;
Profile Test Specification (PTS) and Test Case Library (TCL)**

Reference

RTS/DECT-NG271

Keywords

codec, DECT, GAP, IMT-2000, interoperability,
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Foreword

This Technical Specification (TS) 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], EN 300 444 [12], TS 102 527-1 [13] and TS 102 527-3 [14]. General attachment requirements and speech attachment requirements are based on EN 300 176-1 [9], EN 301 406 [11] (replacing TBR 006 [i.2]) and EN 300 176-2 [10] (previously covered by TBR 010 [i.3]). Further details of the DECT system may be found in TR 101 178 [i.1].

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a rapidly changing area, and it is possible that some of the information contained in the present document may become outdated or incomplete within relatively short time-scales.

All numbers and names used in examples are imaginary. Any similarities to actual persons, places or directory numbers are merely coincidental.

1 Scope

The present document contains the Profile Test Specification (PTS) and the Test Case Library (TCL) for "New Generation DECT; Part 3: Extended wideband speech" (TS 102 527-3 [14]). The present document covers both the Portable (PT) and the Fixed (FT) Radio terminations.

The Test Case Library (TCL) covers also some test cases for "DECT New Generation; Part 1: Wideband speech" (TS 102 527-1 [13]) and for the "Generic Access Profile" (EN 300 444 [12]). This is done because such test cases are mandatory or especially relevant for New Generation DECT part 3 (see TS 102 527-3 [14]), and are not covered by existing GAP test specifications.

Due to the ascending compatibility of DECT profiles, all New Generation DECT part 3 devices (see TS 102 527-3 [14]) are required to be also compliant with "DECT New Generation; Part 1: Wideband speech" (TS 102 527-1 [13]) and with the "Generic Access Profile" (GAP, EN 300 444 [12]). Annex D of the present document specifies the modifications to GAP test cases for requirements and tests that are optional in GAP test specifications (see note), but that become mandatory by the support of the corresponding GAP features in New Generation DECT Part 3.

NOTE: The industry de-facto standard practice for insuring the compliance to GAP [12] is the use of TBR 022 [i.4] amended by TBR 022/A1 [i.5], even when these two documents do not have any longer their initial regulatory signification. TBR 022 [i.4] relies on the GAP Profile Test Specification (EN 300 494 parts 1 [i.6] to 3 [i.8]) and on the DECT Test Case Library (EN 300 497 parts 1 [i.9] to 9 [i.17]). GAP test suite includes also the GAP Profile Implementation Conformance Statement (PICS) (EN 300 474 parts 1 [i.25] and 2 [i.26]) and the DECT Common Interface (CI) Profile Implementation Conformance Statement (PICS) (EN 300 476 parts 1 [i.18] to 7 [i.24]).

The objective of the present document is to provide a basis for approval tests of NG-DECT Part 3 equipment giving a high probability of air interface inter-operability between different manufacturer's DECT equipment.

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 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.

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".
- [12] ETSI EN 300 444: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP)".
- [13] ETSI TS 102 527-1: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 1: Wideband Speech".
- [14] ETSI TS 102 527-3: "Digital Enhanced Cordless Telecommunications (DECT); New Generation DECT; Part 3: Extended wideband speech services".

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 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 TBR 022: "Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications".
- [i.5] ETSI TBR 022/A1: Amendment to: "Radio Equipment and Systems (RES); Attachment requirements for terminal equipment for Digital Enhanced Cordless Telecommunications (DECT) Generic Access Profile (GAP) applications".
- [i.6] ETSI EN 300 494-1: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 1: Summary".
- [i.7] ETSI EN 300 494-2: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 2: Profile Specific Test Specification (PSTS) - Portable radio Termination (PT)".
- [i.8] ETSI EN 300 494-3: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile Test Specification (PTS); Part 3: Profile Specific Test Specification (PSTS) - Fixed radio Termination (FT)".
- [i.9] ETSI EN 300 497-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 1: Test Suite Structure (TSS) and Test Purposes (TP) for Medium Access Control (MAC) layer".

- [i.10] ETSI EN 300 497-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 2: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Portable radio Termination (PT)".
- [i.11] ETSI EN 300 497-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 3: Abstract Test Suite (ATS) for Medium Access Control (MAC) layer - Fixed radio Termination (FT)".
- [i.12] ETSI EN 300 497-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 4: Test Suite Structure (TSS) and Test Purposes (TP) - Data Link Control (DLC) layer".
- [i.13] ETSI EN 300 497-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 5: Abstract Test Suite (ATS) - Data Link Control (DLC) layer".
- [i.14] ETSI EN 300 497-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 6: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Portable radio Termination (PT)".
- [i.15] ETSI EN 300 497-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 7: Abstract Test Suite (ATS) for Network (NWK) layer - Portable radio Termination (PT)".
- [i.16] ETSI EN 300 497-8: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 8: Test Suite Structure (TSS) and Test Purposes (TP) - Network (NWK) layer - Fixed radio Termination (FT)".
- [i.17] ETSI EN 300 497-9: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Test Case Library (TCL); Part 9: Abstract Test Suite (ATS) for Network (NWK) layer - Fixed radio Termination (FT)".
- [i.18] ETSI EN 300 476-1: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 1: Network (NWK) layer - Portable radio Termination (PT)".
- [i.19] ETSI EN 300 476-2: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 2: Data Link Control (DLC) layer - Portable radio Termination (PT)".
- [i.20] ETSI EN 300 476-3: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 3: Medium Access Control (MAC) layer - Portable radio Termination (PT)".
- [i.21] ETSI EN 300 476-4: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 4: Network (NWK) layer - Fixed radio Termination (FT)".
- [i.22] ETSI EN 300 476-5: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 5: Data Link Control (DLC) layer - Fixed radio Termination (FT)".
- [i.23] ETSI EN 300 476-6: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 6: Medium Access Control (MAC) layer - Fixed radio Termination (FT)".
- [i.24] ETSI EN 300 476-7: "Digital Enhanced Cordless Telecommunications (DECT); Common Interface (CI); Protocol Implementation Conformance Statement (PICS) proforma; Part 7: Physical layer".
- [i.25] ETSI EN 300 474-1: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 1: Portable radio Termination (PT)".

- [i.26] ETSI EN 300 474-2: "Digital Enhanced Cordless Telecommunications (DECT); Generic Access Profile (GAP); Profile requirement list and profile specific Implementation Conformance Statement (ICS) proforma; Part 2: Fixed radio Termination (FT)".
- [i.27] Recommendation ITU-T P.311 (2005): "Transmission characteristics for wideband (150-7000 Hz) digital handset telephones".
- [i.28] ISO/IEC 9646-7: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TS 102 527-3 [14], TS 102 527-1 [13], EN 300 444 [12] and the following apply:

GAP (PP, FP, device or equipment): PP, FP or any of them compliant with EN 300 444 [12]

golden device: ideal example of a device used as reference device for compliance testing and against which later devices are tested and judged

NG-DECT Part 1 golden device: golden device, such as the one administered by the DECT Forum, used for compliance testing of NG-DECT Part 1 [13] equipment

NG-DECT Part 1 (PP, FP, device or equipment), also shortened as Part 1 (PP, FP, device or equipment): PP, FP or any of them compliant with TS 102 527-1 [13]

NG-DECT Part 3 (PP, FP, device or equipment), also shortened as Part 3 (PP, FP, device or equipment): PP, FP or any of them compliant with TS 102 527-3 [14]

Off-hook CLIP: ability of a network to send CLIP information for a waiting call (also known as "CLIP on call waiting" or "CLIP phase II")

ZAP: ability first to assign and then to re-program the account data held in the PP

3.2 Symbols

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

| | |
|-----|---|
| M | mandatory to support (provision mandatory, process mandatory) |
| O | optional to support (provision optional, process mandatory) |
| I | out-of-scope (provision optional, process optional) not subject for testing |
| C | conditional to support (process mandatory) |
| N/A | not applicable (in the given context the present document makes it impossible to use this capability) |

Provision mandatory, process mandatory means that the indicated feature service or procedure is to be implemented as described in the present document, and may be subject to testing.

Provision optional, process mandatory means that the indicated feature, service or procedure may be implemented, and if implemented, the feature, service or procedure is to be implemented as described in the present document, and may be subject to testing.

NOTE: The used notation is based on the notation proposed in ISO/IEC 9646-7 [i.28].

3.3 Abbreviations

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

| | |
|---------|--|
| AAC-LD | Advanced Audio Coding - Low Delay |
| AC | Authentication Code |
| ADPCM | Adaptive Delta Pulse Code Modulation |
| AP | Application |
| BCD | Binary Code Decimal |
| CC | Call Control |
| CFB | Call forwarding on Busy subscriber |
| CFNA | Call forwarding on No Answer |
| CFU | Call forwarding Unconditional |
| CI | Common Interface |
| CISS | Call Independant Supplementary Services |
| CLIP | Calling Line Identification Presentation |
| CLIR | Calling Line Identification Restriction |
| CLMS | Connection Less Message Service |
| CNIP | Calling Name Identification Presentation |
| CS | Call Status |
| DCIBS | Double Call with In-Band Signalling |
| DCK | Derived Cypher Key |
| DECT | Digital Enhanced Cordless Telecommunications |
| DHCP | Dynamic Host Configuration Protocol |
| DLC | Data Link Control |
| DNS | Domain Name Server |
| DTMF | Dual Tone Multi-Frequency |
| ER | Enhanced Rate |
| FP | Fixed Part |
| FT | Fixed radio Termination |
| GAP | Generic Access Profile |
| GFSK | Gaussian Filtered Frequency Shift Keying |
| HATS | Head and Torso Simulator |
| HPP | Headset Portable Part |
| HTTP | HyperText Transfer Protocol |
| IA-5 | International Alphabet-5 |
| IE | Information Element |
| IP | Internet Protocol |
| ISDN | Integrated Services Digital Network |
| IUT | Implementation Under Test |
| IWU | InterWorking Unit |
| IXIT | Implementation eXtra Information for Testing |
| LA | List Access |
| LAPC | Link Access Protocol for the Control plane |
| LiA | List Access |
| LU | Link access protocol User |
| MAC | Medium Access Control |
| MM | Mobility Management |
| MMI | Man and Machine Interface |
| MPEG | Moving Picture Expert Group |
| NB | Narrow Band |
| NDT | Network Delay Type |
| NEM | No Emission Mode |
| NG | New Generation |
| NG-DECT | New Generation DECT |
| NWK | NetWorK |
| PABX | Private Automatic Branch Exchange |
| PBX | Private Branch eXchange |
| PCM | Pulse Code Modulation |
| PHL | PHysical Layer |
| PHY | PHYsical layer |

| | |
|------|-----------------------------------|
| PIN | Personal Identification Number |
| PLC | Packet Loss Concealment |
| PP | Portable Part |
| PSTN | Public Switched Telephone Network |
| PT | Portable radio Termination |
| PTS | Profile Test Specification |
| RF | Radio Frequency |
| RFPI | Radio Fixed Part Identity |
| SARI | Secondary Access Rights Identity |
| SC | Speech Coding |
| SIP | Session Initiated Protocol |
| SS | Supplementary Services |
| TC | Test Case |
| TCL | Test Case Library |
| TPUI | Temporary Portable User Identity |
| TRUP | Transparent UnProtected |
| TS | Test System |
| UNF | Unprotected Framed |
| USR | USeR |
| UTF | Unicode Transformation Format |
| VoIP | Voice over IP |
| WB | WideBand |

4 Test method

This clause describes the test method used to test the NG-DECT Part 3 devices.

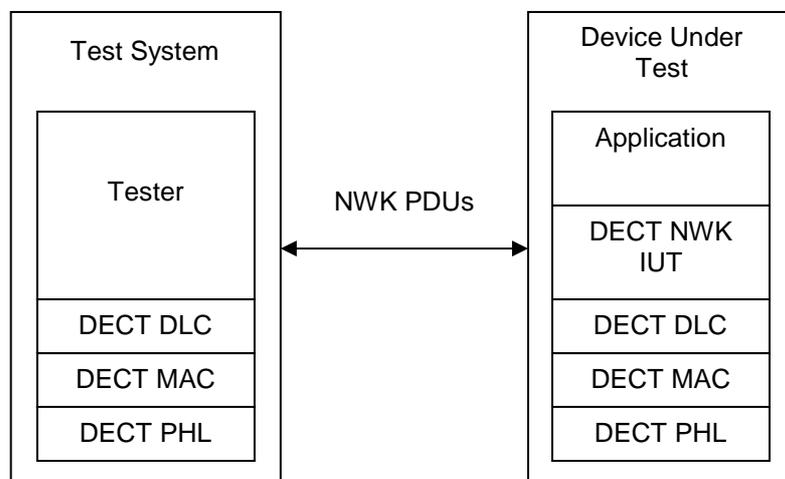


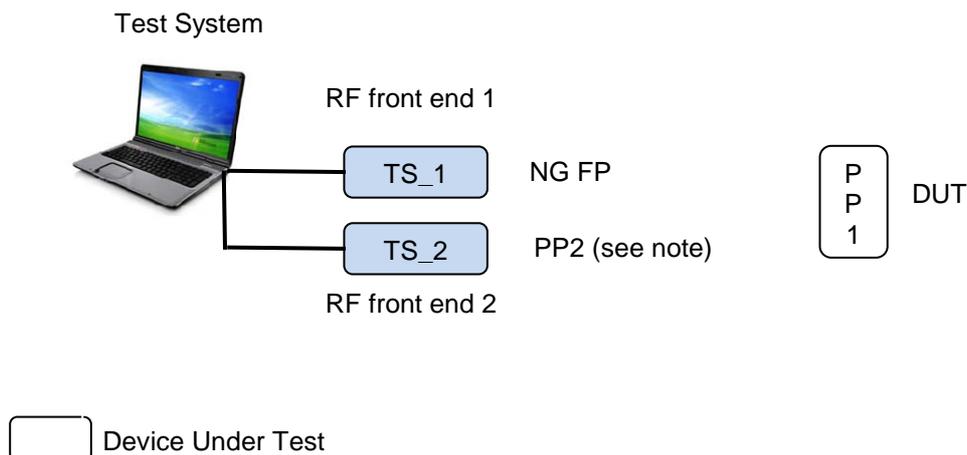
Figure 1: New Generation DECT remote test method

Tester: A tester is located in a remote DECT test system. It controls and observes the behaviour of the Implementation Under Test (IUT). The TS behaves as a FP (or a PP) when testing a PP (respectively a FP).

4.1 Test platform

4.1.1 PP test platform

The PP test platform is depicted on Figure 2.



NOTE: PP2 behaves either as a NG PP or a legacy GAP PP according to test case.

Figure 2: PP test platform

The first RF front-end of Test system "TS_1" plays the role of a NG FP to which the tested PP is paired.

The following devices are needed to perform parallel call test cases: either a NG PP or a GAP legacy PP. The second RF front-end of Test system "TS_2" plays the role of one of these PPs according to test case condition.

4.1.1.1 List content for tests

The following list contents will be used by the tester when running List access PP test cases.

4.1.1.1.1 List of supported lists

All lists are supported (list identifiers from 00H to 09H).

4.1.1.1.2 Missed calls list

Presence of 3 missed calls with a total number of 10 entries in the list.

Table 1: Missed calls test list content

| Number | Name | Date and time | Unread | Line name | Line id | Nb of calls |
|------------------|--------------|-------------------|--------|------------|---------|-------------|
| 497312456897 | JENDREZEJZAK | 09/09/09 06:45:00 | 1 | Provider 1 | 0, 0 | 2 |
| 0145567897 | | 06/09/09 18:48:00 | 1 | Provider 1 | 0, 0 | 3 |
| 00441324778824 | C.Alexander | 06/09/09 15:36:36 | 0 | Provider 1 | 0, 0 | 1 |
| 0321259514 | LE BIHAN | 06/09/09 15:36:00 | 1 | Provider 2 | 0, 1 | 1 |
| 0296301005 | | 06/09/09 12:35:00 | 0 | Provider 1 | 0, 0 | 1 |
| 008989945270 | M.UWE | 02/09/09 11:17:00 | 0 | Provider 3 | 0, 2 | 1 |
| 0177476923 | C.FENRIJO | 01/09/09 14:08:00 | 0 | Provider 1 | 0, 0 | 1 |
| 4526300099446770 | B.ZIMMERMANN | 30/08/09 18:50:00 | 0 | Provider 3 | 0, 2 | 1 |
| 0675000209 | R.ALOUSSI | 22/08/09 12:00:00 | 0 | Provider 1 | 0, 0 | 1 |
| 0247413706 | VAN DER VYNC | 20/08/09 18:15:00 | 0 | Provider 2 | 0, 1 | 1 |

Properties

- For all fields, editable=0;
- For Number, Line name, and Line id fields: PIN protected=0.

4.1.1.1.3 Outgoing calls list

Total number of 10 entries in the list.

Table 2: Outgoing calls test list content

| Number | Name | Date and time | Line name | Line id |
|------------------|---------------|-------------------|------------|---------|
| 008989945270 | UWE | 08/09/09 13:13:13 | Provider 1 | 0, 0 |
| 0145567897 | | 07/09/09 09:09:09 | Provider 1 | 0, 0 |
| 0675000321 | WOJCIECHOSKI | 06/09/09 08:33:33 | Provider 1 | 0, 0 |
| 0612345678 | FENJIRO | 06/09/09 08:22:22 | Provider 2 | 0, 2 |
| 0490413002 | FENJIRO | 06/09/09 08:12:12 | Provider 2 | 0, 2 |
| 00550123456789 | G. DEL PIETRO | 03/09/09 07:07:07 | Provider 3 | 0, 0 |
| 4526300099446770 | B.ZIMMERMANN | 31/08/09 23:23:23 | Provider 1 | 0, 0 |
| 00449876543210 | C.ALEXANDER | 31/08/09 16:16:16 | Provider 3 | 0, 2 |
| 0296301005 | | 28/08/09 17:17:17 | Provider 1 | 0, 0 |
| 02298951214 | LAGADEC | 27/08/09 18:18:18 | Provider 1 | 0, 0 |

Properties

- For all fields, editable=0.
- For Number, Line name, and Line id fields: PIN protected=0.

4.1.1.1.4 Incoming accepted calls list

Total number of 10 entries in the list.

Table 3: Incoming accepted calls test list content

| Number | Name | Date Time | Line name | Line id |
|----------------|---------------|-------------------|------------|---------|
| 02298951214 | J.LAGADEC | 07/09/09 12:12:12 | Provider 1 | 0, 0 |
| 0321259514 | LE BIHAN | 06/09/09 18:36:18 | Provider 2 | 0, 1 |
| 0308980764 | | 06/09/09 08:24:24 | Provider 1 | 0, 0 |
| 0581321185 | K.BORDONADO | 06/09/09 08:16:16 | Provider 1 | 0, 0 |
| 00441324778824 | C.Alexander | 06/09/09 08:16:08 | Provider 1 | 0, 0 |
| 00550123456789 | G. DEL PIETRO | 02/09/09 09:18:09 | Provider 3 | 0, 2 |
| 0296301005 | | 01/09/09 20:40:20 | Provider 1 | 0, 0 |
| 00449876543210 | C.ALEXANDER | 31/08/09 12:24:12 | Provider 3 | 0, 2 |
| 0425960406 | D.LE BRAZ | 25/08/09 18:36:18 | Provider 2 | 0, 1 |
| 0675000321 | WOJCIECHOSKI | 22/08/09 11:22:11 | Provider 1 | 0, 0 |

Properties

- For all fields, editable=0.
- For Number, Line name, and Line id fields: PIN protected=0.

4.1.1.1.5 All calls list

Total number of 30 entries in the list.

Table 4: All calls test list content

| Call Type | Number | Name | Date and time | Line name | Line id |
|-----------|------------------|---------------|-------------------|------------|---------|
| Missed | 497312456897 | JENDREZEJZAK | 09/09/09 06:45:00 | Provider 1 | 0, 0 |
| Outgoing | 008989945270 | UWE | 08/09/09 13:13:13 | Provider 1 | 0, 0 |
| Accepted | 02298951214 | J.LAGADEC | 07/09/09 12:12:12 | Provider 1 | 0, 0 |
| Outgoing | 0145567897 | | 07/09/09 09:09:09 | Provider 1 | 0, 0 |
| Missed | 0145567897 | | 06/09/09 18:48:00 | Provider 1 | 0, 0 |
| Accepted | 0321259514 | LE BIHAN | 06/09/09 18:36:18 | Provider 2 | 0, 1 |
| Missed | 00441324778824 | C.Alexander | 06/09/09 15:36:36 | Provider 1 | 0, 0 |
| Missed | 0321259514 | LE BIHAN | 06/09/09 15:36:00 | Provider 2 | 0, 1 |
| Missed | 0296301005 | | 06/09/09 12:35:00 | Provider 1 | 0, 0 |
| Outgoing | 0675000321 | WOJCIECHOSKI | 06/09/09 08:33:33 | Provider 1 | 0, 0 |
| Accepted | 0308980764 | | 06/09/09 08:24:24 | Provider 1 | 0, 0 |
| Outgoing | 0612345678 | FENJIRO | 06/09/09 08:22:22 | Provider 3 | 0, 2 |
| Accepted | 0581321185 | K.BORDONADO | 06/09/09 08:16:16 | Provider 1 | 0, 0 |
| Accepted | 00441324778824 | C.Alexander | 06/09/09 08:16:08 | Provider 1 | 0, 0 |
| Outgoing | 0490413002 | FENJIRO | 06/09/09 08:12:12 | Provider 3 | 0, 2 |
| Outgoing | 00550123456789 | G. DEL PIETRO | 03/09/09 07:07:07 | Provider 1 | 0, 0 |
| Missed | 008989945270 | M.UWE | 02/09/09 11:17:00 | Provider 3 | 0, 2 |
| Accepted | 00550123456789 | G. DEL PIETRO | 02/09/09 09:18:09 | Provider 3 | 0, 2 |
| Accepted | 0296301005 | | 01/09/09 20:40:20 | Provider 1 | 0, 0 |
| Missed | 0177476923 | C.FENRIJO | 01/09/09 14:08:00 | Provider 1 | 0, 0 |
| Outgoing | 4526300099446770 | B.ZIMMERMANN | 31/08/09 23:23:23 | Provider 1 | 0, 0 |
| Outgoing | 00449876543210 | C.ALEXANDER | 31/08/09 16:16:16 | Provider 3 | 0, 2 |
| Accepted | 00449876543210 | C.ALEXANDER | 31/08/09 12:24:12 | Provider 3 | 0, 2 |
| Missed | 4526300099446770 | B.ZIMMERMANN | 30/08/09 18:50:00 | Provider 3 | 0, 2 |
| Outgoing | 0296301005 | | 28/08/09 17:17:17 | Provider 1 | 0, 0 |
| Outgoing | 02298951214 | LAGADEC | 27/08/09 18:18:18 | Provider 1 | 0, 0 |
| Accepted | 0425960406 | D.LE BRAZ | 25/08/09 18:36:18 | Provider 2 | 0, 1 |
| Missed | 0675000209 | R.ALOUSSI | 22/08/09 12:00:00 | Provider 1 | 0, 0 |
| Accepted | 0675000321 | WOJCIECHOSKI | 22/08/09 11:22:11 | Provider 1 | 0, 0 |
| Missed | 0247413706 | VAN DER VYNC | 20/08/09 18:15:00 | Provider 2 | 0, 1 |

Properties

- For all fields, editable=0.
- For Number, Line name, and Line id fields: PIN protected=0.

4.1.1.1.6 Contact list

Total number of 10 entries in the list.

Table 5: Contact list test content

| Name | First name | Contact number1 | Contact number2 (note 1) | Associated Melody (note 2) | Line id |
|--|------------|---------------------------|-----------------------------|-------------------------------|---------|
| ALEXANDER | Christian | (fixed) 00441324778824 | (work) 00449876543210 | 1 | 3, 2 |
| ALEXANDER | Christina | (fixed) 00441324778812 | | 2 | 3, 2 |
| ALOSSI | RAMIN | (fixed) 0156891247 | (mobile) 0675000209 | 3 | 3, 0 |
| BORDONADO | Karlità | (work) 0581321185 | | 4 | 3, 0 |
| DEL PIETRO | David | (fixed) 00550123456789 | | 5 | 3, 0 |
| FENJIRO | Carlos | (work) 0490413002 | (mobile) 0612345678 | 6 | 3, 2 |
| LAGADEC | Jérôme | (work) 02298951214 | | 7 | 3, 0 |
| UWE | MARCUS | (work) 008989945270 | (fixed) 00491603794505 | 1 | 3, 0 |
| WALKER | BARCLAY | (mobile) 06123123 | | 2 | 3, 2 |
| WOJCIECHOSKI | | (mobile) 0675000321 | | 3 | 3, 1 |
| <p>NOTE 1: 'Contact number' is a multiple instance field. The test equipment shall support two instances maximum for this field. Contact number2 entry field instance shall be sent by the test equipment if and only if it is defined and the PP requested it in the request. The sending of this instance does not depend on whether the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1).</p> <p>NOTE 2: 'Associated melody' field is optional on PP side, anyhow it should be handled in each entry when received in data packet.</p> | | | | | |

Properties

- For all fields, editable=1.
- For Associated Melody, and Line id fields: PIN protected=0.

4.1.1.1.7 Internal names list

Total number of 4 entries in the list.

Table 6: Internal names test list content

| Number | Name | Call interception |
|--------|-------------|-------------------|
| 31H | Kitchen | 30H |
| 32H | Living-room | 30H |
| 33H | Office | 31H |
| 39H | Boby room | 30H |

Properties

- Number field: editable=0, internal=1, own=0 (see note), PIN code protected=0.
- Name field: editable=1.
- Call interception field: editable=1, PIN code protected=1.

NOTE: The 'own' property bit is however equal to 1 when the IUT accesses its own entry in PT test cases. When this is the case, it is explicitly written in the test case.

4.1.1.1.8 DECT system settings list

Table 7: DECT system settings test list content

| Entry identifier | Settings | Editable | PIN protected | Value |
|------------------|-------------------------------|----------|---------------|---|
| 1 | Current PIN code | 1 | 0 | FFH, FFH, 12H, 34H |
| | Clock master | 1 | 0 | 30H (FP) |
| | Base reset | 1 | 1 | 30H (No) |
| | FP IP address / type | 1 | 0 | DHCP=0, Static=1 |
| | FP IP address / value | 1 | 0 | IPv4/6=0, 'C0A8D40C'H (192.168.212.12) |
| | FP IP address / subnet mask | 1 | 0 | IPv4/6=0, 'FFFFFF00'H (255.255.255.0) |
| | FP IP address / gateway | 1 | 0 | IPv4/6=0, 'C0A8D401'H (192.168.212.1) |
| | FP IP address / DNS server | 1 | 0 | IPv4/6=0, 'C0A8D401'H (192.168.212.1) (see note) |
| | FP version / Firmware version | 0 | 0 | "F1.2C8" |
| | FP version / Eeprom version | 0 | 0 | "E1.5C6" |
| | FP version / Hardware version | 0 | 0 | "H1.4A2" |
| | Emission mode | 1 | 0 | NEM=0 (deactivated) |
| | New PIN code | 1 | 1 | FFH, FFH, 12H, 34H |

NOTE: 'FP IP address / DNS server' is a multiple instance field. The test equipment shall support only a single instance for this field.

4.1.1.1.9 Line settings list

Total number of 2 entries in the list.

Table 8: Line settings test list content

| Entry identifier | Settings | Editable | PIN protected | Value |
|------------------|------------------------------------|----------|---------------|---|
| 1 | Line Name | 1 | 0 | "Provider VoIP1" |
| | Line id | 0 | 0 | 3, 0 |
| | Attached handsets | 1 | 1 | Nb=03H, bitmap=03H, 82H (PP1, PP2, PP9) |
| | Dialling Prefix | 1 | 0 | "" |
| | FP melody | 1 | 0 | 07H |
| | FP volume | 1 | 0 | 30H |
| | Blocked number | 1 | 0 | "08*" (see note) |
| | Multiple calls mode | 1 | 0 | 30H (Single call mode) |
| | Intrusion call | 1 | 0 | 30H (Not allowed) |
| | Permanent CLIR | 1 | 0 | Value=30H (deactivated), CLIR activation code="R*12*" CLIR deactivation code="R#19#" |
| | Call forwarding Unconditional | 1 | 0 | Value=30H (deactivated), CFU activation code="*22" CFU deactivation code="*33" Nb = "0698765432" |
| | Call forwarding on No Answer | 1 | 0 | Value=30H (deactivated), Nb of seconds=19H (25) CFNA activation code="#44" CFNA deactivation code="#55" Nb = "0212345678" |
| | Call forwarding on Busy subscriber | 1 | 0 | Value=30H (deactivated), CFB activation code="*66" CFB deactivation code="#77" Nb = "0612345678" |

| Entry identifier | Settings | Editable | PIN protected | Value |
|--|-------------------------------|----------|---|--|
| 2 | Line Name | 1 | 0 | "Provider VoIP2" |
| | Line id | 0 | 0 | 3, 1 |
| | Attached handsets | 1 | 1 | Nb=01H, bitmap=84H (PP3) |
| | Dialling Prefix | 1 | 0 | "3651" |
| | FP melody | 1 | 0 | 03H |
| | FP volume | 1 | 0 | 30H |
| | Blocked number | 1 | 0 | "06*" |
| | Multiple calls mode | 1 | 0 | 30H (Single call mode) |
| | Intrusion call | 1 | 0 | 30H (Not allowed) |
| | Permanent CLIR | 1 | 0 | Value=30H (deactivated), CLIR activation code="#88#" CLIR deactivation code="#99#" |
| | Call forwarding Unconditional | 1 | 0 | Value=30H (deactivated), CFU activation code="" CFU deactivation code="" Nb = "" |
| | Call forwarding on No Answer | 1 | 0 | Value=30H (deactivated), Nb of seconds=00H CFNA activation code="" CFNA deactivation code="" Nb = "" |
| Call forwarding on Busy subscriber | 1 | 0 | Value=30H (deactivated), CFB activation code="" CFB deactivation code="" Nb = "" | |
| NOTE: 'Blocked number' is a multiple instance field. The test equipment shall support only a single instance for this field. | | | | |

4.1.1.1.10 All incoming calls list

Total number of 20 entries in the list.

Table 9: All incoming calls test list content

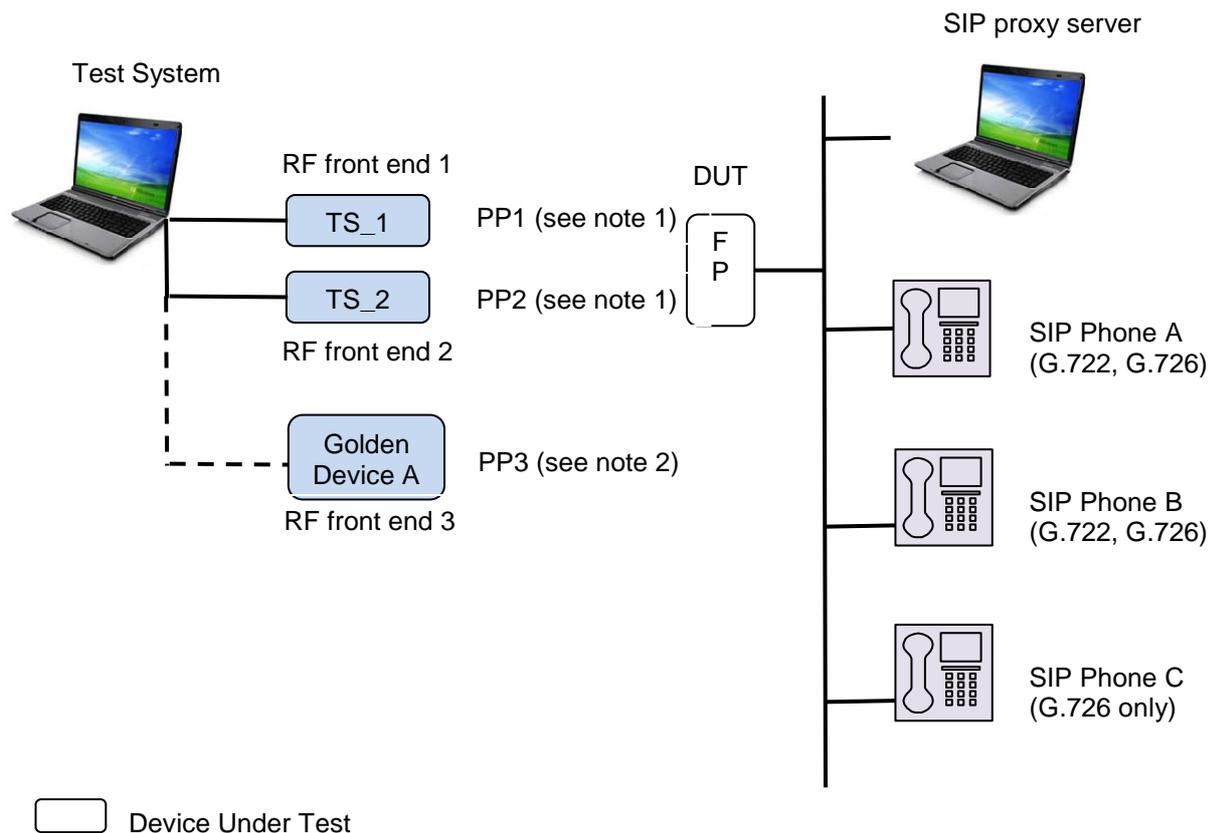
| Number | Name | Date and time | Unread | Line name | Line id | Nb of calls |
|------------------|--------------|-------------------|--------|------------|---------|-------------|
| 497312456897 | JENDREZEJZAK | 09/09/09 06:45:00 | 1 | Provider 1 | 0, 0 | 2 |
| 02298951214 | J.LAGADEC | 07/09/09 12:12:12 | 0 | Provider 1 | 0, 0 | 1 |
| 0145567897 | | 06/09/09 18:48:00 | 1 | Provider 1 | 0, 0 | 3 |
| 0321259514 | LE BIHAN | 06/09/09 18:36:18 | 0 | Provider 2 | 0, 1 | 1 |
| 00441324778824 | C.Alexander | 06/09/09 15:36:36 | 0 | Provider 1 | 0, 0 | 1 |
| 0321259514 | LE BIHAN | 06/09/09 15:36:00 | 1 | Provider 2 | 0, 1 | 1 |
| 0296301005 | | 06/09/09 12:35:00 | 0 | Provider 1 | 0, 0 | 1 |
| 0308980764 | | 06/09/09 08:24:24 | 0 | Provider 1 | 0, 0 | 1 |
| 0581321185 | K.BORDONADO | 06/09/09 08:16:16 | 0 | Provider 1 | 0, 0 | 1 |
| 00441324778824 | C.Alexander | 06/09/09 08:16:08 | 0 | Provider 1 | 0, 0 | 1 |
| 008989945270 | M.UWE | 02/09/09 11:17:00 | 0 | Provider 3 | 0, 2 | 1 |
| 00550123456789 | G.DEL PIETRO | 02/09/09 09:18:09 | 0 | Provider 3 | 0, 2 | 1 |
| 0296301005 | | 01/09/09 20:40:20 | 0 | Provider 1 | 0, 0 | 1 |
| 0177476923 | C.FENRIJO | 01/09/09 14:08:00 | 0 | Provider 1 | 0, 0 | 1 |
| 00449876543210 | C.ALEXANDER | 31/08/09 12:24:12 | 0 | Provider 3 | 0, 2 | 1 |
| 4526300099446770 | B.ZIMMERMANN | 30/08/09 18:50:00 | 0 | Provider 3 | 0, 2 | 1 |
| 0425960406 | D.LE BRAZ | 25/08/09 18:36:18 | 0 | Provider 2 | 0, 1 | 1 |
| 0675000209 | R.ALOUSSI | 22/08/09 12:00:00 | 0 | Provider 1 | 0, 0 | 1 |
| 0675000321 | WOJCIECHOSKI | 22/08/09 11:22:11 | 0 | Provider 1 | 0, 0 | 1 |
| 0247413706 | VAN DER VYNC | 20/08/09 18:15:00 | 0 | Provider 2 | 0, 1 | 1 |

Properties

- For all fields, editable=0.
- For Number, Line name, and Line id fields: PIN protected=0.

4.1.2 FP test platform

The fixed part under test shall be connected to a network when running the tests suite. It shall be ready to initiate an outgoing call or to receive an incoming call. An example of FP test platform is depicted on Figure 3.



NOTE 1: PP1 and PP2 behave either as a NG PP, a legacy GAP PP, or a headset PP according to test case.
 NOTE 2: Golden device A needed for NG-DECT Part 1 backward compatibility tests is re-used here for convenience. Very few NG-DECT Part 3 test cases need a third PP.

Figure 3: Example of FP Test platform

The first RF front-end of Test system "TS_1" plays the role of a NG PP or a GAP PP paired on the tested FP.

The following devices are needed:

- One other PP for internal call test cases: a NG PP and a GAP legacy PP (see note 1).
- One call server (e.g. a SIP server).
- A first phone 'Phone A' (e.g. SIP phone supporting G.722 and G.726 codecs) for first call test cases (see note 2).
- A second phone 'Phone B' (e.g. SIP phone supporting G.722 and G.726 codecs) for parallel call test cases (see note 2).
- A third phone 'Phone C' supporting only G.726 codec for narrow band calls and call deflection test cases.
- A handset PP for headset call test cases (see notes 1 and 3).
- A third handset is needed for few test cases (internal general call and call transfer): any GAP PP can be used.

NOTE 1: The second RF front-end of Test system "TS_2" plays the role of one of these PPs according to test case condition: NG PP, GAP PP or headset PP.

NOTE 2: When running "Multiple lines" test cases, phone A is on line 0 and phone B on line 1. These line identifiers values are generic identifier values standing for the line identifiers defined by the system.

NOTE 3: To behave like a headset, the TS has just to set the corresponding terminal capability bit "Support of the "Headset management" feature" and to send a "call interception request from HPP" command in {CC-SETUP} message.

This platform is based on SIP protocol exchanges between the FP and the network. It shall be considered as an example as the FP under test may not be designed for SIP network (e.g. H323, PBX, etc.). However, no matter which network is used, it shows the minimum devices needed to run the FP test cases.

4.1.2.1 List content for tests

When running List access FP test cases, the 'Current PIN code' field shall be set to (FFH, FFH, 12H, 34H). Thus, the test equipment can automatically edit and save the 'Current PIN code' field of 'DECT system settings' list before editing 'PIN protected' field (see Clause 5.1).

4.1.3 NG-DECT Part 1 backward compatibility test platform

It is crucial to ensure interoperability between NG-DECT Part 3 devices and legacy NG-DECT Part 1 devices. In order to gain maximum interoperability to the NG-DECT Part 1 devices a test against the legacy Golden Devices (FT and PT) is absolutely necessary.

In order to keep the required effort as low as possible, it is proposed to add just some basic tests such as incoming call WB, outgoing call WB and service change WB->NB.

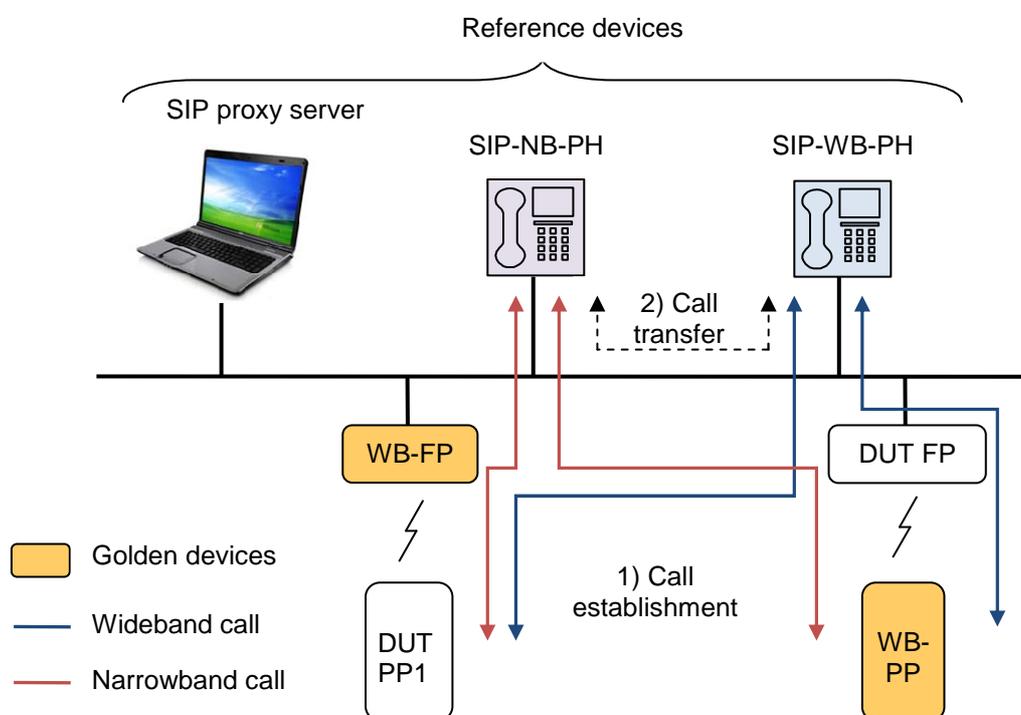


Figure 4: Test platform for NG-DECT Part 1 backwards compatibility tests

The following devices are needed:

- Golden devices:
 - One Golden NG-DECT Part 1 handset (WB-PP) (see note).
 - Two Golden NG-DECT Part 1 base stations (WB-FP).
- Reference devices:
 - One corded wideband SIP phone (SIP-WB-PH).
 - One corded narrowband SIP phone (SIP-NB-PH).

- SIP server.
- Device under test:
 - wideband handset (DUT-PP); or
 - wideband base station (DUT-FP).

NOTE: This unique golden NG-DECT Part 1 handset supports encryption in full-slot and long-slot mode in accordance with NG-DECT Part 1 standard.

4.2 Hypothesis

Protocol layers tested

Network and application features are only tested. DLC, MAC, and PHY procedures used by new DECT generation standard are supposed to be tested when testing network features.

Speech services tested

Device under test is required to support only mandatory speech services. The optional codecs are out of the scope of the present document.

Length of a NWK layer message

The test equipment shall not send NWK layer messages longer than 63 bytes (see EN 300 444 [12], Clause 6.9.3). In the other direction, the test equipment shall be capable of receiving and processing NWK layer messages of at least 63 octets long. A received NWK layer message longer than 63 bytes shall be discarded.

4.3 Test groups

4.3.1 Network features

See TS 102 527-3 [14], Clauses 5.2, 6.4 and 6.10.

4.3.2 Application features

See TS 102 527-3 [14], Clauses 5.7, 6.9 and 6.13.

5 Test Cases (TCs)

5.1 TC definition conventions

The TCs are defined following particular rules as shown in Table 10.

Table 10: TC definition rules

| TC Id according to the TC naming conventions | Test case objective |
|--|---|
| Reference: | The reference should contain the references of the subject to be validated by the actual TC (specification reference, clause, paragraph, flow chart number, etc.) |
| Initial condition: | The condition defines in which initial state the IUT has to be to apply the actual TC. |
| Stimulus: | The stimulus defines the test event to which the TC is related |
| Pass criteria: | Definition of the events or parameters that are expected from the IUT to conform to the base specification |
| Comments: (optional) | Additional information or comments on test case content |

The device under test and the test equipment shall meet the features and procedures specified in "New Generation DECT; Part 3: Extended wideband speech" (see TS 102 527-3 [14]). Nevertheless, only checked protocol elements are specifically described in the test case. Even if a NG-DECT Part 3 requirement is not specified in a stimulus or a pass criteria test step, this does not mean it should not be implemented or tested. This simply means that this requirement is out of scope of this test case and will be tested elsewhere. As a result, the "New Generation DECT; Part 1: Wideband speech" (TS 102 527-1 [13]) and the delta to the "Generic Access Profile" (EN 300 444 [12]) features will be tested with the NG-DECT Part 3 requirements implemented (e.g. call identification, line identification, etc.).

TC Id

The TC Id is a unique identifier; it shall be specified according to the TC naming conventions defined in the clause below.

Reference

When a flowchart number is given in reference, this flowchart is only a recommendation to implement the test case. As a result, the TS shall be flexible enough to deal with several IUT implementations (dynamic behaviour).

Initial condition

When a test necessitates other PP registered (NG PP or legacy GAP PP), it is stipulated.

By default (i.e. no other PP specified), the TS_1 and the IUT are involved together in the CC instance whose CC control state is stipulated in the initial condition.

A test case reference is given when this TC has to be run to reach the initial condition (for example: "Run TC_FT_NG1.N.16_BV_1802"). That means that this test case shall be run before the current one.

Pass criteria

- Checking "end-to-end U-plane connection" criteria: this is an operation to detect the state of the U-plane connection. The acoustical path will be checked in both directions. When testing a PP, Test system could perform an audio loopback and introduce a delay (e.g. 1s) to create an echo. When testing a FP, Test system could use a tone generation. In both cases, Test system could also use a handset receiver plugged in the equipment.
- Some parameters used in TCs can be allocated by the IUT (e.g. call id, terminal identity number, session id, line id, etc.) or be network dependant (line type information for each line) as a consequence a generic notation is used in the TC description (respectively "call id A", "IA5 coding of terminal identity number in decimal of PP1", session id n, line 0, lt0, etc.).

5.1.1 Test equipment implementation requirements

This clause specifies the general requirements to be implemented by the test equipment. The requirements listed below can be valid either for several features on one side, or for one feature on both sides, PP and FP side. Specific requirements for a single feature are given in the related section describing the sub tests suite for this feature.

Order of information elements in NWK layer messages

- IUT shall send Information elements in the correct order within a NWK layer message (as defined in EN 300 175-5 [5], Clause 7.5.1 "Coding rules"). This is valid for PT and FT sides.

NOTE 1: If this requirement is not respected, some test cases may fail on PT and FT side (as the test equipment will expect the correct order).

Segmentation of information in CC procedures

- IUT shall not use segmentation of NWK messages (defined in EN 300 175-5 [5], Clause 9.9 "Segmentation of information in CC procedures").

NOTE 2: If this requirement is not respected, some test cases may fail on PT and FT side (as the test equipment will expect only one segment).

NOTE 3: "Segmentation of information in CC procedures" is not mandatory for NG-DECT Part 3 devices. So such implementations may face interoperability problems in case the peer party does not support the same mechanism.

Basic service used by the test equipment when initiating a call (external, internal, or list access service call)

- Within PT and FT test cases the test equipment shall behave as follows:

Rule 1: When behaving as a NG-DECT device, the test equipment shall use by default the "Wideband speech default setup attributes" basic service in IE <<BASIC-SERVICE>> at call setup (as required in TS 102 527-1 [13] and TS 102 527-3 [14]). This is the default behaviour for all test cases and especially in those where "TS_x is a NG PP" is mentioned. This basic service shall also be used even in the test cases where outgoing calls to narrow band phones are performed.

Rule 2: When behaving as a GAP device the test equipment shall use by default the "Basic speech default setup attributes" basic service in IE <<BASIC-SERVICE>> at call setup (as required in EN 300 444 [12]). This is the default behaviour for all test cases where "TS_x is a GAP PP" is mentioned.

NOTE 4: The "automatic" rule 1 applies because in all the test cases of the current test specification, the test equipment initiates calls only in front of NG-DECT Part 3 IUTs (PP or FP) but not in front of GAP IUTs. As a consequence the test equipment does not need to check the NG-DECT capabilities of the remote party (IUT) to define the basic service to be used.

NOTE 5: When receiving a call on the test equipment (internal calls for example), it is the IUT that will use the correct basic service depending if the test equipment behaves as a NG-DECT or GAP device.

Line type information

- When testing a PP, by default if it is not specified, the simulated lines are full VoIP lines and so the 'Line type information' field in <<CALL-INFORMATION>> IE shall be coded as follows:
 - The 'Network delay type' ('**NDT**') = '1'B, indicating that the line is a 'significant delay' line.
 - The 'Second call type' ('**SCT**') = '0'B, indicating that second calls are handled with 'common parallel call' procedures.
- When testing a FP, the 'Line type information' field in <<CALL-INFORMATION>> is line dependant for the 'Network delay type' ('**NDT**') information. The 'Second call type' ('**SCT**') information shall be coded according to the manufacturer's declarations for Line 0 and Line 1 (see Table A.16 and Table A.17).

Internal call Initiation

- When initiating an internal call, a PP under test could access to the internal names list. The test equipment shall be ready to accept both methods: with and without access to the internal names list.

External call Initiation

- When initiating an external call (either first or parallel), a PP under test could access to the line settings list, so that the user can select a line of this call. This access to the line settings list might occur e.g. after subscription/location registration or triggered by a {FACILITY} message with a list change notification for the line settings list or triggered by a user interaction fully independent from a call or immediately before placing the external outgoing call. The test equipment shall be ready to accept both methods: with and without access to the line settings list.

List access service tests cases

- In order to make lighter the NG1.N.16 List access service test cases, stimulus and pass criteria make reference only to the list access commands sent or expected. However, the tester and IUT shall comply with NG-DECT Part 3 requirements (see TS 102 527-3 [14], Clause 7.4.10.1). As a consequence, when receiving commands in pass criteria, each command shall be received in a {IWU-Info} message with information element <<IWU to IWU>> using the protocol discriminator '03'H. Respectively, when sending commands in stimulus, the tester shall use the same transport message.

IUT not registered in initial condition

When a test starts with the initial condition "IUT not registered", the test equipment shall send an {ACCESS-RIGHTS-TERMINATE-REQUEST} message to the IUT just before the first stimulus in order to ensure that the IUT is de-registered at the beginning of the TC. The test equipment shall be prepared to receive optionally an ACCESS-RIGHTS-TERMINATE-ACCEPT (if an IUT was previously registered).

Support of release collision scenario by the equipment

The test equipment shall support the release collision procedure as defined in Clause 8.7.2.1 of EN 300 444 (GAP) [12]. More specifically for test cases such as TC_FT_NG1.N.16_BV_2109, where the digits dialled by the test equipment do not correspond to any existing remote party, the IUT and the TS may release the link simultaneously via CC-RELEASE.

5.2 TC naming conventions

Each feature to be tested corresponds to a group of test cases identified by its standard feature number.

The identifier of the TC is built according to Table 11.

Table 11: TC naming convention

| TC_<rt>_<fn>_<tt>_<ppnn> | | |
|---|--|--|
| <rt> = type of radio termination | FT PT | Fixed radio Termination Portable radio Termination |
| <fn> = feature number | NG1.N.x GAP.N.x NG1.A.x GAP.A.x | New generation Network feature GAP Network feature New generation Application feature GAP Application feature |
| <tt> = Type of testing | BV GC WC | Valid Behaviour Tests GAP backward compatibility Tests (see note 1) NG-DECT Part 1 backward compatibility Tests (note 2) |
| <pp> = procedure number | (1 to 99) | Procedure Number (see note 3) |
| <nn> = sequential number | (01 to 99) | Test Purpose Number |
| NOTE 1: GAP backward compatibility tests concern only the FP. These tests check FP specific behaviours for NG features in front of GAP PPs. | | |
| NOTE 2: These tests are to ensure interoperability in front of legacy NG-DECT Part 1 "Wideband speech" devices. | | |
| NOTE 3: The procedure number refers to the number given to each procedure in Annex B. For example the procedure "NG1.N.1_3 Codec Negotiation during call establishment" is the procedure number '3' of NG1.N.1 Codec Negotiation feature. If several procedures are involved in the TS, the procedure number refers to the procedure mainly tested. | | |

NOTE: In order to limit the number of tests, invalid behaviour use cases are not tested.

5.3 Portable Part TC purposes

5.3.1 List of New Generation DECT Part 3 PT tests cases related to NG-DECT Part 1 features

This clause gives the list of NG-DECT Part 3 test cases related to the DECT "Wideband speech" (part 1) (TS 102 527-1 [13]) features. In other words, these test cases shall be implemented with the NG-DECT Part 3 requirements (see Clause 5.1).

Table 12: NG-DECT Part 3 PT Test Case Index related to NG-DECT Part 1 features

| NG-DECT Part 3 PT test case index related to NG-DECT Part 1 features | | | |
|--|----------------------|--|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | NG1.N.1 | Codec Negotiation | |
| TC_PT_NG1.N.1 | TC_PT_NG1.N.1_BV_101 | NG-DECT Part 1 capability during subscription registration | M |
| | TC_PT_NG1.N.1_BV_102 | NG-DECT Part 1 capability during location registration | M |
| | TC_PT_NG1.N.1_BV_201 | Basic service wideband speech | M |
| | TC_PT_NG1.N.1_BV_301 | Outgoing call, codec chosen in {CC-SETUP-ACK} without slot type modification | M |
| | TC_PT_NG1.N.1_BV_303 | Outgoing call, codec chosen in {CC-CALL-PROC} without slot type modification | M |
| | TC_PT_NG1.N.1_BV_308 | Outgoing call, codec chosen in {CC-CONNECT} message in state T-01 without slot type modification | M |
| | TC_PT_NG1.N.1_BV_309 | Outgoing call, codec chosen in {CC-SETUP-ACK} with slot type modification | M |
| | TC_PT_NG1.N.1_BV_311 | Outgoing call, codec chosen in {CC-CALL-PROC} message with slot type modification | M |
| | TC_PT_NG1.N.1_BV_316 | Outgoing call, codec chosen in {CC-CONNECT} in state T-01 with slot type modification | M |
| | TC_PT_NG1.N.1_BV_317 | Outgoing call, fall back to a mandatory codec when slot type modification fails | M |
| | TC_PT_NG1.N.1_BV_321 | Incoming call G.722, full paging | M |
| | TC_PT_NG1.N.1_WC_101 | Outgoing call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device A) | M |
| | TC_PT_NG1.N.1_WC_102 | Outgoing call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device B) | M |
| | TC_PT_NG1.N.1_WC_103 | Incoming call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device A) | M |
| | TC_PT_NG1.N.1_WC_104 | Incoming call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device B) | M |
| | TC_PT_NG1.N.1_WC_105 | Service change at NG-DECT Part 1 Golden Device FT (Golden Device A) | M |
| | TC_PT_NG1.N.1_WC_106 | Service change at NG-DECT Part 1 Golden Device FT (Golden Device B) | M |
| | NG1.N.2 | Codec Switching | M |
| TC_PT_NG1.N.2 | TC_PT_NG1.N.2_BV_101 | Codec switching from G.722 to G.726 | M |
| | TC_PT_NG1.N.2_BV_102 | Codec switching from G.726 to G.722 | M |
| | GAP.N.30 | Calling Line Identification Presentation (CLIP) | M |
| TC_PT_GAP.N.30 | TC_PT_GAP.N.30_BV_01 | Incoming call with calling party number in {CC-SETUP} | M |
| | TC_PT_GAP.N.30_BV_02 | Incoming call with calling party number in {CC-INFO} | M |

5.3.2 List of New Generation DECT Part 3 PT tests cases

This clause gives the list of NG-DECT Part 3 test cases related to the DECT "Extended Wideband Speech Services" (TS 102 527-3 [14]) features.

Table 13: NG-DECT Part 3 PT Test Case Index

| NG-DECT Part 3 PT test case index | | | |
|-----------------------------------|----------------------|--|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | NG1.N.1 | Codec negotiation | M |
| TC_PT_NG1.N.1 | TC_PT_NG1.N.1_BV_103 | NG-DECT Part 3 capability during subscription registration | M |
| | TC_PT_NG1.N.1_BV_104 | NG-DECT Part 3 capability during location registration | M |
| | NG1.N.3 | Missed call notification | M |
| TC_PT_NG1.N.3 | TC_PT_NG1.N.3_BV_201 | Missed call notification, activation | M |
| | TC_PT_NG1.N.3_BV_202 | Missed call notification, deactivation | M |
| | TC_PT_NG1.N.3_BV_203 | Missed call notification, activation while on active call | M |
| | NG1.N.4 | Voice message waiting notification | M |
| TC_PT_NG1.N.4 | TC_PT_NG1.N.4_BV_201 | Voice message waiting notification, activation | M |

| NG-DECT Part 3 PT test case index | | | |
|-----------------------------------|-----------------------|---|----------------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_PT_NG1.N.4_BV_202 | Voice message waiting notification, deactivation | M |
| | NG1.N.5 | Date and Time synchronization | M |
| TC_PT_NG1.N.5 | TC_PT_NG1.N.5_BV_101 | FT initiated Date and Time synchronization | M |
| | TC_PT_NG1.N.5_BV_102 | PT initiated Date and Time synchronization | O |
| | NG1.N.6 | Parallel Calls | M |
| TC_PT_NG1.N.6 | TC_PT_NG1.N.6_BV_401 | Codec change for parallel calls from G.722 to G.726 | M |
| | TC_PT_NG1.N.6_BV_402 | Codec change for parallel calls from G.726 to G.722 | M |
| | TC_PT_NG1.N.6_BV_501 | Sending negative acknowledgement - call toggle unsuccessful | M |
| | TC_PT_NG1.N.6_BV_601 | Busy line notification | M |
| | NG1.N.7 | Common parallel call procedures (external or internal) | M |
| TC_PT_NG1.N.7 | TC_PT_NG1.N.7_BV_102 | Outgoing parallel call initiation (external) | M |
| | TC_PT_NG1.N.7_BV_103 | Outgoing parallel call initiation (internal) | M |
| | TC_PT_NG1.N.7_BV_201 | Call waiting indication (external) - CLIP on call waiting indication - End of call waiting indication | M |
| | TC_PT_NG1.N.7_BV_202 | Call waiting indication (internal) - CLIP on call waiting indication - End of call waiting indication | M |
| | TC_PT_NG1.N.7_BV_301 | Call toggle (external) | M |
| | TC_PT_NG1.N.7_BV_302 | Call toggle (internal) | M |
| | TC_PT_NG1.N.7_BV_401 | Call release and call release rejection | M |
| | TC_PT_NG1.N.7_BV_601 | Call waiting acceptance (from PP to FP) (external) | M |
| | TC_PT_NG1.N.7_BV_602 | Call waiting acceptance (from PP to FP) (internal) | M |
| | TC_PT_NG1.N.7_BV_701 | Active call release with replacement (from PP to FP) - call waiting (external) | O |
| | TC_PT_NG1.N.7_BV_702 | Active call release with replacement (from PP to FP) - call on-hold (external) | O |
| | TC_PT_NG1.N.7_BV_801 | Call waiting rejection (from PP to FP) (external) | M |
| | TC_PT_NG1.N.7_BV_901 | Putting a call on-hold - Resuming a call put on-hold | O |
| | TC_PT_NG1.N.7_BV_1201 | CNIP on call waiting indication (external) | M |
| | TC_PT_NG1.N.7_BV_1202 | CNIP on call waiting indication (internal) | M |
| | NG1.N.8 | Call transfer (external or internal) | M |
| TC_PT_NG1.N.8 | TC_PT_NG1.N.8_BV_101 | Call transfer (external) - announced | M |
| | TC_PT_NG1.N.8_BV_102 | Call transfer (external) - unannounced | M |
| | TC_PT_NG1.N.8_BV_103 | Call re-injection to the system (external) | M |
| | TC_PT_NG1.N.8_BV_104 | Remote party CLIP on call transfer (external) | M |
| | TC_PT_NG1.N.8_BV_105 | Remote party CNIP on call transfer (external) | M |
| | NG1.N.9 | 3-party conference with established external and/or internal calls | O |
| TC_PT_NG1.N.9 | TC_PT_NG1.N.9_BV_101 | 3-party conference with established external and internal calls - IUT is the initiating party- release from one of the non initiating parties | M |
| | TC_PT_NG1.N.9_BV_102 | 3-party conference with established external and internal calls - IUT is not the initiating party | M |
| | TC_PT_NG1.N.9_BV_103 | 3-party conference with established external and internal calls - IUT is the initiating party – FT sends negative acknowledgement | M (note 1) |
| | NG1.N.10 | Intrusion call | O |
| TC_PT_NG1.N.10 | TC_PT_NG1.N.10_BV_101 | Implicit call intrusion into a line in "single call" mode - IUT is the initiating party in front of a non-early {CC-CONNECT} FP | C1301 |
| | TC_PT_NG1.N.10_BV_102 | Implicit call intrusion into a line in "single call" mode - IUT is the initiating party in front of an early {CC-CONNECT} FP | C1301 |
| | TC_PT_NG1.N.10_BV_103 | Implicit call intrusion into a line in "single call" mode - IUT is the initiating party – FT sends negative acknowledgement | C1301 (note 1) |
| | TC_PT_NG1.N.10_BV_201 | Explicit call intrusion into a line in "single call" mode in front of a non-early {CC-CONNECT} FP | C1301 |
| | TC_PT_NG1.N.10_BV_202 | Explicit call intrusion into a line in "single call" mode in front of an early {CC-CONNECT} FP | C1301 |
| | TC_PT_NG1.N.10_BV_203 | Explicit handset intrusion - IUT is the initiating party – FT sends negative acknowledgement | C1315 (note 1) |
| | TC_PT_NG1.N.10_BV_204 | Explicit line intrusion - IUT is the initiating party – FT sends negative acknowledgement | C1315 (note 1) |

| NG-DECT Part 3 PT test case index | | | |
|--|------------------------|---|---------------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_PT_NG1.N.10_BV_301 | Test of the intruded PP – Implicit call intrusion into a line in "single cal" mode – IUT is not the initiating party | M |
| | NG1.N.11 | Call deflection (external or internal) | O |
| TC_PT_NG1.N.11 | TC_PT_NG1.N.11_BV_101 | Call deflection (internal) in multiple lines context | M |
| | TC_PT_NG1.N.11_BV_201 | Call deflection (external) - successful | M |
| | TC_PT_NG1.N.11_BV_202 | Call deflection (external) - unsuccessful | M |
| | TC_PT_NG1.N.11_BV_203 | Call deflection (external) - Call waiting deflection | M |
| | NG1.N.12 | Line identification | M |
| TC_PT_NG1.N.12 | TC_PT_NG1.N.12_BV_201 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE (non early CC-CONNECT implementation) | M |
| | TC_PT_NG1.N.12_BV_202 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE (early CC-CONNECT implementation) | M |
| | TC_PT_NG1.N.12_BV_501 | FP managed line selection for a first external outgoing call (non early CC-CONNECT implementation) | M |
| | TC_PT_NG1.N.12_BV_502 | FP managed line selection for a first external outgoing call (early CC-CONNECT implementation) | M |
| | NG1.N.13 | Call identification | M |
| TC_PT_NG1.N.13 | TC_PT_NG1.N.13_BV_201 | Call identifier assignment on outgoing call (FP to PP) - Normal call (non early CC-CONNECT implementation) - Call status indication | M |
| | TC_PT_NG1.N.13_BV_202 | Call identifier assignment on outgoing call (FP to PP) - Normal call (early CC-CONNECT implementation) - Call status indication | M |
| | TC_PT_NG1.N.13_BV_203 | Call identifier assignment on outgoing call (FP to PP) - Internal call - Call status indication | M |
| | TC_PT_NG1.N.13_BV_301 | Call identifier assignment on incoming call (FP to PP) - Normal call setup | M |
| | NG1.N.14 | Multiple Lines | M |
| TC_PT_NG1.N.14 | TC_PT_NG1.N.14_BV_301 | Incoming external calls on a multiple line system - Accept incoming call on second line and release it - Resume first call | M |
| | TC_PT_NG1.N.14_BV_305 | Outgoing external calls on a multiple line system - Initiate a second outgoing call on second line using PP line selection | M |
| | TC_PT_NG1.N.14_BV_306 | Outgoing external calls on a multiple line system - Initiate a second outgoing call on second line using FP managed line selection | M |
| | NG1.N.15 | Multiple calls | M |
| TC_PT_NG1.N.15 | TC_PT_NG1.N.15_BV_201 | Incoming external calls on a multiple call line - Accept incoming second call | M |
| | TC_PT_NG1.N.15_BV_205 | Outgoing external calls on a multiple call line - Initiate a second outgoing call on the line using line selection | M |
| | TC_PT_NG1.N.15_BV_206 | Outgoing external calls on a multiple call line - Initiate a second outgoing call on the line using FP managed line selection | M |
| | TC_PT_NG1.N.15_BV_301 | Busy system notification | M |
| | NG1.N.16 | List access service | M |
| TC_PT_NG1.N.16 | TC_PT_NG1.N.16_BV_1701 | Missed calls list - Read entries - Initiate an external call | M |
| | TC_PT_NG1.N.16_BV_1702 | Missed calls list - Delete entry | M |
| | TC_PT_NG1.N.16_BV_1703 | Missed calls list - Delete list - Read entries when empty | M |
| | TC_PT_NG1.N.16_BV_1704 | Missed calls list - Transfer number from missed calls list to contact list | M |
| | TC_PT_NG1.N.16_BV_1705 | Missed calls list - Incoming first voice call during existing list access session | M |
| | TC_PT_NG1.N.16_BV_1801 | Outgoing calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_1802 | Outgoing calls list - Delete entry | O |
| | TC_PT_NG1.N.16_BV_1803 | Outgoing calls list - Delete list - Read entries when empty | O |
| | TC_PT_NG1.N.16_BV_1901 | Incoming accepted calls list - Read entries - Initiate an external call | M |
| | TC_PT_NG1.N.16_BV_1902 | Incoming accepted calls list - Delete entry | M |
| | TC_PT_NG1.N.16_BV_1903 | Incoming accepted calls list - Delete list - Read entries when empty | M |

| NG-DECT Part 3 PT test case index | | | |
|-----------------------------------|------------------------|---|--------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_PT_NG1.N.16_BV_1904 | Incoming accepted calls list - Transfer number from Incoming accepted calls list to contact list | M |
| | TC_PT_NG1.N.16_BV_2101 | Contact list - Read entries - Initiate an external call | M |
| | TC_PT_NG1.N.16_BV_2102 | Contact list - Delete entry | M |
| | TC_PT_NG1.N.16_BV_2103 | Contact list - Delete list - Read entries when empty | M |
| | TC_PT_NG1.N.16_BV_2104 | Contact list - Create entry - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_2105 | Contact list - Create entry - Negative Acknowledgement | M |
| | TC_PT_NG1.N.16_BV_2106 | Contact list - Read entries during external call | M |
| | TC_PT_NG1.N.16_BV_2110 | Contact list - Entry with several contact numbers | C1309 |
| | TC_PT_NG1.N.16_BV_2201 | Internal names list - Read entries - Initiate an internal call | M |
| | TC_PT_NG1.N.16_BV_2202 | Internal names list - Delete entry | M |
| | TC_PT_NG1.N.16_BV_2203 | Internal names list - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_2204 | Internal names list - Call interception - PIN protected - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_2301 | All incoming calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2302 | All incoming calls list - Delete entry | O |
| | TC_PT_NG1.N.16_BV_2303 | All incoming calls list - Delete list - Read entries when empty | O |
| | TC_PT_NG1.N.16_BV_2401 | DECT system settings list - Read entries | M |
| | TC_PT_NG1.N.16_BV_2501 | Line settings list - Read entries | M |
| | TC_PT_NG1.N.16_BV_2601 | Virtual missed calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2602 | Virtual outgoing calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2603 | Virtual incoming accepted calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2604 | Virtual all calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2605 | Virtual contact list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2606 | Virtual all incoming calls list - Read entries - Initiate an external call | O |
| | TC_PT_NG1.N.16_BV_2701 | DECT system settings list - Current PIN code - New PIN code - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_2801 | DECT system settings list - Clock master - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_2901 | DECT system settings list - Base reset - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_2902 | DECT system settings list - Base reset - PIN protected - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_3001 | DECT system settings list - FP IP address - Edit entry - Save entry | O |
| | TC_PT_NG1.N.16_BV_3501 | DECT system settings list - FP version - Read entries | M |
| | TC_PT_NG1.N.16_BV_3801 | Line settings list - Line name - Edit entry - Save entry | M |
| | | void | |
| | TC_PT_NG1.N.16_BV_4002 | Line settings list - Attached handsets - PIN protected - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_4101 | Line settings list - Dialing prefix - Edit entry - Save entry | O |
| | TC_PT_NG1.N.16_BV_4201 | Line settings list - FP melody - Edit entry - Save entry | O |
| | TC_PT_NG1.N.16_BV_4301 | Line settings list - FP volume - Edit entry - Save entry | O |
| | TC_PT_NG1.N.16_BV_4401 | Line settings list - Blocked telephone number - Edit entry - Save entry | O |
| | TC_PT_NG1.N.16_BV_4501 | Line settings list - Multiple calls mode - Edit entry - Save entry | M |
| | TC_PT_NG1.N.16_BV_4601 | Line settings list - Intrusion call - Edit entry - Save entry | C1302 |
| | TC_PT_NG1.N.16_BV_4701 | Line settings list - Permanent CLIR - Edit entry - Save entry - 'Value' subfield | C1303 |
| | TC_PT_NG1.N.16_BV_4702 | Line settings list - Permanent CLIR - Edit entry - Save entry - CLIR code subfields | C1307 |
| | TC_PT_NG1.N.16_BV_4801 | Line settings list - Call forwarding unconditional - Edit entry - Save entry - 'Value' and 'Call forwarding number' subfields | M |
| | TC_PT_NG1.N.16_BV_4802 | Line settings list - Call forwarding unconditional - Edit entry - Save entry - CFU codes subfields | C1312 |
| | TC_PT_NG1.N.16_BV_4901 | Line settings list - Call forwarding on No answer - Edit entry - Save entry - 'Value' and 'Call forwarding number' subfields | M |

| NG-DECT Part 3 PT test case index | | | |
|-----------------------------------|------------------------|--|--------------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_PT_NG1.N.16_BV_4902 | Line settings list - Call forwarding on No answer - Edit entry - Save entry - CFNA codes subfields | C1313 |
| | TC_PT_NG1.N.16_BV_5001 | Line settings list - Call forwarding on Busy subscriber - Edit entry - Save entry - 'Value' and 'Call forwarding number' subfields | M |
| | TC_PT_NG1.N.16_BV_5002 | Line settings list - Call forwarding on Busy subscriber - Edit entry - Save entry - CFB codes subfields | C1314 |
| | TC_PT_NG1.N.16_BV_5101 | DECT system settings list - Emission mode - Edit entry - Save entry | C1304 |
| | NG1.N.17 | Calling line identity restriction | O |
| TC_PT_NG1.N.17 | TC_PT_NG1.N.17_BV_301 | Temporary CLIR mode (call by call) | M |
| | NG1.N.18 | Call forwarding (external calls) | M |
| TC_PT_NG1.N.18 | No test case | | |
| | NG1.N.19 | DTMF handling | M |
| TC_PT_NG1.N.19 | TC_PT_NG1.N.19_BV_101 | Uplink DTMF transmission at call setup when FP connected to classic switching network | M |
| | TC_PT_NG1.N.19_BV_201 | Uplink DTMF transmission when connected | M |
| | NG1.N.20 | Tones provision | M |
| TC_PT_NG1.N.20 | TC_PT_NG1.N.20_BV_201 | Tones provision by the system - Ring-back tone and Busy tone | M |
| | TC_PT_NG1.N.20_BV_203 | Tones provision by the system - Intercept tone, Negative acknowledgement tone and Call waiting tone | M |
| | TC_PT_NG1.N.20_BV_206 | Tones provision by the system - Dial tone | O |
| | TC_PT_NG1.N.20_BV_207 | Tones provision by the system - Off-hook warning tone | O |
| | TC_PT_NG1.N.20_BV_208 | Tones provision by the system - Network congestion tone | O |
| | NG1.N.21 | Headset management | C1305 |
| TC_PT_NG1.N.21 | TC_PT_NG1.N.21_BV_101 | Headset capability during subscription registration | C1305 |
| | TC_PT_NG1.N.21_BV_102 | Headset capability during location registration | C1305 |
| | TC_PT_NG1.N.21_BV_201 | Headset call interception - G.722 call | C1305 |
| | TC_PT_NG1.N.21_BV_301 | Headset incoming call - G.722 call | C1305 |
| | TC_PT_NG1.N.21_BV_401 | Re-dial of last outgoing call | C1306 |
| | TC_PT_NG1.N.21_BV_501 | Re-dial of last incoming call | C1306 |
| | TC_PT_NG1.N.21_BV_601 | Headset incoming call - G.726 call - Switching from headset to handset (handset initiated) | C1306 |
| | TC_PT_NG1.N.21_BV_701 | Headset side - Headset call interception - G.726 call - Switching from headset to handset (handset initiated) | C1305 |
| | TC_PT_NG1.N.21_BV_705 | Handset side - Headset call interception - G.722 call - Switching from headset to handset (handset initiated) | C1308 |
| | NG1.N.22 | Handling of lines where second calls are signalled in-band | M |
| TC_PT_NG1.N.22 | TC_PT_NG1.N.22_BV_401 | Use of transparent commands on DCIBS lines (Basic or Off-hook CLIP enabled) or any other line | M |
| | GAP.N.31 | Internal call | M |
| TC_PT_GAP.N.31 | TC_PT_GAP.N.31_BV_101 | Internal call setup - call class checking | M |
| | TC_PT_GAP.N.31_BV_301 | Internal call CLIP | M |
| | TC_PT_GAP.N.31_BV_401 | Internal call CNIP | M |
| | TC_PT_GAP.N.31_BV_601 | Internal call codec priority - outgoing call | C1311 |
| | TC_PT_GAP.N.31_BV_602 | Internal call codec priority - incoming call | C1311 |
| | GAP.N.34 | Calling Name Identification Presentation (CNIP) | M |
| TC_PT_GAP.N.34 | TC_PT_GAP.N.34_BV_101 | Incoming call with calling party name in {CC-SETUP} | M |
| | TC_PT_GAP.N.34_BV_102 | Incoming call with calling party name in {CC-INFO} | M |
| | TC_PT_GAP.N.34_BV_103 | Incoming call with CLIP and CNIP in {CC-INFO} | M |
| | GAP.N.35 | Enhanced security | M |
| TC_PT_GAP.N.35 | TC_PT_GAP.N.35_BV_101 | Encryption of all calls | M |
| | TC_PT_GAP.N.35_BV_201 | Indication of Support of 'Re-keying' and 'early encryption' in terminal capabilities during registration | O |
| | TC_PT_GAP.N.35_BV_202 | Indication of Support of 'Re-keying' and 'early encryption' in terminal capabilities during location registration | O |
| | TC_PT_GAP.N.35_BV_203 | Re-keying procedure | O |
| | TC_PT_GAP.N.35_BV_301 | Assignment of default cipher key and usage of early encryption during incoming call | O |
| | TC_PT_GAP.N.35_BV_302 | Usage of early encryption during outgoing call | O |

| NG-DECT Part 3 PT test case index | | | |
|-----------------------------------|--|---|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_PT_GAP.N.35_BV_303 | Usage of early encryption for MM procedure | O |
| | TC_PT_GAP.N.35_BV_304 | Overwriting a default cipher key by assigning a new default cipher key with the same index | O |
| | TC_PT_GAP.N.35_BV_305 | Assign two default cipher keys with different indices. | O |
| | TC_PT_GAP.N.35_BV_306 | PP releases connection in case FP rejects early encryption on MAC layer | O |
| | TC_PT_GAP.N.35_BV_501 | Release of unexpectedly unencrypted outgoing call in call proceeding state | M |
| | TC_PT_GAP.N.35_BV_502 | Release of unexpectedly unencrypted outgoing call in connect state | M |
| | TC_PT_GAP.N.35_BV_503 | Release of unexpectedly unencrypted incoming call in alerting state | M |
| | TC_PT_GAP.N.35_BV_504 | Release of unexpectedly unencrypted incoming call in connect state. | M |
| | TC_PT_GAP.N.35_BV_505 | Release of unexpectedly unencrypted outgoing call in connect state after switching encryption support in FT off | M |
| | TC_PT_GAP.N.35_BV_506 | Release of unexpectedly unencrypted outgoing call in connect state despite of successful authentication | M |
| | TC_PT_GAP.N.35_BV_507 | Release of unexpectedly unencrypted incoming call in connect state despite of successful authentication | M |
| | NG1.A.1 | Easy PIN code registration | M |
| TC_PT_NG1.A.1 | TC_PT_NG1.A.1_BV_101 | Registration mode automatic access | M |
| | TC_PT_NG1.A.1_BV_201 | Searching mode and PIN code requests | M |
| | TC_PT_NG1.A.1_BV_301 | Base station name selection | O |
| | TC_PT_NG1.A.1_BV_401 | Registration user feedback | M |
| | NG1.A.2 | Easy pairing registration | M |
| TC_PT_NG1.A.2 | TC_PT_NG1.A.2_BV_401 | Searching mode request (default PIN) | M |
| | TC_PT_NG1.A.2_BV_402 | Searching mode request (switching back to PIN entry) | M |
| | NG1.A.3 | Handset Locator | M |
| TC_PT_NG1.A.3 | TC_PT_NG1.A.3_BV_101 | Handset Locator | M |
| | GAP.A.4 | Terminal identity number assignment in mono cell system | O |
| TC_PT_GAP.A.4 | No test case | | |
| C1301: | At least one of the two procedures implicit or explicit call intrusion shall be implemented (see Table A.5 NG1.N.10_1 and NG1.N.10_2). | | |
| C1302: | IF NG1.N.10 "Intrusion call" THEN "M" ELSE "I". | | |
| C1303: | IF NG1.N.17 "Calling line identity restriction" THEN "M" ELSE "I". | | |
| C1304: | IF NG1.M.5 "no-emission" mode is supported THEN "M" ELSE "I". | | |
| C1305: | IF the PT is a headset PP THEN "M" ELSE "I". | | |
| C1306: | IF the PT is a headset PP THEN "O" ELSE "I". | | |
| C1307: | IF NG1.N.17 "Calling line restriction" is supported AND CLIR code subfields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IEXIT_2) | | |
| C1308: | IF the PT is a headset PP THEN "I" ELSE "O". | | |
| C1309: | IF several contact numbers in contact list is supported THEN "M" ELSE "N/A" (see Table A.2 PT_IEXIT_1). | | |
| C1311: | IF PP complies one of the exception cases to this procedure listed in Clause 7.4.3.9.2 THEN "N/A" ELSE "M" (see Table A.2 PT_IEXIT_6) | | |
| C1312: | IF CFU code sub fields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IEXIT_3). | | |
| C1313: | IF CFNA code sub fields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IEXIT_4). | | |
| C1314: | IF CFB code sub fields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IEXIT_5). | | |
| C1315: | If the PT implements explicit call intrusion (NG1.N.10_2 implemented, see C1301), at least one of the two procedures "explicit handset intrusion" or "explicit line intrusion" shall be implemented (see TS 102 527-3 [14], Clause 7.4.3.8.2). | | |
| NOTE: | If the feature is not supported on FT side, the FT nevertheless implements the sending of a negative acknowledgement for that feature (see TS 102 527-3 [14], Clause 7.4.3.8.2). | | |

5.4 Fixed Part TC purposes

5.4.1 List of New Generation DECT Part 3 FT tests cases related to NG-DECT Part 1 features

This clause gives the list of NG-DECT Part 3 test cases related to the DECT "Wideband speech" (part 1) (TS 102 527-1 [13]) features. In other words, these test cases shall be implemented with the NG-DECT Part 3 requirements (see Clause 5.1).

Table 14: NG-DECT Part 3 FT Test Case Index related to NG-DECT Part 1 features

| NG-DECT Part 3 FT test case index related to NG-DECT Part 1 features | | | |
|--|----------------------|---|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | NG1.N.1 | Codec Negotiation | M |
| TC_FT_NG1.N.1 | TC_FT_NG1.N.1_BV_101 | Exchange of codec list during subscription registration | M |
| | TC_FT_NG1.N.1_BV_102 | Exchange of codec list during location registration | M |
| | TC_FT_NG1.N.1_BV_103 | NG-DECT Part 1 higher layer capabilities | M |
| | TC_FT_NG1.N.1_BV_201 | Basic service wideband speech | M |
| | TC_FT_NG1.N.1_BV_301 | Outgoing G.722 call using long slot MAC setup | M |
| | TC_FT_NG1.N.1_BV_302 | Outgoing G.726 call using full slot MAC setup | M |
| | TC_FT_NG1.N.1_BV_303 | Outgoing G.722 call using full slot MAC setup | M |
| | TC_FT_NG1.N.1_BV_304 | Outgoing G.726 call using long slot MAC setup | M |
| | TC_FT_NG1.N.1_BV_305 | Outgoing G.722 call, fall back to a G.726 codec when full to long slot type modification fails | M |
| | TC_FT_NG1.N.1_BV_306 | Outgoing call without sending any IE <<CODEC-LIST>> in {CC-SETUP} | M |
| | TC_FT_NG1.N.1_BV_307 | Outgoing call with an IE <<CODEC-LIST>> in {CC-SETUP} different from previous sent during location registration | M |
| | TC_FT_NG1.N.1_BV_321 | Incoming call G.722 | M |
| | TC_FT_NG1.N.1_BV_322 | Incoming call G.726 | M |
| | TC_FT_NG1.N.1_BV_323 | Incoming call G.722, negotiation results in G.726 | M |
| | TC_FT_NG1.N.1_WC_101 | Outgoing call Wideband at NG-DECT Part 1 Golden Device PT (Golden Device A) | M |
| | TC_FT_NG1.N.1_WC_103 | Incoming call Wideband at NG-DECT Part 1 Golden Device PT (Golden Device A) | M |
| | TC_FT_NG1.N.1_WC_105 | Service change at NG-DECT Part 1 Golden Device PT (Golden Device A) | M |
| | NG1.N.2 | Codec switching | M |
| TC_FT_NG1.N.2 | No test case | | |
| | GAP.N.30 | Calling Line Identification Presentation (CLIP) | M |
| TC_FT_GAP.N.30 | TC_FT_GAP.N.30_BV_01 | Incoming call with calling party number | M |

5.4.2 List of New Generation DECT Part 3 FT tests cases

This clause gives the list of NG-DECT Part 3 test cases related to the DECT "Extended Wideband Speech Services" (TS 102 527-3 [14]) features.

Table 15: NG-DECT Part 3 FT Test Case Index

| NG-DECT Part 3 FT test case index | | | |
|-----------------------------------|----------------------|---|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | NG1.N.1 | Codec negotiation | M |
| TC_FT_NG1.N.1 | TC_FT_NG1.N.1_BV_104 | NG-DECT Part 3 higher layer capabilities | M |
| | NG1.N.3 | Missed call notification | M |
| TC_FT_NG1.N.3 | TC_FT_NG1.N.3_BV_201 | Missed call notification after PP location registration | M |
| | NG1.N.4 | Voice message waiting notification | M |
| TC_FT_NG1.N.4 | TC_FT_NG1.N.4_BV_201 | Voice message waiting notification, activation | M |
| | TC_FT_NG1.N.4_BV_202 | Voice message waiting notification, deactivation | M |
| | NG1.N.5 | Date and Time synchronization | M |

| NG-DECT Part 3 FT test case index | | | |
|--|-----------------------|--|---------------|
| Test Group Reference | Test Case Id | Description | Status |
| TC_FT_NG1.N.5 | TC_FT_NG1.N.5_BV_101 | FT initiated Date and Time synchronization | M |
| | TC_FT_NG1.N.5_BV_102 | PT initiated Date and Time synchronization | M |
| | NG1.N.6 | Parallel Calls | M |
| TC_FT_NG1.N.6 | TC_FT_NG1.N.6_BV_401 | Codec change for parallel calls from G.722 to G.726 | M |
| | TC_FT_NG1.N.6_BV_402 | Codec change for parallel calls from G.726 to G.722 | M |
| | TC_FT_NG1.N.6_BV_501 | Sending negative acknowledgement - invalid call toggle request | M |
| | TC_FT_NG1.N.6_BV_601 | Busy system notification | C1513 |
| | NG1.N.7 | Common parallel call procedures (external or internal) | M |
| TC_FT_NG1.N.7 | TC_FT_NG1.N.7_BV_101 | Outgoing parallel call initiation (external), FP managed line selection | M |
| | TC_FT_NG1.N.7_BV_102 | Outgoing parallel call initiation (internal) | M |
| | TC_FT_NG1.N.7_BV_103 | Outgoing parallel call initiation (external), line selection using <<CALL-INFO>> IE in {CC-INFO} | M |
| | TC_FT_NG1.N.7_BV_201 | Call waiting indication (external) - CLIP on call waiting indication - End of call waiting indication | M |
| | TC_FT_NG1.N.7_BV_202 | Call waiting indication (internal) - CLIP on call waiting indication - End of call waiting indication | M |
| | TC_FT_NG1.N.7_BV_301 | Call toggle (external) | M |
| | TC_FT_NG1.N.7_BV_302 | Call toggle (internal) | M |
| | TC_FT_NG1.N.7_BV_401 | Call release and call release rejection - Resuming a call put on-hold | C1501 |
| | TC_FT_NG1.N.7_BV_601 | Call waiting acceptance (from PP to FP) (external) | M |
| | TC_FT_NG1.N.7_BV_602 | Call waiting acceptance (from PP to FP) (internal) | M |
| | TC_FT_NG1.N.7_BV_701 | Active call release with replacement (from PP to FP) - call waiting (external) | M |
| | TC_FT_NG1.N.7_BV_702 | Active call release with replacement (from PP to FP) - call on-hold (external) | M |
| | TC_FT_NG1.N.7_BV_801 | Call waiting rejection (from PP to FP) (external) | C1502 |
| | TC_FT_NG1.N.7_BV_901 | Putting a call on hold (external) - Resuming a call put on-hold | C1503 |
| | TC_FT_NG1.N.7_BV_902 | Putting a call on hold (internal) - Resuming a call put on-hold | M |
| | TC_FT_NG1.N.7_BV_1201 | CNIP on call waiting indication (external) | M |
| | TC_FT_NG1.N.7_BV_1202 | CNIP on call waiting indication (internal) | M |
| | NG1.N.8 | Call transfer (external or internal) | M |
| TC_FT_NG1.N.8 | TC_FT_NG1.N.8_BV_101 | Call transfer (external) - announced | M |
| | TC_FT_NG1.N.8_BV_201 | Call transfer (external) - unannounced | M |
| | TC_FT_NG1.N.8_BV_301 | Call re-injection to the system (external) - announced | M |
| | TC_FT_NG1.N.8_BV_302 | Call re-injection to the system (external) - unannounced | M |
| | TC_FT_NG1.N.8_BV_401 | Remote party CLIP on call transfer | M |
| | TC_FT_NG1.N.8_BV_501 | Remote party CNIP on call transfer | M |
| | NG1.N.9 | 3-party conference with established external and/or internal calls | O |
| TC_FT_NG1.N.9 | TC_FT_NG1.N.9_BV_101 | 3-party conference with established external and internal calls - release from non initiating internal party | M |
| | TC_FT_NG1.N.9_BV_102 | 3-party conference with established external and internal calls - release of external party from initiating PP | M |
| | TC_FT_NG1.N.9_BV_103 | 3-party conference with established external calls - release from initiating party | O |
| | TC_FT_NG1.N.9_BV_104 | 3-party conference with established external calls on two different lines - release from initiating party | C1514 |
| | TC_FT_NG1.N.9_BV_105 | Three-party conference call – Extended Higher Layer Capabilities (Part 2) | M |
| | NG1.N.10 | Intrusion call | O |
| TC_FT_NG1.N.10 | TC_FT_NG1.N.10_BV_101 | Implicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) - release from intruder - G.726 call | C1522 |
| | TC_FT_NG1.N.10_BV_102 | Implicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation) - release from intruder - G.726 call | C1522 |

| NG-DECT Part 3 FT test case index | | | |
|--|-----------------------|--|---------------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_FT_NG1.N.10_BV_103 | Explicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) with targeted line specified in {CC-SETUP} - release from intruder - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_104 | Explicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation) with targeted line specified in {CC-SETUP} - release from intruder - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_105 | Implicit call intrusion into a line in "single call" mode on a multiple line system (non early CC-CONNECT implementation) with targeted line specified in {CC-INFO} - release from intruder - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_106 | Implicit call intrusion into a line in "single call" mode on a multiple line system (early CC-CONNECT implementation) with targeted line specified in {CC-INFO} - release from intruder - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_201 | Explicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) - handset intrusion - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_202 | Explicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation)- handset intrusion - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_203 | Explicit call intrusion into a line in "single call" mode - line intrusion with target in {CC-INFO} - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_204 | Explicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation) - line intrusion with target in {CC-INFO} - G.722 call | C1522 |
| | TC_FT_NG1.N.10_BV_301 | Intrusion Call – Extended Higher Layer Capabilities (Part 2) | M |
| | NG1.N.11 | Call deflection (external or internal) | O |
| TC_FT_NG1.N.11 | TC_FT_NG1.N.11_BV_101 | Call deflection (internal) in multiple lines context | C1514 |
| | TC_FT_NG1.N.11_BV_201 | Call deflection (external) - first incoming call deflection | M |
| | TC_FT_NG1.N.11_BV_202 | Call deflection (external) - call waiting deflection | M |
| | NG1.N.12 | Line identification | M |
| TC_FT_NG1.N.12 | TC_FT_NG1.N.12_BV_301 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE in {CC-INFO} (non early CC-CONNECT implementation) | C1515 |
| | TC_FT_NG1.N.12_BV_302 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE in {CC-INFO} (early CC-CONNECT implementation) | C1515 |
| | TC_FT_NG1.N.12_GC_401 | Backward-compatible line identification for a first external outgoing call using <<MULTI-KEYPAD>> IE (non early CC-CONNECT implementation) | O (note 1) |
| | TC_FT_NG1.N.12_GC_402 | Backward-compatible line identification for a first external outgoing call using IE <<MULTI-KEYPAD>> IE (early CC-CONNECT implementation) | O (note 1) |
| | TC_FT_NG1.N.12_BV_501 | FP managed line selection for a first external outgoing call (non early CC-CONNECT implementation) | C1516 |
| | TC_FT_NG1.N.12_BV_502 | FP managed line selection for a first external outgoing call (early CC-CONNECT implementation) | C1516 |
| | NG1.N.13 | Call identification | M |
| TC_FT_NG1.N.13 | TC_FT_NG1.N.13_BV_201 | Call identifier assignment on outgoing call (FP to PP) - Normal call (non early CC-CONNECT implementation) - Call status indication | C1511 |
| | TC_FT_NG1.N.13_BV_202 | Call identifier assignment on outgoing call (FP to PP) - Normal call (early CC-CONNECT implementation) - Call status indication | C1511 |
| | TC_FT_NG1.N.13_BV_203 | Call identifier assignment on outgoing call (FP to PP) - Internal call - Call status indication | M |
| | TC_FT_NG1.N.13_BV_204 | Call identifier assignment on outgoing call (FP to PP) - LiA service setup - Call status indication for outgoing external call | M |
| | TC_FT_NG1.N.13_BV_205 | Call identifier assignment on outgoing call (FP to PP) - LiA service setup - Call status indication for internal call | M |

| NG-DECT Part 3 FT test case index | | | |
|-----------------------------------|------------------------|---|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_FT_NG1.N.13_BV_301 | Call identifier assignment on incoming call (FP to PP) - Normal call setup | M |
| | TC_FT_NG1.N.13_BV_302 | Call identifier assignment on incoming call (FP to PP) - LiA service setup - Call status indication for incoming external call | M |
| | NG1.N.14 | Multiple Lines | O |
| TC_FT_NG1.N.14 | TC_FT_NG1.N.14_BV_301 | Incoming external calls on a multiple line system - Incoming calls on two lines with no active PPs | M |
| | TC_FT_NG1.N.14_BV_302 | Incoming external calls on a multiple line system - Incoming calls with one active PP - Accept second call on idle PP and release it | M |
| | TC_FT_NG1.N.14_BV_303 | Incoming external calls on a multiple line system - Incoming calls with one active PP - Accept second call on active PP and release it - Resume active call | C1517 |
| | TC_FT_NG1.N.14_BV_304 | Incoming external calls on a multiple line system - Two simultaneous incoming calls | M |
| | TC_FT_NG1.N.14_BV_305 | Outgoing external calls on a multiple line system - Initiate outgoing calls on two lines (non early CC-CONNECT implementation) | C1518 |
| | TC_FT_NG1.N.14_BV_306 | Outgoing external calls on a multiple line system - Initiate outgoing calls on two lines (early CC-CONNECT implementation) | C1518 |
| | TC_FT_NG1.N.14_BV_401 | Internal calls in multiple line context | M |
| | NG1.N.15 | Multiple calls | M |
| TC_FT_NG1.N.15 | TC_FT_NG1.N.15_BV_201 | Incoming external calls on a multiple call line - Accept incoming second call on idle PP | M |
| | TC_FT_NG1.N.15_BV_202 | Incoming external calls on a multiple call line - Accept incoming second call on active PP | M |
| | TC_FT_NG1.N.15_BV_205 | Outgoing external calls on a multiple call line - Initiate outgoing second call on idle PP (non early CC-CONNECT implementation) | C1519 |
| | TC_FT_NG1.N.15_BV_206 | Outgoing external calls on a multiple call line - Initiate outgoing second call on idle PP (early CC-CONNECT implementation) | C1519 |
| | TC_FT_NG1.N.15_BV_207 | Outgoing external calls on a multiple call line - Initiate outgoing second call on active PP using <<CALL-INFORMATION>> line selection | M |
| | TC_FT_NG1.N.15_BV_301 | Busy line notification | M |
| | NG1.N.16 | List access service | M |
| TC_FT_NG1.N.16 | TC_FT_NG1.N.16_BV_301 | Start / end session sequencing and parameters - list of supported lists | M |
| | TC_FT_NG1.N.16_BV_302 | CC-RELEASE without end session - list of supported lists | M |
| | TC_FT_NG1.N.16_BV_303 | No simultaneous access to the same list from 2 different PPs - internal names list | C1510 |
| | TC_FT_NG1.N.16_BV_304 | Simultaneous access to the same list from 2 different PPs (check edit locks an entry)- internal names list | C1510 |
| | TC_FT_NG1.N.16_BV_305 | Edit Current PIN code while Line setting list session is open | M |
| | TC_FT_NG1.N.16_BV_1601 | List of supported lists - read entries | M |
| | TC_FT_NG1.N.16_BV_1701 | Missed calls list - Delete list - Read entries when empty | M |
| | TC_FT_NG1.N.16_BV_1702 | Missed calls list - List change notification - Read entries when new entries | M |
| | TC_FT_NG1.N.16_BV_1703 | Missed calls list - Delete entry - Negative acknowledgement | M |
| | TC_FT_NG1.N.16_BV_1704 | Missed calls list - Transfer number from missed calls list to contact list | M |
| | TC_FT_NG1.N.16_BV_1705 | Missed calls list - Initiate a voice call during a list access session | M |
| | TC_FT_NG1.N.16_BV_1706 | Missed calls list - List access during existing voice call with second call initiation - Switching between LA session and voice call - Returning to LA session after voice call termination | M |
| | TC_FT_NG1.N.16_BV_1801 | Outgoing calls list - Delete list - Read entries when empty | O |

| NG-DECT Part 3 FT test case index | | | |
|-----------------------------------|------------------------|---|--------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_FT_NG1.N.16_BV_1802 | Outgoing calls list - Read entries when new entries | O |
| | TC_FT_NG1.N.16_BV_1803 | Outgoing calls list - Delete entry - Negative acknowledgement | O |
| | TC_FT_NG1.N.16_BV_1901 | Incoming accepted calls list - Delete list - Read entries when empty | M |
| | TC_FT_NG1.N.16_BV_1902 | Incoming accepted calls list - Read entries when new entries | M |
| | TC_FT_NG1.N.16_BV_1903 | Incoming accepted calls list - Delete entry - Negative acknowledgement | M |
| | TC_FT_NG1.N.16_BV_2101 | Contact list - Delete list - Read entries when empty | M |
| | TC_FT_NG1.N.16_BV_2102 | Contact list - Save entry - Read entries in ascending order | M |
| | TC_FT_NG1.N.16_BV_2103 | Contact list - Query supported entry fields - Read entries in descending order | M |
| | TC_FT_NG1.N.16_BV_2104 | Contact list - Edit entry - add a second contact number field to an entry | M |
| | TC_FT_NG1.N.16_BV_2105 | Contact list - Edit entry - Save entry without changing the entry | M |
| | TC_FT_NG1.N.16_BV_2106 | Contact list - Search entries using matching options | M |
| | TC_FT_NG1.N.16_BV_2107 | Contact list - Search entries in ascending order and descending order | M |
| | TC_FT_NG1.N.16_BV_2108 | Contact list - Initiate a voice call during a list access session | M |
| | TC_FT_NG1.N.16_BV_2109 | Contact list - Entry used to update Outgoing call list | C1521 |
| | TC_FT_NG1.N.16_BV_2110 | Contact list - Delete entry - Negative acknowledgement | M |
| | TC_FT_NG1.N.16_BV_2111 | Contact list - Incoming first voice call during existing list access session | M |
| | TC_FT_NG1.N.16_BV_2201 | Internal names list - Edit entry - Save entry | M |
| | TC_FT_NG1.N.16_BV_2202 | Internal names list - New registration - List change notification - Read entries | M |
| | TC_FT_NG1.N.16_BV_2203 | Internal names list - Initiate and check internal call from internal names list | M |
| | TC_FT_NG1.N.16_BV_2210 | Internal names list - Delete entry | M |
| | TC_FT_NG1.N.16_BV_2301 | All incoming calls list - Delete list - Read entries when empty | O |
| | TC_FT_NG1.N.16_BV_2302 | All incoming calls list - Read entries when new entries | O |
| | TC_FT_NG1.N.16_BV_2303 | All incoming calls list - Delete entry - Negative acknowledgement | O |
| | TC_FT_NG1.N.16_BV_2401 | DECT system settings list - Query supported entry fields | M |
| | TC_FT_NG1.N.16_BV_2402 | DECT system settings list - Read entries | M |
| | TC_FT_NG1.N.16_BV_2501 | Line settings list - Query supported entry fields | M |
| | TC_FT_NG1.N.16_BV_2502 | Line settings list - Read entries | M |
| | TC_FT_NG1.N.16_BV_2701 | DECT system settings list - Current PIN code - New PIN code - Edit entry - Save entry | M |
| | TC_FT_NG1.N.16_BV_2801 | DECT system settings list - Clock master- Edit entry - Save entry- Read entries | M |
| | TC_FT_NG1.N.16_BV_2901 | DECT system settings list - Base reset - Edit entry - Save entry - Read entries | M |
| | TC_FT_NG1.N.16_BV_2902 | DECT system settings list - Base reset - Read entries - Default settings values | M |
| | TC_FT_NG1.N.16_BV_3001 | DECT system settings list - FP IP address - Edit entry - Save entry - Read entries | O |
| | TC_FT_NG1.N.16_BV_3501 | DECT system settings list - FP version - Read entries | M |
| | TC_FT_NG1.N.16_BV_3801 | Line settings list - Line name- Edit entry - Save entry - List change notification - Read entries | M |
| | TC_FT_NG1.N.16_BV_3901 | Line settings list - Line id - Edit entry - Save entry- Read entries | M |
| | TC_FT_NG1.N.16_BV_4001 | Line settings list - Attached handsets - Edit entry - Save entry - List change notification - Read entries after registration | M |
| | TC_FT_NG1.N.16_BV_4101 | Line settings list - Dialling Prefix - Edit entry - Save entry - Read entries- Outgoing call | O |
| | TC_FT_NG1.N.16_BV_4201 | Line settings list - FP melody - Edit entry - Save entry - Read entries | O |

| NG-DECT Part 3 FT test case index | | | |
|--|------------------------|---|---------------|
| Test Group Reference | Test Case Id | Description | Status |
| | TC_FT_NG1.N.16_BV_4301 | Line settings list - FP volume - Edit entry - Save entry Read entries | O |
| | TC_FT_NG1.N.16_BV_4401 | Line settings list - Blocked number - Edit entry - Save entry Read entries- Outgoing call blocked | O |
| | TC_FT_NG1.N.16_BV_4501 | Line settings list - Multiple calls mode - Edit entry - Save entry - List change notification - Read entries | M |
| | TC_FT_NG1.N.16_BV_4601 | Line settings list - Intrusion call - Edit entry - Save entry - List change notification - Read entries | C1504 |
| | TC_FT_NG1.N.16_BV_4701 | Line settings list - Permanent CLIR - Edit entry - Save entry - List change notification - Read entries | C1505 |
| | TC_FT_NG1.N.16_BV_4801 | Line settings list - Call Forwarding unconditional - Edit entry - Save entry - List change notification - Read entries | M |
| | TC_FT_NG1.N.16_BV_4901 | Line settings list - Call Forwarding on no answer - Edit entry - Save entry - List change notification - Read entries | M |
| | TC_FT_NG1.N.16_BV_5001 | Line settings list - Call Forwarding on busy subscriber - Edit entry - Save entry - List change notification - Read entries | M |
| | TC_FT_NG1.N.16_BV_5101 | DECT system settings list - Emission mode - Edit entry - Save entry - Read entries | C1506 |
| | NG1.N.17 | Calling line identity restriction | O |
| TC_FT_NG1.N.17 | TC_FT_NG1.N.17_BV_201 | Permanent CLIR mode (all calls) | M |
| | TC_FT_NG1.N.17_BV_202 | Permanent CLIR – Extended higher layer capabilities (Part 2) | M |
| | NG1.N.18 | Call forwarding (external calls) | M |
| TC_FT_NG1.N.18 | TC_FT_NG1.N.18_BV_201 | External Call Forwarding Unconditional (CFU) to external number | M |
| | TC_FT_NG1.N.18_BV_301 | External Call Forwarding on No Answer (CFNA) to external number | M |
| | TC_FT_NG1.N.18_BV_401 | External Call Forwarding on Busy subscriber (CFB) to external number | C1512 |
| | NG1.N.19 | DTMF handling | M |
| TC_FT_NG1.N.19 | TC_FT_NG1.N.19_BV_401 | Local DTMF feedback of dialled digits | M |
| | NG1.N.20 | Tones provision | M |
| TC_FT_NG1.N.20 | TC_FT_NG1.N.20_BV_201 | Tones provision by the system - Ring-back tone | C1523 |
| | TC_FT_NG1.N.20_BV_202 | Tones provision by the system - Busy tone | C1523 |
| | TC_FT_NG1.N.20_BV_203 | Tones provision by the system - Call waiting tone | C1523 |
| | TC_FT_NG1.N.20_BV_204 | Tones provision by the system - Negative acknowledgement tone | M |
| | | Void (Intercept tone tested in test group TC_FT_NG1.N.21) | |
| | TC_FT_NG1.N.20_BV_206 | Tones provision by the system - Dial tone | O (note 2) |
| | TC_FT_NG1.N.20_BV_207 | Tones provision by the system - Off-hook warning tone | O (note 2) |
| | TC_FT_NG1.N.20_BV_210 | Tones provision by the system - Ring-back tone on parallel call | C1523 |
| | TC_FT_NG1.N.20_BV_220 | Tones provision by the system - Backward compatibility with legacy PPs | M |
| | TC_FT_NG1.N.20_BV_301 | Transparency to tones provision by the network or PABX- Dial tone and ring back tone for a first call | C1523 |
| | TC_FT_NG1.N.20_BV_302 | Transparency to tones provision by the network or PABX - Busy tone | C1523 |
| | TC_FT_NG1.N.20_BV_303 | Transparency to tones provision by the network or PABX - Call waiting tone | C1523 |
| | TC_FT_NG1.N.20_BV_304 | Transparency to tones provision by the network or PABX - Dial tone and ring back tone for outgoing parallel call | C1523 |
| | NG1.N.21 | Headset management | M |
| TC_FT_NG1.N.21 | TC_FT_NG1.N.21_BV_201 | Headset call interception - G.722 call | M |
| | TC_FT_NG1.N.21_BV_202 | Headset call interception - G.726 call | M |
| | TC_FT_NG1.N.21_BV_204 | Headset call interception - Control code failed | M |
| | TC_FT_NG1.N.21_BV_701 | Switching from headset to handset (handset initiated) - G.722 call | M |

| NG-DECT Part 3 FT test case index | | | |
|-----------------------------------|-----------------------|--|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | NG1.N.22 | Handling of lines where second calls are signalled in-band | O |
| TC_FT_NG1.N.22 | TC_FT_NG1.N.22_BV_101 | Off-hook CLIP enabled 'double call with in-band signalling' lines - double call with in-band signalling type for outgoing call (first and second call) | M |
| | TC_FT_NG1.N.22_BV_301 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Call release | C1507 |
| | TC_FT_NG1.N.22_BV_302 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Call waiting rejection (from PP to FP) (external) | C1508 |
| | TC_FT_NG1.N.22_BV_303 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Putting a call on hold (external) | C1509 |
| | GAP.N.31 | Internal call | M |
| TC_FT_GAP.N.31 | TC_FT_GAP.N.31_BV_101 | Internal call setup - internal call class | M |
| | TC_FT_GAP.N.31_BV_102 | Internal call setup - internal general call | M |
| | TC_FT_GAP.N.31_BV_301 | Internal call CLIP | M |
| | TC_FT_GAP.N.31_BV_401 | Internal call CNIP | M |
| | TC_FT_GAP.N.31_BV_601 | Internal call codec priority | M |
| | GAP.N.34 | Calling Name Identification Presentation (CNIP) | M |
| TC_FT_GAP.N.34 | TC_FT_GAP.N.34_BV_101 | Incoming call with calling party name | M |
| | TC_FT_GAP.N.34_BV_201 | Incoming call with UTF-8 calling party name | C1520 |
| | TC_FT_GAP.N.34_GC_201 | Incoming call with calling party name - UTF-8 to IA5 characters translation | C1520 |
| | GAP.N.35 | Enhanced security | M |
| | TC_FT_GAP.N.35_BV_101 | Verify that FT enables encryption for incoming call within timer < MM_encryption_check.1 > | M |
| | TC_FT_GAP.N.35_BV_102 | Verify that FT enables encryption for outgoing call within timer < MM_encryption_check.1 > | M |
| | TC_FT_GAP.N.35_BV_105 | Release of unencrypted call in case of wrong answer to authentication request | M |
| | TC_FT_GAP.N.35_BV_106 | Release of unencrypted call in case of missing answer to authentication request | M |
| | TC_FT_GAP.N.35_BV_107 | Release of unencrypted call in case of PP sending {AUTHENTICATION-REJECT} message | M |
| | TC_FT_GAP.N.35_BV_108 | Release of unencrypted call in case of cipher reject. | M |
| | TC_FT_GAP.N.35_BV_109 | Release of unencrypted call in case of missing encryption activation on MAC layer. | M |
| | TC_FT_GAP.N.35_BV_201 | Verify indication of Support of 'Re-keying' and 'early encryption' in extended higher layer capabilities part 2 | O |
| | TC_FT_GAP.N.35_BV_202 | Usage and frequency of re-keying procedure | O |
| | TC_FT_GAP.N.35_BV_203 | Abnormal release if encryption for re-keying is not activated in MAC layer | O |
| | TC_FT_GAP.N.35_BV_204 | Abnormal release if PP does not answer to {AUTHENTICATION-REQUEST} message for re-keying procedure | O |
| | TC_FT_GAP.N.35_BV_205 | Abnormal release if PP answers to {AUTHENTICATION-REQUEST} message for re-keying procedure with { AUTHENTICATION-REJECT} | O |
| | TC_FT_GAP.N.35_BV_206 | Abnormal release if PP answers to {CIPHER_REQUEST} message for re-keying procedure with { CIPHER_REJECT} | O |
| | TC_FT_GAP.N.35_BV_301 | Assignment of default cipher key and usage of early encryption during incoming call. | O |
| | TC_FT_GAP.N.35_BV_302 | Usage of early encryption during outgoing call | O |
| | TC_FT_GAP.N.35_BV_303 | Usage of early encryption for MM procedure | O |
| | TC_FT_GAP.N.35_BV_401 | Duration of registration window | M |
| | TC_FT_GAP.N.35_BV_402 | Closing of registration window after successful registration. | M |
| | NG1.A.1 | Easy PIN code registration | O |
| TC_FT_NG1.A.1 | TC_FT_NG1.A.1_BV_401 | Registration user feedback | O |
| | NG1.A.2 | Easy pairing registration | M |
| TC_FT_NG1.A.2 | TC_FT_NG1.A.2_BV_301 | Base station limited registration mode | M |
| | TC_FT_NG1.A.2_BV_501 | Base station name selection | O |
| | NG1.A.3 | Handset Locator | O |
| TC_FT_NG1.A.3 | TC_FT_NG1.A.3_BV_101 | Handset Locator | O |

| NG-DECT Part 3 FT test case index | | | |
|-----------------------------------|--|--|----------|
| Test Group Reference | Test Case Id | Description | Status |
| | GAP.A.4 | Terminal Identity number assignment in mono cell system | O |
| TC_FT_GAP.A.4 | No test case | | |
| C1501: | IF NG1.N.22 AND call release command is not supported THEN "N/A" ELSE "M". | | |
| C1502: | IF NG1.N.22 AND call waiting rejection command is not supported THEN "N/A" ELSE "M". | | |
| C1503: | IF NG1.N.22 AND putting a call on-hold command is not supported THEN "N/A" ELSE "M". | | |
| C1504: | IF NG1.N.10 "Call intrusion" THEN "M" ELSE "I". | | |
| C1505: | IF NG1.N.17 "Calling line identity restriction" THEN "M" ELSE "I". | | |
| C1506: | IF NG1.M.5 "no-emission" mode is supported THEN "M" ELSE "I". | | |
| C1507: | IF call release command is not supported THEN "M" ELSE "N/A". | | |
| C1508: | IF call waiting rejection command is not supported THEN "M" ELSE "N/A". | | |
| C1509: | IF putting a call on-hold command is not supported THEN "M" ELSE "N/A". | | |
| C1510: | Tests cases are exclusive: IF FP supports simultaneous accesses to the same list from 2 PPs THEN run TC_FT_NG1.N.16_BV_304 ELSE run TC_FT_NG1.N.16_BV_303 (see Table A.15 FT_IXIT_11). | | |
| C1511: | Tests cases are exclusive: IF FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.13_BV_201 ELSE run TC_FT_NG1.N.13_BV_202 (see Table A.16 FT_IXIT_22). | | |
| C1512: | IF FP triggers the Call Forwarding Busy when second incoming call occurs THEN "M" else "I" (see FT_IXIT_16 in Table A.15). | | |
| C1513: | IF FP supports three parallel call contexts (or more) on one PP-FP pair THEN "I" else "M" (see FT_IXIT_15 in Table A.15). | | |
| C1514: | IF NG1.N.14 "Multiple lines" is supported THEN "O" ELSE "I". | | |
| C1515: | Tests cases are exclusive: IF FP implements 'non early CC CONNECT' on line 0 THEN run TC_FT_NG1.N.12_BV_301 ELSE run TC_FT_NG1.N.12_BV_302 (see Table A.16 FT_IXIT_22). | | |
| C1516: | Tests cases are exclusive: IF FP implements 'non early CC CONNECT' on line 0 THEN run TC_FT_NG1.N.12_BV_501 ELSE run TC_FT_NG1.N.12_BV_502 (see Table A.16 FT_IXIT_22). | | |
| C1517: | IF (NG1.N.22 "Handling of lines where second calls are signalled in band" is supported on line 1 AND the call release command is not supported by the line 1) OR (NG1.N.22 "Handling of lines where second calls are signalled in band" is supported on line 0 AND the resuming a call put on hold command is not supported by the line 0) THEN N/A ELSE m (see Table A.17 FT_IXIT_31 and FT_IXIT_34 or Table A.16 FT_IXIT_21 and FT_IXIT_27). | | |
| C1518: | Tests cases are exclusive: IF FP implements 'non early CC CONNECT' on line 0 and line 1 THEN run TC_FT_NG1.N.15_BV_305 ELSE run TC_FT_NG1.N.15_BV_306 (see Table A.16 FT_IXIT_22 and Table A.17 FT_IXIT_32). | | |
| C1519: | Test cases are exclusive: if FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.15_BV_205 ELSE TC_FT_NG1.N.15_BV_206 (see Table A.16 FT_IXIT_22). | | |
| C1520: | IF FP is connected to an UTF-8 CNIP enabled line THEN "M" ELSE "N/A" (see Table A.16 FT_IXIT_23). | | |
| C1521: | IF NG1.N.16_18 "Outgoing calls list" is supported THEN "M" ELSE "I". | | |
| C1522: | Tests cases are exclusive: IF FP implements 'non early CC CONNECT' on line 0 THEN run the five tests TC_FT_NG1.N.10_BV_101, 105, 103, 203, 201 ELSE run TC_FT_NG1.N.10_BV_102, 106, 104, 204, 202 (see Table A.16 FT_IXIT_22) | | |
| C1523: | Tests cases are exclusive: They correspond to mandatory tones. For each tone, the manufacturer shall declare which procedure is supported to provide this tone on external call (NG1.N.20_2 or NG1.N.20_3) and run only the corresponding test cases (see Table A.26). | | |
| NOTE 1: | The procedure NG1.N.12_4 corresponding to those two tests is optional. When procedure is supported, test cases are exclusive: if FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.12_GC_401 ELSE run TC_FT_NG1.N.12_GC_402 (see Table A.16, FT_IXIT_22). | | |
| NOTE 2: | These tones are optional. For each tone, the manufacturer shall declare which procedure is supported to provide this tone on external call (NG1.N.20_2 or NG1.N.20_3) and run only the corresponding test cases (see Table A.26). | | |

6 Portable Part Test specification

This clause includes lists of the test groups relevant for a NG-DECT portable part. Test cases are ordered like network features followed by application features (TS 102 527-3 [14], Clauses 6.4 and 6.9).

6.1 TC_PT_NG1.N.1 Codec negotiation tests cases

Test subgroup objectives: to check the IUT's behaviours when negotiating a codec.

| | |
|-----------------------------|---|
| TC_PT_NG1.N.1_BV_101 | NG-DECT Part 1 capability during subscription registration |
| Reference: | TS 102 527-1 [13], Clauses 7.3.1 and 7.3.7 EN 300 175-5 [5], Clause 7.7.41 |
| Initial condition: | No access rights. |
| Stimulus: | A44 set to 1 on TS_1. Perform an access rights request from IUT |
| Pass criteria: | Verify that the IUT includes in the {ACCESS-RIGHTS-REQUEST} message: <ul style="list-style-type: none"> • an IE <<TERMINAL-CAPABILITY>> with following capabilities declared: <ul style="list-style-type: none"> - Full and long 640 slots in Slot type capability field (octet 3c) - "GAP supported" in Profile indicator_1 field (octet 4) - "NG-DECT Part 1: Wide band voice supported" in Profile indicator_7 field (octet 4f) • an IE <<CODEC-LIST>> with G.722 codec, G.726 codec, and "Codec negotiation possible" indications |
| Comments: | The IUT may access the Internal Names list after registration and may perform all list access operations (Including: Read / Search / Save, etc.) |

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|-----------------------------|--|
| TC_PT_NG1.N.1_BV_102 | NG-DECT Part 1 capability during location registration |
| Reference: | TS 102 527-1 [13], Clause 7.3.1 EN 300 175-5 [5], Clause 7.7.41 |
| Initial condition: | T-00 |
| Stimulus: | Perform a location registration request from IUT (Switch IUT off and on again) |
| Pass criteria: | Verify that the IUT includes in the {LOCATE-REQUEST} message: <ul style="list-style-type: none"> • an IE <<TERMINAL-CAPABILITY>> with following capabilities declared: <ul style="list-style-type: none"> - Full and long 640 slots in Slot type capability field (octet 3c) - "GAP supported" in Profile indicator_1 field (octet 4) - "NG-DECT Part 1: Wide band voice supported" in Profile indicator_7 field (octet 4f) • an IE <<CODEC-LIST>> with G.722 codec, G.726 codec, and "Codec negotiation possible" indications |
| Comments: | The IUT may access the Internal Names list after registration and may perform all list access operations (Including: Read / Search / Save, etc.) |

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|-----------------------------|---|
| TC_PT_NG1.N.1_BV_103 | NG-DECT Part 3 capability during subscription registration |
| Reference: | TS 102 527-1 [13], Clause 7.4.9.1 EN 300 175-5 [5], Clause 7.7.41 |
| Initial condition: | No access rights. |
| Stimulus: | A44 set to 1 on TS_1. Perform an access rights request from IUT |
| Pass criteria: | Verify that the IUT includes in the {ACCESS-RIGHTS-REQUEST} message an IE <<TERMINAL-CAPABILITY>> with following capabilities declared: <ul style="list-style-type: none"> • "TCLw > 55 dB" in Echo parameters field (octet 3b) • "Support of NG-DECT Part 3" capability in Profile indicator_7 octet (octet 4f) |
| Comments: | The IUT may access the Internal Names list after registration and may perform all list access operations (Including: Read / Search / Save, etc.) |

| | |
|-----------------------------|--|
| TC_PT_NG1.N.1_BV_104 | NG-DECT Part 3 capability during location registration |
| Reference: | TS 102 527-3 [14], Clause 7.4.9.1 EN 300 175-5 [5], Clause 7.7.41 |
| Initial condition: | T-00 |
| Stimulus: | Perform a location registration request from IUT (Switch IUT off and on again) |
| Pass criteria: | Verify that the IUT includes in the {LOCATE-REQUEST} message an IE <<TERMINAL-CAPABILITY>> with following capabilities declared: <ul style="list-style-type: none"> "TCLw > 55 dB" in Echo parameters field (octet 3b) "Support of NG-DECT Part 3" capability in Profile indicator_7 field (octet 4f) |
| Comments: | The IUT may access the Internal Names list after registration and may perform all list access operations (Including: Read / Search / Save, etc.) |
| TC_PT_NG1.N.1_BV_201 | Basic service wideband speech |
| Reference: | TS 102 527-1 [13], Clause 7.3.2 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT |
| Pass criteria: | Verify that the IUT sets "wideband speech default" attribute in an IE <<BASIC-SERVICE>> in {CC-SETUP} message |
| TC_PT_NG1.N.1_BV_301 | Outgoing call, codec chosen in {CC-SETUP-ACK} without slot type modification |
| Reference: | TS 102 527-3 [14], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose in a {CC-SETUP-ACK} message, a mandatory codec in the list compatible with the already established slot type |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-01 to perform a codec negotiation without slot type modification |
| TC_PT_NG1.N.1_BV_303 | Outgoing call, codec chosen in {CC-CALL-PROC} without slot type modification |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose in a {CC-CALL-PROC} message, a mandatory codec in the list compatible with the already established slot type |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-02 to perform a codec negotiation without slot type modification |
| TC_PT_NG1.N.1_BV_308 | Outgoing call, codec chosen in {CC-CONNECT} message in state T-01 without slot type modification |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 2 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose in a {CC-CONNECT} message, a mandatory codec in the list compatible with the already established slot type |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-01 to perform a codec negotiation without slot type modification |
| TC_PT_NG1.N.1_BV_309 | Outgoing call, codec chosen in {CC-SETUP-ACK} with slot type modification |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose in a {CC-SETUP-ACK} message, another mandatory codec in the list with a different slot type from the already established one |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-01 to perform a codec negotiation with slot type modification |

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|-----------------------------|---|
| TC_PT_NG1.N.1_BV_311 | Outgoing call, codec chosen in {CC-CALL-PROC} message with slot type modification |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose in a {CC-CALL-PROC} message, another mandatory codec in the list with a different slot type from the already established one |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-02 to perform a codec negotiation with slot type modification |

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|-----------------------------|---|
| TC_PT_NG1.N.1_BV_316 | Outgoing call, codec chosen in {CC-CONNECT} in state T-01 with slot type modification |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 2 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose in a {CC-CONNECT} message, another mandatory codec in the list with a different slot type from the already established one |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-01 to perform a codec negotiation with slot type modification |

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|-----------------------------|---|
| TC_PT_NG1.N.1_BV_317 | Outgoing call, fall back to a mandatory codec when slot type modification fails |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 2 |
| Initial condition: | T-00 |
| Stimulus: | Perform an outgoing call from IUT. TS_1 will choose a different mandatory codec in the list in a {CC-CONNECT} message. TS_1 will reject the slot type modification. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able to fall back to a mandatory codec supporting the current slot format and indicates so by sending {IWU-INFO} |

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|-----------------------------|---|
| TC_PT_NG1.N.1_BV_321 | Incoming call G.722, full paging |
| Reference: | TS 102 527-1 [13], Clauses 7.3.3, D.1.3.1 and Figure D.7 |
| Initial condition: | T-00 |
| Stimulus: | Perform incoming call G.722 (full paging (Long slot; j = 640), G.722 prioritized) from TS_1. Call pick up on IUT. |
| Pass criteria: | Verify that the IUT selects a codec only in one of the following messages: {CC-ALERTING} and {CC-CONNECT} (other messages not allowed) Verify by checking end-to-end U-plane connection that the IUT is able to process an incoming call G.722 through full paging |

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|-----------------------------|---|
| TC_PT_NG1.N.1_WC_101 | Outgoing call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device A) |
| Reference: | TS 102 527-1 [13], Clauses D.1.2.1, D.1.2.2 |
| Initial condition: | T-00, A wideband corded SIP phone (SIP-WB-PH) is connected to the SIP server. IUT registered to this Golden Device FT |
| Stimulus: | Perform an outgoing call from IUT to the SIP-WB-PH. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that a test audio signal (e.g. sine wave 6 kHz) transmitted to/from the corded phone can be heard on both ends |

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|-----------------------------|---|
| TC_PT_NG1.N.1_WC_102 | Outgoing call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device B) |
|-----------------------------|---|

Same as TC_PT_NG1.N.1_WC_401 but with the second Golden Device FT.

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|-----------------------------|---|
| TC_PT_NG1.N.1_WC_103 | Incoming call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device A) |
| Reference: | TS 102 527-1 [13], Clause D.1.3.1 |
| Initial condition: | T-00, A wideband corded SIP phone (SIP-WB-PH) is connected to the SIP server. IUT registered to this Golden Device FT |
| Stimulus: | An outgoing call is established from the corded wideband phone (SIP-WB-PH) to the Golden Device FT. The call is answered on the IUT. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that a test audio signal (e.g. sine wave 6 kHz) transmitted to/from the corded phone can be heard on both ends |

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|-----------------------------|---|
| TC_PT_NG1.N.1_WC_104 | Incoming call Wideband at NG-DECT Part 1 Golden Device FT (Golden Device B) |
|-----------------------------|---|

Same as TC_PT_NG1.N.1_WC_103 but with the second Golden Device FT.

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|-----------------------------|--|
| TC_PT_NG1.N.1_WC_105 | Service change at NG-DECT Part 1 Golden Device FT (Golden Device A) |
| Reference: | TS 102 527-1 [13], Clause D.1.4.1 |
| Initial condition: | A wideband corded SIP phone (SIP-WB-PH) and a narrow band corded SIP phone (SIP-NB-PH) are connected to the SIP server G.722 call established between IUT and a wideband corded SIP phone (SIP-WB-PH) as is in TC_PT_NG1.N.1_WC_101 |
| Stimulus: | Perform a call transfer from the corded wideband phone (SIP-WB-PH) to the corded narrowband phone (SIP-NB-PH) initiated by the corded wideband phone. This results in the SIP server re-negotiating from wideband to narrowband. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that a test audio signal (e.g. sine wave 2 kHz) transmitted to/from the corded phone can be heard on both ends |

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|-----------------------------|---|
| TC_PT_NG1.N.1_WC_106 | Service change at NG-DECT Part 1 Golden Device FT (Golden Device B) |
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Same as TC_PT_NG1.N.1_WC_105 but with the second Golden Device FT.

6.2 TC_PT_NG1.N.2 Codec switching tests cases

Test subgroup objectives: to check the IUT's behaviours during codec switching.

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|-----------------------------|--|
| TC_PT_NG1.N.2_BV_101 | Codec switching from G.722 to G.726 |
| Reference: | TS 102 527-1 [13], Clauses 7.3.4, 7.3.5, D.1.4.1 and Figure D.10 |
| Initial condition: | T-10 (IUT+TS_1) in G.722 |
| Stimulus: | Perform a codec change from TS_1 |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-10 to perform a codec switching from G.722 to G.726 |
| Comments: | IUT and TS_1 shall send their respective {IWU-INFO} messages regardless of reception of {IWU-INFO} from the other side |

| | |
|-----------------------------|--|
| TC_PT_NG1.N.2_BV_102 | Codec switching from G.726 to G.722 |
| Reference: | TS 102 527-1 [13], Clauses 7.3.4 and 7.3.5 |
| Initial condition: | T-10 (IUT+TS_1) in G.726 |
| Stimulus: | Perform a codec change from TS_1 |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able in state T-10 to perform a codec switching from G.726 to G.722 |
| Comments: | IUT and TS_1 shall send their respective {IWU-INFO} messages regardless of reception of {IWU-INFO} from the other side |

6.3 TC_PT_NG1.N.3 Missed call notification tests cases

Test subgroup objectives: to check the IUT's behaviours when receiving missed call notification.

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|-----------------------------|--|
| TC_PT_NG1.N.3_BV_201 | Missed call notification, activation |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.3, Table 15 |
| Initial condition: | T-00 |
| Stimulus: | Send a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, A new external missed voice call just arrived, 1>(<=<01H,81H,81H>) < List change indication, Missed calls list, 10>(<=<03H,81H,8AH>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> from TS_1 |
| Pass criteria: | Verify that the IUT indicates the missed call to the receiving user |

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|-----------------------------|--|
| TC_PT_NG1.N.3_BV_202 | Missed call notification, deactivation |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.3, Table 15 |
| Initial condition: | T-00, Missed call notified (Run TC_PT_NG1.N.3_BV_201) |
| Stimulus: | Send a {FACILITY} with IE <<EVENTS NOTIFICATION= <Missed call, No new missed call arrived, 0>(<=<01H,82H,80H>) < List change indication, Missed calls list, 10> (<=<03H,81H,8AH>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> from TS_1 |
| Pass criteria: | Verify that the IUT deactivates the missed call indication to the receiving user |

| | |
|-----------------------------|---|
| TC_PT_NG1.N.3_BV_203 | Missed call notification, activation while on active call |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.3 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)> 2. Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> from TS_1 3. Send a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, A new external missed voice call just arrived, 1>(<=<01H,81H,81H>) < List change indication, Missed calls list, 10>(<=<03H,81H,8AH>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> from TS_1 Hang up on IUT 4. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT indicates the call waiting to the receiving user 2. Verify that the IUT stops the call waiting presentation to the receiving user 3. Verify that the IUT sends to TS_1 a {CC-RELEASE} message 4. Verify that the IUT indicates the missed call to the receiving user |
| Comments: | At the end of the test, TS_1 may re-send an <<EVENTS NOTIFICATION>> to de-notify the missed call so that the handset may clear its display or led indication related to the missed call |

6.4 TC_PT_NG1.N.4 Voice message waiting notification tests cases

Test subgroup objectives: to check the IUT's behaviours when receiving voice message waiting notification.

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|-----------------------------|--|
| TC_PT_NG1.N.4_BV_201 | Voice message waiting notification, activation |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.2, Table 14 |
| Initial condition: | T-00 |
| Stimulus: | Send a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Message waiting, voice, 2>(<=<00H,81H,82H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> from TS_1 |
| Pass criteria: | Verify that the IUT indicates 2 voice messages waiting to the receiving user |

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|-----------------------------|--|
| TC_PT_NG1.N.4_BV_202 | Voice message waiting notification, deactivation |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.2, Table 14 |
| Initial condition: | T-00, Voice message waiting notified (Run TC_PT_NG1.N.4_BV_201) |
| Stimulus: | Send a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Message waiting, voice, 0>(<00H,81H,80H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> from TS_1 |
| Pass criteria: | Verify that the IUT deactivates the voice message waiting indication to the receiving user |

6.5 TC_PT_NG1.N.5 Date and time synchronization tests cases

Test subgroup objectives: to check the IUT's behaviours regarding date and time synchronization.

Declarations (see Annex A):

- NG1.N.5_1 "PT initiated Date and Time synchronization" sub procedure is optional. So the manufacturer shall declare if it is supported.

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|-----------------------------|--|
| TC_PT_NG1.N.5_BV_101 | FT initiated Date and Time synchronization |
| Reference: | TS 102 527-3 [14], Clauses 7.4.2.1 and 7.4.2, Table 16 |
| Initial condition: | T-00 |
| Stimulus: | Send a {FACILITY} message for date and time synchronization with IE <<TIME-DATE = <Time and Date, The current time/date, (35H, 01H, 14H, 18H, 52H, 12H, 00H)> >> from TS_1 |
| Pass criteria: | Verify that the IUT sets its date to 14-Jan-2035 and its time to 18h 52mn (18h stands for 6p.m) |
| Comments: | Method to check time after test might be device specific Seconds may differ from sent value |

| | |
|-----------------------------|--|
| TC_PT_NG1.N.5_BV_102 | PT initiated Date and Time synchronization |
| Reference: | TS 102 527-3 [14], Clauses 7.4.2.2 and 7.4.2, Table 16 |
| Initial condition: | T-00 |
| Stimulus: | Modify date and time on the IUT to 22-May-2035 and 05h 33mn 07sec |
| Pass criteria: | Verify that the IUT sends to TS_1 a {FACILITY} message with IE <<TIME-DATE = <Time and Date, The current time/date, (35H, 05H, 22H, 05H, 33H, do not care value, 00H)> >> |
| Comments: | Some IUT may not allow to configure the seconds. As a result, octet 6 seconds is not tested. Some IUTs have separated menus for changing the date and the time and thus send two FACILITY messages. The tester shall cope with this behaviour. |

6.6 TC_PT_NG1.N.6 Parallel calls tests cases

Test subgroup objectives: to check the IUT's behaviours regarding parallel calls common requirements taking into account the following considerations:

- As NG1.N.6_2 "Control messages" and NG1.N.6_3 "Sending keypad information" procedures are tested implicitly when testing NG1.N.7 "Common parallel call procedures (external or internal)", there is no test case defined for these two procedures.

| TC_PT_NG1.N.6_BV_501 | Sending negative acknowledgement - call toggle unsuccessful |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.4 and 7.4.3.5.3 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), One parallel external call on hold on line 0 (call id b) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a call toggle from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' and IE <<CALL-INFORMATION>> specifying (call id b, CS call hold, control code failed) =<(1, 0, value b), (2, 1, 9), (2, 2, 3)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 31H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Verify that the IUT indicates that the service cannot be fulfilled, generates a negative acknowledgement tone and stops the generation by itself Verify end-to-end U-plane connection between IUT and TS_1 |

| TC_PT_NG1.N.6_BV_601 | Busy line notification |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.8.3 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing external parallel call on line 0 to "0123456789" phone number from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 04H indicating 'Busy tone on' and IE <<CALL-INFORMATION>> specifying (call id b, CS call disconnecting, reason=line in use) =<(1, 0, value a), (2, 1, 6), (2, 2, 1)> 3. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 3FH indicating 'Tones off' and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value a)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits 2. Verify that the IUT indicates that the line is busy and generates a busy tone 3. Verify that the IUT stops the tone generation Verify end-to-end U-plane connection between IUT and TS_1 |

6.7 TC_PT_NG1.N.7 Common parallel call procedures tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Common parallel call procedures (external or internal).

Declarations (see Annex A):

- NG1.N.7_7 "Active call release with replacement (from PP to FP)" is optional. So the manufacturer shall declare if it is supported for each sub procedure: call waiting and call on-hold.
- NG1.N.7_9 "Putting a call on-hold" is optional. So the manufacturer shall declare if it is supported.
- NG1.N.7_10 "Resuming a call put on-hold" is optional. So the manufacturer shall declare if it is supported.

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|-----------------------------|---|
| TC_PT_NG1.N.7_BV_103 | Outgoing parallel internal call initiation |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.1 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | 1. Perform an internal outgoing parallel call on IUT towards PP2 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> If dialing information was not received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> |
| Pass criteria: | 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 17H digit, and possibly together with terminal Id of PP2, or 2AH in case of internal general call 2. If dialing information was not received in step 1 then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to the terminal Id of PP2, or 2AH in case of internal general call, and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_2 |
| Comments: | IUT could access to internal names list, and/or initiate internal general call, to initiate internal call |

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|-----------------------------|---|
| TC_PT_NG1.N.7_BV_201 | Call waiting indication (external) - CLIP on call waiting indication - End of call waiting indication |
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.5.2, 7.4.15.2.1, and 7.4.3.5.10 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <International number, Unknown, '33298951207'> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> |
| Pass criteria: | 1. Verify that the IUT indicates the call waiting to the receiving user and generates a call waiting tone and stops the generation by itself Verify CLIP presentation on IUT display according to its display capabilities 2. Verify that the IUT stops the call waiting presentation to the receiving user |

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|-----------------------------|---|
| TC_PT_NG1.N.7_BV_202 | Call waiting indication (internal) - CLIP on call waiting indication - End of call waiting indication |
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.5.2 and 7.4.3.5.10 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> |
| Pass criteria: | 1. Verify that the IUT Indicates the call waiting to the receiving user, generates a call waiting tone and stops the generation by itself Verify CLIP presentation on IUT display 2. Verify that the IUT stops the call waiting presentation to the receiving user |
| Comments: | Internal CLIP is the terminal Identity number of the calling part |

| | |
|-----------------------------|--|
| TC_PT_NG1.N.7_BV_301 | Call toggle (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.3 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), one parallel external call on hold on line 0 (call id b) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a call toggle from IUT 2. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 3. Perform a call toggle from IUT 4. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call hold) =<(1, 0, value b), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 either <ul style="list-style-type: none"> • a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 31H) digits and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> or • a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 41H) and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> (hold call id a). followed by, a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 42H) and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> (resume call id b) 2. Verify end-to-end U-plane connection between IUT and TS_1 3. Verify that the IUT sends to TS_1 either <ul style="list-style-type: none"> • a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 31H) digits and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> or if declared (see Annex A, Table A.4) • a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 41H) and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> (hold call id b). followed by, a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 42H) and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> (resume call id a) 4. Verify end-to-end U-plane connection between IUT and TS_1 |

| TC_PT_NG1.N.7_BV_302 | Call toggle (internal) |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.3 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), one parallel internal call on hold (call id b) with PP2 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a call toggle from IUT 2. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 3. Perform a call toggle from IUT 4. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call hold) =<(1, 0, value b), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 either <ul style="list-style-type: none"> • a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 31H) and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> or • a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 41H) and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> (hold call id a), followed by, a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 42H) and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> (resume call id b) 2. Verify end-to-end U-plane connection between IUT and TS_2 3. Verify that the IUT sends to TS_1 either <ul style="list-style-type: none"> • a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 31H) and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> or if declared (see Annex A, Table A.4) • a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 41H) and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> (hold call id b), followed by, a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 42H) and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> (resume call id a) 4. Verify end-to-end U-plane connection between IUT and TS_1 |

| TC_PT_NG1.N.7_BV_401 | Call release and call release rejection - Resuming a call put on-hold |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.4 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), one parallel external call on hold on line 0 (call id b) |
| Stimulus: | <ol style="list-style-type: none"> 1. Release active call from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> 3. Resume call put on hold from IUT. This may require or not an action of the user. 4. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 2. None 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 42H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 4. Verify end-to-end U-plane connection between IUT and TS_1 |
| Comments: | From stimulus 2 to stimulus 4, TS_1 sends mute patterns to IUT |

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| TC_PT_NG1.N.7_BV_601 Reference: Initial condition: Stimulus: Pass criteria: | Call waiting acceptance (from PP to FP) (external) TS 102 527-3 [14], Clause 7.4.3.5.6 External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = < National number, National standard plan, Presentation restricted, User-provided, verified and passed, "> >> and IE <<CALLING PARTY NAME = < Presentation restricted, UTF-8, Network provided, "> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 1a. Accept waiting call from IUT 2. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 1. Verify that the IUT indicates the call waiting to the receiving user, with CLIP or CNIP presentation on IUT display ("Private", "Hidden" or any equivalent display) 1a. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Verify end-to-end U-plane connection between IUT and TS_1 |
| TC_PT_NG1.N.7_BV_602 Reference: Initial condition: Stimulus: Pass criteria: | Call waiting acceptance (from PP to FP) (internal) TS 102 527-3 [14], Clause 7.4.3.5.6 2 PPs registered (IUT is PP1, TS_2 is NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> Accept waiting call from IUT 2. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Verify end-to-end U-plane connection between IUT and TS_2 |
| TC_PT_NG1.N.7_BV_701 Reference: Initial condition: Stimulus: Pass criteria: Comments: | Active call release with replacement (from PP to FP) - call waiting (external) TS 102 527-3 [14], Clause 7.4.3.5.12 External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> set to the value 07H indicating 'Call waiting tone on' and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = << National number, National standard plan, '123456789012345678'>> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Accept waiting call from IUT with active call released 3. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 1. Verify that the IUT indicates the call waiting to the receiving user 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 38H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_1 In this particular test case, no IE SIGNAL is sent toward the IUT intentionally. This test case simulates a situation where the FP plays an inband call waiting tone. The IUT shall however correctly handle the call waiting |

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| TC_PT_NG1.N.7_BV_702 | Active call release with replacement (from PP to FP) - call on-hold (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.12 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), one parallel external call on hold on line 0 (call id b) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an active call release with replacement from IUT 2. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 38H) digits and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Verify end-to-end U-plane connection between IUT and TS_1 |

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| TC_PT_NG1.N.7_BV_801 | Call waiting rejection (from PP to FP) (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.7 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> set to the value 07H indicating 'Call waiting tone on' and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <International number, Unknown, '33298951207'> >> and IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, User-provided, verified and passed, 'CLIP&CNIP'> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Reject waiting call from IUT 3. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT indicates the call waiting to the receiving user 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 36H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_1 |

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| TC_PT_NG1.N.7_BV_901 | Putting a call on-hold (external) - Resuming a call put on-hold |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.8 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), |
| Stimulus: | <ol style="list-style-type: none"> 1. Put call on hold from IUT 2. Resume call put on hold from IUT |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 41H) and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> None 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 42H) and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> Verify end-to-end U-plane connection between IUT and TS_1 |
| Comments: | From stimulus 1 to stimulus 2, TS_1 sends mute patterns to IUT |

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| TC_PT_NG1.N.7_BV_1201 | CNIP on call waiting indication (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.11 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, User-provided, verified and passed, 'CW external CNIP'> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> |
| Pass criteria: | Verify CNIP presentation on IUT display of 'CW external CNIP'. According to its display capabilities the CNIP might be abbreviated by the IUT. |

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| TC_PT_NG1.N.7_BV_1202 | CNIP on call waiting indication (internal) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.11 EN 300 444 [12], Clause 8.44 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)>,)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, User provided, verified and passed, 'CW int CNIP'> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> |
| Pass criteria: | Verify CNIP presentation on IUT display of 'CW int CNIP' |

6.8 TC_PT_NG1.N.8 Call transfer tests cases

Test subgroup objectives: to check the IUT's behaviours regarding call transfer procedures.

In the following test cases, TS_1 plays the role of a FP where a virtual NG PP2 is registered

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| TC_PT_NG1.N.8_BV_101 | Call transfer (external) – announced |
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.6 and 7.4.15.2.1 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_1 is FT + NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an internal outgoing parallel call on IUT towards PP2 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> If dialing information was not received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> 3. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' and IE <<CALL-INFORMATION>> specifying (call id b CS call alerting) =<(1, 0, value b), (2, 1, 4)> 4. Sends a {CC-INFO} message from TS_1 with an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' and IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 5. Send a call transfer request from IUT (in order to transfer call with call id a to PP2) 6. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>, followed by a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 17H digit, and possibly together with terminal Id of PP2 2. If dialing information was not received in step 1 then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to the terminal Id of PP2, and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify that the IUT generates a ring-back tone 4. Verify that the IUT stops the tone generation Verify end-to-end U-plane connection between IUT and TS_1 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 34H) digits and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 6. Verify that the IUT send to TS_1 a {CC-RELEASE-COM} message |
| Comments: | IUT could access to internal names list to initiate internal call The call transfer is initiated by the user either in stimulus 1 or in stimulus 5 (depending on the user interface of the IUT) |

| TC_PT_NG1.N.8_BV_102 | Call transfer (external) - unannounced |
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| Reference: | TS 102 527-3 [14], Clauses 7.4.3.6 and 7.4.15.2.1 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_1 is FP + NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an internal outgoing parallel call on IUT towards PP2 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> If dialing information was not received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> 3. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' and IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)> 4. Send a call transfer request from IUT (in order to transfer call with call id a to PP2) 5. Send a {CC-INFO} message with an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 6. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>, followed by a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 17H digit, and possibly together with terminal Id of PP2 2. If dialing information was not received in step 1 then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to the terminal Id of PP2, and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify that the IUT generates a ring-back tone 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 34H) digits and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 5. Verify that the IUT stops the tone generation 6. Verify that the IUT send to TS_1 a {CC-RELEASE-COM} message |
| Comments: | IUT could access to internal names list to initiate internal call The call transfer is initiated by the user either in stimulus 1 or in stimulus 4 (depending on the user interface of the IUT) |

| TC_PT_NG1.N.8_BV_103 | Call re-injection to the system (external) |
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| Reference: | TS 102 527-3 [14], Clause 7.4.3.6.3 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_1 is FP + NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an internal outgoing parallel call on IUT towards all PPs 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> If dialing information was not received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> 3. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' and IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)> 4. Send a call transfer request from IUT (in order to transfer call with call id a to any PP) 5. Send a {CC-INFO} message with an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 6. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>, followed by a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 17H digit, and possibly together with 2AH digit 2. If dialing information was not received in step 1 then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 2AH in and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify that the IUT generates a ring-back tone 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 34H) digits and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 5. Verify that the IUT stops the tone generation 6. Verify that the IUT send to TS_1 a {CC-RELEASE-COM} message |
| Comments: | IUT could access to internal names list to initiate internal call The call transfer is initiated by the user either in stimulus 1 or in stimulus 4 (depending on the user interface of the IUT) |

| TC_PT_NG1.N.8_BV_104 | Remote party CLIP on call transfer (external) |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.6.4 and 7.4.3.6.5 Figure 18 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_1 is FP + NG PP2), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <Call class = internal call>>>, IE <<SIGNAL>> set to 40H indicating 'Alerting on - pattern 0', and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)>, <ol style="list-style-type: none"> 1a. Send a {CC-INFO} message from TS_1 with IE << CALLING PARTY NUMBER = < Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2 >>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <National number, National standard plan, '0298123456'>>> and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, updated call id a, CS call under transfer) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 12)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT send to TS_1 a {CC-ALERTING} message <ol style="list-style-type: none"> 1a. Verify CLIP presentation on IUT display of PP2's internal CLIP 2. Verify CLIP presentation on IUT display according to its display capabilities of '0298123456' phone number |
| Comments: | Internal CLIP is the terminal Identity number of the calling part |

| TC_PT_NG1.N.8_BV_105 | Remote party CNIP on call transfer (external) |
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| Reference: | TS 102 527-3 [14], Clause 7.4.3.6.5 Figure 18 |
| Initial condition: | Internal names test list content (see Clause 4.1.1.1.7), 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <Call class = internal call>>>, IE <<SIGNAL>> set to 40H indicating 'Alerting on - pattern 0', and with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)>, <ol style="list-style-type: none"> 1a. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, User-provided, verified and passed, internal names list entry of PP2.> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NAME= <Presentation allowed, UTF-8, User-provided, verified and passed, "Transferred CNIP"> >> and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, updated call id a, CS call under transfer) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 12)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT send to TS_1 a {CC-ALERTING} message <ol style="list-style-type: none"> 1a. Verify CNIP presentation on IUT display of PP2's internal CNIP 'Living-room' 2. Verify CNIP presentation on IUT display according to its display capabilities of 'Transferred CNIP' |

6.9 TC_PT_NG1.N.9 3-party conference with established external and/or internal calls tests cases

Test subgroup objectives: to check the IUT's behaviours regarding 3-party conference with established external and/or internal calls.

Declarations (see Annex A):

- NG1.N.9 "3-party conference with established external and/or internal calls" feature is optional on PP side, so the manufacturer shall declare if it is supported.

| TC_PT_NG1.N.9_BV_101 | 3-party conference with established external and internal calls - IUT is the initiating party - release from one of the non initiating parties |
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| Reference: | TS 102 527-3 [14], Clause 7.4.3.7 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_1 is FP + NG PP2), External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), one parallel internal call on hold (call id b) with PP2 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a 3-party conference call request from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 5)> and IE <<CALLING PARTY NUMBER = <International number, Unknown, '33299886655'> >> to simulate a hang up from NG PP2 4. Hang up from IUT 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 32H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Verify end-to-end U-plane connection between IUT and TS_1 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.9_BV_102 | 3-party conference with established external and internal calls - IUT is not the initiating party |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.7 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), Internal call in T-10 (IUT+TS_1) initiated by IUT (call id b) with PP2, One parallel external call on-hold on line 0 (call id a) |
| Stimulus: | 1. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, updated call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 11)> 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> as a result of release of external party from TS_2 3. Hang up from IUT 4. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify end-to-end U-plane connection between IUT and TS_1/TS_2 2. Verify end-to-end U-plane connection between IUT and TS_1 3. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.9_BV_103 | 3-party conference with established external and internal calls - IUT is the initiating party – FT sends negative acknowledgement |
| Test purpose | Verify that the PP IUT does not drop the existing call when it receives a negative acknowledgement for a conference call request |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.7.1 |
| Initial condition: | Two PPs registered (IUT is NG PP1, TS_2 is NG PP2, TS_1 is NG FP) External call in F-10 (TS_1) between IUT (in T-10) and Phone A on line 0 (call id a) Parallel internal call on hold between IUT and TS_2 (call id b) TS_1 (FP) has bit a33 (3 party conference) set in Extended Higher Layer Capabilities (Part 2) IUT and TS_2 attached to line 0 only |
| Time sequence: | s1 [USR >> IUT] Initiate a Conference Call Request a1 [IUT >> TS_1] {CC-INFO} with <<MULTI-KEYPAD>>(1CH, 32H) and <<CALL-INFORMATION>>(call id b) s2 [TS_1 >> IUT] {CC-INFO} with <<CALL_INFORMATION>> with: - call status = 'CS call hold', - call status reason = 'control code failed', - call id = 'call id b' a2.1 [IUT] The IUT caters with the negative acknowledgement in an implementation specific way. a2.2 [IUT <> TS_1] End to end U-plane connection (with Phone A) s3 [TS_1 >> IUT] {CC-RELEASE} message a3 [IUT >> TS_1] {CC-RELEASE-COM} message |
| Pass criteria: | Verify all answers In a2.2 verify that call with call id a is still active |
| Comments: | |

6.10 TC_PT_NG1.N.10 Intrusion call tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Intrusion call.

Declarations (see Annex A):

- NG1.N.10 "Intrusion call" feature is optional on PP side, so the manufacturer shall declare if it is supported.
- If the call intrusion feature is supported, supplier shall declare at least one of the 2 following procedures :
 - NG1.N.10_1 "Implicit call intrusion into a line in 'single call' mode" is optional. So the manufacturer shall declare if it is supported.
 - NG1.N.10_2 "Explicit call intrusion (from PP to FP)" is optional. So the manufacturer shall declare if it is supported.

Table 16: Summary of call intrusion test cases on PT side

| Type of intrusion | Test reference | Comment |
|---|-----------------------|---|
| Implicit call intrusion | TC_PT_NG1.N.10_BV_101 | Test equipment behaves as a "Non-early {CC-CONNECT} FP" |
| | TC_PT_NG1.N.10_BV_102 | Test equipment behaves as an "Early {CC-CONNECT} FP" |
| | TC_PT_NG1.N.10_BV_103 | Test equipment behaves as an "Early {CC-CONNECT} FP" |
| Explicit call intrusion (line or handset) (note) | TC_PT_NG1.N.10_BV_201 | Test equipment behaves as a "Non-early {CC-CONNECT} FP" |
| | TC_PT_NG1.N.10_BV_202 | Test equipment behaves as an "Early {CC-CONNECT} FP" |
| | TC_PT_NG1.N.10_BV_203 | Test equipment behaves as an "Early {CC-CONNECT} FP" |
| | TC_PT_NG1.N.10_BV_204 | Test equipment behaves as an "Early {CC-CONNECT} FP" |
| Test of intruded PP | TC_PT_NG1.N.10_BV_301 | |
| NOTE: Tests for explicit call intrusion allow the PP to use either handset or line intrusion (a given PP implementing explicit call intrusion is allowed to implement either one or the other). | | |

| TC_PT_NG1.N.10_BV_101 | Implicit call intrusion into a line in "single call" mode in front of a non-early CC-CONNECT implemented FP - IUT is the initiating party |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.1 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 |
| Stimulus: | External call in T-10 (TS_2+TS_1) initiated by TS_2 on line 0 (call id a) 1. Perform an outgoing call on line 0 from IUT 1a. if (line 0) was NOT specified in {CC-SETUP}, send a {CC-SETUP-ACK} message from TS_1, with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. if (line 0) was NOT specified in {CC-SETUP}, Send a {CC-CONNECT} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, updated call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Else (no call id update) Send a {CC-CONNECT} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 11)> 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 5)> and IE <<CALLING PARTY NUMBER = <National number, Unknown, '041 1223344'> >> as a result of hang up from TS_2 4. Hang up from IUT 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', and possibly an IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 1a. if (line 0) was NOT specified in {CC-SETUP}, verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, 0), (1, 0, value b)> 2. Verify end-to-end U-plane connection between IUT and TS_1/TS_2 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.10_BV_102 | Implicit call intrusion into a line in "single call" mode in front of an early CC-CONNECT implemented FP - IUT is the initiating party |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.1 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), |
| | "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H |
| | ("allowed") on line 0, |
| | PP1 and PP2 attached to only line 0 |
| Stimulus: | External call in T-10 (TS_2+TS_1) initiated by TS_2 on line 0 (call id a) |
| | 1. Perform an outgoing call on line 0 from IUT |
| | 1a. if (line 0) was NOT specified in {CC-SETUP}, send a {CC-CONNECT} message from |
| | TS_1, with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)>, followed by a {CC-INFO} message from TS_1, with IE <<CALL-INFORMATION>> |
| | specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> |
| | 2. if (line 0) was NOT specified in {CC-SETUP}, |
| | Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 02H |
| | indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, |
| | full VoIP line type information, call id b, updated call id a, CS conference connect) |
| | =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 11)> |
| | Else (no call id update) |
| | Send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> |
| | specifying (call id a) =<(1, 0, value a)>, followed by a {CC-INFO} with IE |
| | <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and IE |
| | <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call |
| | id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 11)> |
| | 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> |
| | specifying (line 0, full VoIP line type information, call id a, CS call connect) =<(0, 0, |
| | 0), (0, 5, 1), (1, 0, value a), (2, 1, 5)> and IE <<CALLING PARTY NUMBER = |
| | <National number, Unknown, '0411223344'> >> as a result of hang up from TS_2 |
| | 4. Hang up from IUT |
| | 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE |
| | <<BASIC-SERVICE>> 'Normal call setup', and possibly an IE |
| | <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> |
| | 1a. if (line 0) was NOT specified in {CC-SETUP}, verify that the IUT sends to TS_1 a |
| | {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (line 0, call id |
| | b) =<(0, 0, 0), (1, 0, value b)> |
| | 2. Verify end-to-end U-plane connection between IUT and TS_1/TS_2 |
| | 3. Verify end-to-end U-plane connection between IUT and TS_1 |
| | 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | Depending on the case, the {CC-CONNECT} is sent either in stimulus 1a with transient |
| | call id b, or in stimulus 2 with intruded call id a directly |

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| TC_PT_NG1.N.10_BV_103 | Implicit call intrusion into a line in "single call" mode - IUT is the initiating party – FT sends negative acknowledgement |
| Test purpose | Verify that the PP IUT correctly handles a negative acknowledgement for implicit call intrusion |
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.8.1 (error processing) and 7.4.8.3 |
| Initial condition: | One external call in F-10 (TS_1, FP) initiated by Phone A on line 0, call id a to TS_2 (NG PP). Line 0 is set in single call mode. TS_1 (FP) has bit a32 (intrusion call) set in Extended Higher Layer Capabilities (Part 2) but the 'intrusion call' field of line 0 in the line settings list is 30H (not allowed) IUT and TS_2 attached to line 0 only IUT in T-00 |
| Time sequence: | <p>s1 [USR >> IUT] Attempt an external call from IUT</p> <p>a1 [IUT >> TS_1] {CC-SETUP} with <<CALL-INFORMATION>> with < id type/subtype='Line id'/Line id for external calls', < id value='Line 0'> (<i>intrusion target</i>)</p> <p>s2.1 [TS_1 >> IUT] {CC-CONNECT} with <<CALL-INFORMATION>> with: < id type/subtype='Call id'/Call id', < id value='call id b'></p> <p>s2.2 [TS_1 >> IUT] {CC-INFO} with <<CALL_INFORMATION>> with: - call status = 'CS call disconnecting' - call status reason = 'Line in use' - call id = 'call id b'</p> <p>s2.3 [TS_1 >> IUT] {CC-INFO} with <<CALL_INFORMATION>> with: - call status 'CS idle' - call id='call id b'</p> <p>a2 [IUT] The IUT caters with the negative acknowledgement in an implementation specific way.</p> |
| Pass criteria: | Verify all answers In a1, the PP might not allow the user to make any external call attempt on line 0 (single call mode line already in use with intrusion not allowed). In that case the test shall be considered successful. |
| Comments: | Implicit call intrusion is similar to an external outgoing call attempt. When there is an existing call on that line, the attempt may only fail if the line is in multiple call mode (and fails in that case if the line is busy) or if the line is in single call mode, but call intrusion is not allowed on that line. In s2.1, a newly assigned call id is used because intrusion fails |

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| TC_PT_NG1.N.10_BV_201 | Explicit call intrusion into a line in "single call" mode in front of a non-early CC-CONNECT implemented FP |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 |
| Stimulus: | External call in T-10 (TS_2+TS_1) initiated by TS_2 on line 0 (call id a) 1. Perform an explicit call intrusion either on line 0 (line intrusion) or on handset PP2 (handset intrusion) from IUT 1a. if (line 0) was NOT specified in {CC-SETUP} (handset intrusion, or line 0 intrusion with line id in {CC-INFO}), send a {CC-SETUP-ACK} message from TS_1, with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. if (line 0) was NOT specified in {CC-SETUP}, Send a {CC-CONNECT} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, updated call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Else (no call id update) Send a {CC-CONNECT} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 11)> 3. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <National number, Unknown, '0411223344'>, and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 5)>>> as result of TS_2 hang up 4. Hang up from IUT 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', IE <<MULTI-KEYPAD>> set to (1CH, 40H) digits, and possibly an IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 1a if (line 0) was NOT specified in {CC-SETUP}, verify that the IUT sends to TS_1 a {CC-INFO} message with either: - (PP2 handset intrusion) an IE <<MULTI-KEYPAD>> set to (17H, 32H) digits, and an IE <<CALL-INFORMATION>> specifying (call id b) =<(1,0, value b)> - or (line 0 intrusion), an IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, 0), (1, 0, value b)> 2. Verify that the IUT generates an intercept tone and stops the generation by itself Verify end-to-end U-plane connection between IUT and TS_1/TS_2 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comment: | Call id b is a transient call id used in case the line id is not specified in CC-SETUP for the intruding call until call id update is performed |

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| TC_PT_NG1.N.10_BV_202 | Explicit call intrusion into a line in "single call" mode in front of an early CC-CONNECT implemented FP |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 |
| Stimulus: | <p>External call in T-10 (TS_2+TS_1) initiated by TS_2 on line 0 (call id a)</p> <ol style="list-style-type: none"> 1. Perform an explicit call intrusion either on line 0 (line intrusion) or on handset PP2 (handset intrusion) from IUT <ol style="list-style-type: none"> 1a. if (line 0) was NOT specified in {CC-SETUP} (handset intrusion, or line 0 intrusion with line id in {CC-INFO}) send a {CC-CONNECT} message from TS_1, with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message from TS_1, with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. if (line 0) was NOT specified in {CC-SETUP}, <ul style="list-style-type: none"> Send a { CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, updated call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Else (no call id update) <ul style="list-style-type: none"> Send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)>, followed by a {CC-INFO} with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS conference connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 11)> 3. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <National number, Unknown, '0411223344'> , and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 5)> >> as result of TS_2 hang up 4. Hang up from IUT 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', IE << MULTI-KEYPAD >> set to (1CH, 40H) digits, and possibly an IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 1a. if (line 0) was NOT specified in {CC-SETUP}, verify that the IUT sends to TS_1 a {CC-INFO} message with either: <ul style="list-style-type: none"> - (PP2 handset intrusion) an IE << MULTI-KEYPAD >> set to (17H, 32H) digits, and an IE <<CALL-INFORMATION>> specifying (call id b) =<(1,0, value b)> - or (line 0 intrusion), an IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, 0), (1, 0, value b)> 2. Verify that the IUT generates an intercept tone and stops the generation by itself Verify end-to-end U-plane connection between IUT and TS_1/TS_2 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comment: | Call id b is a transient call id used in case the line id is not specified in CC-SETUP for the intruding call until call id update is performed |

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| TC_PT_NG1.N.10_BV_203 | Explicit handset intrusion - IUT is the initiating party – FT sends negative acknowledgement |
| Test purpose | Verify that the PP IUT correctly handles a negative acknowledgement for explicit handset intrusion |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 (error processing) and 7.4.8.3 |
| Initial condition: | Three PPs registered (IUT is NG PP1, TS_2 is NG PP2, TS_3 is NG PP3) IUT, TS_2 and TS_3 attached to line 0 only TS_1 is NG FP; Line 0 is set in multiple call mode Two external calls in F-10 on line 0 (PP2 with call id a and PP3 with call id b) TS_1 (NG-DECT Part 3 FP) has bit a32 (intrusion call) set in Extended Higher Layer Capabilities (Part 2) IUT and TS_2 attached to line 0 only IUT in T-00 |
| Time sequence: | <p>s1 [USR >> IUT] Attempt an explicit handset intrusion of any handset a1 [IUT >> TS_1] {CC-SETUP} with <<MULTI-KEYPAD>>(1CH, 40H)</p> <p>s2 [TS_1 >> IUT] {CC-CONNECT} with <<CALL-INFORMATION>> with: < id type/subtype='Call id'/'Call id', < id value='call id c'></p> <p>a2 [IUT >> TS_1] {CC-INFO} with <<MULTI-KEYPAD>>(17H, '*') and with <<CALL-INFORMATION>> with: < id type/subtype='Call id'/'Call id', < id value='call id c'></p> <p>s3.1 [TS_1 >> IUT] {CC-INFO} with <<CALL_INFORMATION>> with: - call status = CS call disconnecting, - call status reason = 'Line in use' - call id = 'call id c'</p> <p>s3.2 [TS_1 >> IUT] {CC-INFO} with <<CALL INFORMATION>> with: - call status 'CS idle' - call id = 'call id c'</p> <p>a3 [IUT] The IUT caters with the negative acknowledgement in an implementation specific way.</p> |
| Pass criteria: | Verify all answers |
| Comments: | In case of explicit handset intrusion, a newly assigned call id (call id c) is always used (see s2) (whether an error occurs or not), because the intrusion target cannot be specified in {CC-SETUP} Using an NG-DECT Part 3 FP prevents the PP from being able to detect in advance that intrusion will be rejected (no diagnostic feature available) |

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| TC_PT_NG1.N.10_BV_204 | Explicit line intrusion - IUT is the initiating party – FT sends negative acknowledgement |
| Test purpose | Verify that the PP IUT correctly handles a negative acknowledgement for explicit line intrusion |
| Reference: Initial condition: | TS 102 527-3 [14], Clause 7.4.3.8.2 (error processing) and 7.4.8.3 Three PPs registered (IUT is NG PP1, TS_2 is NG PP2, TS_3 is NG PP3) IUT, TS_2 and TS_3 attached to line 0 only TS_1 is NG FP; Line 0 is set in multiple call mode Two external call in F-10 A on line 0 (PP2 with call id a and PP3 with call id b) TS_1 (NG-DECT Part 3 FP) has bit a32 (intrusion call) set in Extended Higher Layer Capabilities (Part 2) IUT and TS_2 attached to line 0 only IUT in T-00 |
| Time sequence: | <p>s1 [USR >> IUT] Attempt an explicit line intrusion towards line 0 a1 [IUT >> TS_1] {CC-SETUP} with <<MULTI-KEYPAD>>(1CH, 40H)</p> <p>s2 [TS_1 >> IUT] {CC-CONNECT} with <<CALL-INFORMATION>> with: < id type/subtype='Call id'/'Call id', < id value = 'call id c'></p> <p>a2 [IUT >> TS_1] {CC-INFO} with << CALL-INFORMATION >> with: < id type/subtype='Line id'/'Line id for external calls', < id value = 'Line 0'> (<i>intrusion target</i>) < id type/subtype='Call id'/'Call id', < id value = 'call id c'></p> <p>s3.1 [TS_1 >> IUT] {CC-INFO} with <<CALL_INFORMATION>> with: - call status = CS call disconnecting - call status reason = 'Line in use' - call id = 'call id c'</p> <p>s3.2 [TS_1 >> IUT] {CC-INFO} with <<CALL INFORMATION>> with: - call status 'CS idle' - call id = 'call id c'</p> <p>a3 [IUT] The IUT caters with the negative acknowledgement in an implementation specific way.</p> |
| Pass criteria: | Verify all answers |
| Comments: | In case of explicit line intrusion with intrusion target in {CC-INFO}, a newly assigned call id (call id c) is always used (see s2.1) (whether an error occurs or not) Using an NG-DECT Part 3 FP prevents the PP from being able to detect in advance that intrusion will be rejected (no diagnostic feature available) |

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| TC_PT_NG1.N.10_BV_301 | Test of the intruded PP - Implicit call intrusion into a line in "single call" mode - IUT is not the initiating party |
| Reference: Initial condition: | TS 102 527-3 [14], Clause 7.4.3.8.1 2 PPs registered (IUT is PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on', IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> and IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> as a result of TS_2 outgoing call Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <National number, Unknown, '0411223344'> and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call connect) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 5)> >> as result of TS_2 hang up Hang up from IUT Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> Verify end-to-end U-plane connection between IUT and TS_1/TS_2 Verify end-to-end U-plane connection between IUT and TS_1 Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.11 TC_PT_NG1.N.11 Call deflection (external or internal) tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Call deflection (external or internal) with the following consideration:

- As NG1.N.11_3 "Call deflection control messages" procedure is tested when testing NG1.N.11_1 "Call deflection (internal)" procedure and NG1.N.11_2 "Call deflection (external)" procedure, there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.N.11 "Call deflection (external or internal)" feature is optional on PP side, so the manufacturer shall declare if it is supported.

| TC_PT_NG1.N.11_BV_101 | Call deflection (internal) in multiple lines context |
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| Reference: | TS 102 527-3 [14], Clause 7.4.4.2 |
| Initial condition: | 2 PPs registered (IUT is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0, PP2 is attached to line 1, F-00 |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)> Request a call deflection to PP2 from IUT Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT send to TS_1 a {CC-ALERTING} message Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 39H, 17H, Terminal Id of PP2) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | Line 1 is not used. PP2 is not attached to line 0 in order not to ring in the first call |

| TC_PT_NG1.N.11_BV_201 | Call deflection (external) - successful |
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| Reference: | TS 102 527-3 [14], Clause 7.4.4.2 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)> Request a call deflection to "1234567890" number from IUT Send a {CC-RELEASE} message |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT send to TS_1 a {CC-ALERTING} message Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 39H, 15H, 31H, 32H, 33H, 34H, 35H, 36H, 37H, 38H, 39H, 30H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

| TC_PT_NG1.N.11_BV_202 | Call deflection (external) - unsuccessful |
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| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.4.2 T-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)> 2. Request a call deflection to "1234567890" number from IUT 3. Send a {CC-INFO} message from TS_1 with an IE <<CALL-INFORMATION>> specifying (call id a, CS call setup, control code failed) =<(1, 0, value a), (2, 1, 1), (2, 2, 3)> 4. Call pick up on IUT 5. Hang up on IUT 6. Send a {CC-RELEASE-COM} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT send to TS_1 a {CC-ALERTING} message 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 39H, 15H, 31H, 32H, 33H, 34H, 35H, 36H, 37H, 38H, 39H, 30H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 3. Verify that the IUT continues ringing 4. Verify end-to-end U-plane connection between IUT and TS_1 5. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

| TC_PT_NG1.N.11_BV_203 | Call deflection (external) - Call waiting deflection |
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| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.5.6 External call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a),</p> <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> set to the value 07H indicating 'Call waiting tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = << National number, National standard plan, Presentation allowed, Network provided, '1234567890' >> >> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Request a call deflection to "1234567890" number from IUT 3. Send a {CC-INFO} message from TS_1 with an IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 1)> <ol style="list-style-type: none"> 1. Verify that the IUT indicates the call waiting to the receiving user 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 39H, 15H, 31H, 32H, 33H, 34H, 35H, 36H, 37H, 38H, 39H, 30H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify that waiting call is no longer presented on IUT Verify end-to-end U-plane connection between IUT and TS_1 |

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| TC_PT_NG1.N.12_BV_202 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE (early CC-CONNECT implementation) |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.5.2.2 T-00</p> <ol style="list-style-type: none"> 1. Perform an outgoing call on line 0 to "0123456789" phone number from IUT 2. <ol style="list-style-type: none"> (2.1) None (2.2) If line id (only) was received in step 1 then send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> (2.3) Else send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a) > followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and possibly IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 2. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1 (i.e. in Clause 2.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 0, call id a) =<(0, 0, 0), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages shall match "0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.12_BV_501 | FP managed line selection for a first external outgoing call (non early CC-CONNECT implementation) |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.5.2.4 T-00</p> <ol style="list-style-type: none"> 1. Perform an outgoing call without selecting a line to "0123456789" phone number from IUT 2. (2.1) None (2.2) If line id (only) was received in step 1 then send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 2)> (2.3) Else send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> In all cases, send a {CC-CALL-PROC} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> In all cases, send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and possibly: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> 2. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1 (i.e. in subcase 2.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line None, call id a) =<(0, 0, 127), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages shall match "0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.12_BV_502 | FP managed line selection for a first external outgoing call (early CC-CONNECT implementation) |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.5.2.4 T-00</p> <ol style="list-style-type: none"> 1. Perform an outgoing call without selecting a line to "0123456789" phone number from IUT 2. (2.1) None (2.2) If line id (only) was received in step 1 then send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> (2.3) Else send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and possibly: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> 2. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1 (i.e. in subcase 2.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line None, call id a) =<(0, 0, 127), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages shall match "0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.13 TC_PT_NG1.N.13 Call identification tests cases

Test subgroup objectives: to check the IUT's behaviours regarding call identification with the following consideration:

- NG1.N.13_1 "Call identification general requirements" and NG1.N.13_4 "Call status indication to the handset (FP to PP)" procedures are tested with NG1.N.13_2 "Call identifier assignment on outgoing call (FP to PP)" and NG1.N.13_3 "Call identifier assignment on incoming call (FP to PP)" procedures.
- NG1.N.13_2 "Call identifier assignment on outgoing call (FP to PP)" procedure for service call is tested with NG1.N.6_17 "Missed called list" procedure and NG1.N.6_22 "Internal names list" procedure.
- No backward compatibility tests in front of a GAP FP are foreseen as these tests will be done when running EN 300 444 [12] tests.
- No backward compatibility tests in front of a NG-DECT Part 1 FP are foreseen as these tests will be done when running NG-DECT Part 1 backward compatibility tests (see TC_PT_NG1.N.1_WC_* TCs).

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| TC_PT_NG1.N.13_BV_201 | Call identifier assignment on outgoing call (FP to PP) - Normal call (non early CC-CONNECT implementation) - Call status indication |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clauses 7.4.6.1, 7.4.6.2 and 7.4.6.4</p> <p>T-00</p> <ol style="list-style-type: none"> 1. Perform an outgoing call on line 0 to "0123456789" phone number from IUT 2. <ol style="list-style-type: none"> (2.1) None (2.2) If line id (only) was received in step 1 then send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 2)> (2.3) Else send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> In all cases, send a {CC-CALL-PROC} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> In all cases, send a {CC-ALERTING} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> In all cases, send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', and possibly: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 2. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1 (i.e. in subcase 2.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 0, call id a) =<(0, 0, 0), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages shall match "0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.13_BV_202 | Call identifier assignment on outgoing call (FP to PP) - Normal call (early CC-CONNECT implementation) - Call status indication |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clauses 7.4.6.1, 7.4.6.2 and 7.4.6.4</p> <p>T-00</p> <ol style="list-style-type: none"> 1. Perform an outgoing call to "0123456789" phone number from IUT 2. <ol style="list-style-type: none"> (2.1) None (2.2) If line id (only) was received in step 1 then send a {CC-CONNECT } message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 2)> (2.3) Else send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> In all cases, send a {CC- INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> In all cases, send a {CC- INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', and possibly: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 2. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1 (i.e. in subcase 2.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 0, call id a) =<(0, 0, 0), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages shall match "0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.13_BV_203 | Call identifier assignment on outgoing call (FP to PP) - Internal call - Call status indication |
| Reference: | TS 102 527-3 [14], Clauses 7.4.6.3 and 7.4.6.4 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an internal outgoing call on IUT towards PP2 2. Send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. Send a {CC-ALERTING} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, followed by a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to terminal Id of PP2, or 2AH in case of internal general call, and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | IUT could access to internal names list, and/or initiate internal general call, to initiate internal call |

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| TC_PT_NG1.N.13_BV_301 | Call identifier assignment on incoming call (FP to PP) - Normal call setup |
| Reference: | TS 102 527-3 [14], Clauses 7.4.6.3 and 7.4.6.4 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)> 1a. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <National number, National standard plan,'1234567890'> >> 2. Call pick up on IUT 3. Send a {CC-CONNECT-ACK} message from TS_1 followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 4. Hang up on IUT 5. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT send to TS_1 a {CC-ALERTING} message 1.a Verify CLIP presentation on IUT display 2. Verify that the IUT sends to TS_1 a {CC-CONNECT} message 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.14 TC_PT_NG1.N.14 Multiple lines tests cases

Test subgroup objectives: to check the IUT's behaviours regarding multiple lines with the following consideration:

- NG1.N.14_1 "Multiple lines general requirements" procedure requires that PP implements NG1.N.7 "Common parallel call procedures (external or internal)" feature. So there is no test case defined for this procedure which is tested implicitly when testing "NG1.N.7 Common parallel call procedures (external or internal)" feature.
- NG1.N.14_2 "Terminal attachment and line settings" procedure is tested when testing NG1.N.16_25 "Line settings list" procedure and NG1.N.16_40 "Attached handsets" procedure.
- NG1.N.14_3 "Incoming and outgoing external calls on a multiple line system" procedure for the first call on a line is tested when testing the NG1.N.12 "Line identification" feature. Only test cases for the second call on a second line are specified in this clause.
- NG1.N.14_4 "Internal calls in multiple context" procedure is not tested on PP side as this procedure includes only FP requirements.

- NG1.N.14_5 "compatibility with non multiple line PP or FP" procedure is not tested as is this procedure is tested when testing the NG1.N.12 "Line identification" feature and when running EN 300 444 [12] tests.

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| TC_PT_NG1.N.14_BV_301 | Incoming external calls on a multiple line system - Accept incoming call on second line and release it - Resume first call |
| <p>Reference: Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.7.3 IUT attached to line 0 and line 1, External call in T-10 (IUT+TS_1) on line 0 (call id a)</p> <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', IE <<Calling Party Number=<National number, National standard plan, '222222222'>> >> and IE<<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b, CS call setup) =<(0, 0, 1), (0, 5, 1), (1, 0, value b), (2, 1, 1)> 2. Accept call waiting on IUT 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 4. Release call on line 1 on IUT 5. Send a {CC-INFO} message from TS_1 with IE<<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> Resume call on line 0 on IUT. This may require or not an action of the user. 6. Send a {CC-INFO} message from TS_1 with IE<<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> <ol style="list-style-type: none"> 1. Verify that the IUT indicates the call waiting to the receiving user, generates a call waiting tone and stops the generation by itself 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with 1CH 35H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection on line 1 between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with 1CH 33H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with 1CH 42H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 6. Verify end-to-end U-plane connection on line 0 between IUT and TS_1 |

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| TC_PT_NG1.N.14_BV_305 | Outgoing external calls on a multiple line system - Initiate a second outgoing call on second line using PP line selection |
| Reference: | TS 102 527-3 [14], Clause 7.4.7.3 |
| Initial condition: | IUT attached to line 0 and line 1, External call in T-10 (IUT+TS_1) on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Initiate a second external call on line 1 to phone number "01234567890" from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> <ol style="list-style-type: none"> (2.1) If line id and complete dialing information were received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b) =<(0, 0, 1), (0, 5, 1), (1, 0, value b)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> (2.2) Else if line id only, or line id with partial dialing information was received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b, CS call setup ack) =<(0, 0, 1), (0, 5, 1), (1, 0, value b), (2, 1, 2)> (2.3) Else send a {CC-INFO} message IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b) =<(0, 0, 1), (0, 5, 1), (1, 0, value b)> If the 'CS call proc' call status was not sent in step 2 (i.e. in subcases 2.2 and 2.3), send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 4. Release call on line 1 on IUT 5. Send a {CC-INFO} message from TS_1 with IE<<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> from TS_1 Hang up on IUT 6. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 1CH 15H digits and possibly either: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line 1) =<(0, 0, 1)> or • "0123456789" or a substring of this string together with IE <<CALL-INFORMATION>> specifying (line 1) =<(0, 0, 1)> 2. If the line id and/or the complete number were not received in step 1 then verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1, the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 1, call id b) =<(0, 0, 1), (1, 0, value b)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages (including the substring received in step 1) shall match "0123456789" • each {CC-INFO} message shall contain (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with 1CH 33H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 5. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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| TC_PT_NG1.N.14_BV_306 | Outgoing external calls on a multiple line system - Initiate a second outgoing call on second line using FP managed line selection |
| Reference: | TS 102 527-3 [14], Clause 7.4.7.3 |
| Initial condition: | IUT attached to line 0 and line 1, An incoming external call on line 0 is answered on the IUT. The call is in T-10 (IUT+TS_1) (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Initiate a second external call without selecting a line to phone number "01234567890" from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> <ol style="list-style-type: none"> (2.1) If line id and complete dialing information were received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b) =<(0, 0, 1), (0, 5, 1), (1, 0, value b)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> (2.2) Else if line id only, or line id with partial dialing information was received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b, CS call setup ack) =<(0, 0, 1), (0, 5, 1), (1, 0, value b), (2, 1, 2)> (2.3) Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id b) =<(0, 0, 1), (0, 5, 1), (1, 0, value b)> If the 'CS call proc' call status was not sent in step 2 (i.e. in subcases 2.2 and 2.3), send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 1, call id b, CS call proc) =<(0, 0, 0), (1, 0, value b), (2, 1, 3)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> from TS_1 4. Release call on line 1 on IUT 5. Send a {CC-INFO} message from TS_1 with IE<<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> Hang up on IUT 6. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 1CH 15H digits and possibly either: <ul style="list-style-type: none"> • an IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> or • "0123456789" or a substring of this string together with IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> 2. If the line id and/or the complete number were not received in step 1 then verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1, the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line None, call id b) =<(0, 0, 127), (1, 0, value b)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages (including the substring received in step 1) shall match "0123456789" • each {CC-INFO} message shall contain (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with 1CH 33H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 5. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.15 TC_PT_NG1.N.15 Multiple calls tests cases

Test subgroup objectives: to check the IUT's behaviours regarding multiple calls procedures with the following consideration:

- NG1.N.15_1 "Multiple calls general requirements" procedure requires that PP implements NG1.N.7 "Common parallel call procedures (external or internal)" feature. So there is no test case defined for this procedure which is tested implicitly when testing "NG1.N.7 Common parallel call procedures (external or internal)" feature.

| TC_PT_NG1.N.15_BV_201 | Incoming external calls on a multiple call line - Accept incoming second call |
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| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | IUT attached to line 0 in "Multiple call" mode line, External call in T-10 (IUT+TS_1) on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', IE <<CALLING PARTY NUMBER=<National number, National standard plan, Number not available, Network provided, ">> and IE<<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NAME = Name not available, UTF-8, Network provided, ">> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 2. Accept call waiting on IUT 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)>, followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 4. Send a {CC-RELEASE} message from TS_1. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT indicates the call waiting to the receiving user, generates a call waiting tone with CLIP or CNIP presentation on IUT display ("Unknown" or any equivalent display), then stops the generation by itself 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with 1CH 35H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

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| TC_PT_NG1.N.15_BV_205 | Outgoing external calls on a multiple call line - Initiate a second outgoing call on the line using line selection |
| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | IUT attached to line 0 in "Multiple call" mode line, |
| Stimulus: | External call in T-10 (IUT+TS_1) on line 0 (call id a) |
| | <ol style="list-style-type: none"> 1. Initiate a second external on line 0 to phone number "0123456789" from IUT 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> <ol style="list-style-type: none"> (2.1) If line id and complete dialing information were received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b) =<(0, 0, 0), (0, 5, 1), (1, 0, value b) > followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> (2.2) Else if line id only, or line id with partial dialing information was received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 2)> (2.3) Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b) =<(0, 0, 0), (0, 5, 1), (1, 0, value b) > If the 'CS call proc' call status was not sent in step 2 (i.e. in subcases 2.2 and 2.3), send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 4. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 1CH 15H digits and possibly either: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> or • "0123456789" or a substring of this string together with IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 2. If the line id and/or the complete number were not received in step 1 then verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1, the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, 0), (1, 0, value b)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages (including the substring received in step 1) shall match "0123456789" • each {CC-INFO} message shall contain (call id b) =<(1, 0, value b)> 3. Verify end-to-end U-plane connection between IUT and TS_1 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

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| TC_PT_NG1.N.15_BV_206 | Outgoing external calls on a multiple call line - Initiate a second outgoing call on the line using FP managed line selection |
| <p>Reference: Initial condition: Stimulus: Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.8.2 IUT attached to line 0 in "Multiple call" mode line, An incoming external call on line 0 is answered on the IUT. The call is in T-10 (IUT+TS_1) (call id a)</p> <p>1. Initiate a second external call without selecting a line to phone number "0123456789" from IUT</p> <p>2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> (2.1) If line id and complete dialing information were received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b) =<(0, 0, 0), (0, 5, 1), (1, 0, value b) > followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> (2.2) Else if line id only, or line id with partial dialing information was received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value b), (2, 1, 2)> (2.3) Else send a {CC-INFO} message IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value a), (2, 1, 2)></p> <p>3. If the line type information was not sent in step 2 (i.e. in subcase 2.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id b) =<(0, 0, 0), (0, 5, 1), (1, 0, value b) > If the 'CS call proc' call status was not sent in step 2 (i.e. in subcases 2.2 and 2.3), send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, call id b, CS call proc) =<(0, 0, 0), (1, 0, value b), (2, 1, 3)> In all cases, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)></p> <p>4. Send a {CC-RELEASE} message from TS_1</p> <p>1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 1CH 15H digits and possibly either:</p> <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> or • "0123456789" digits together with IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> <p>2. If the line id and/or the complete number were not received in step 1 then verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that:</p> <ul style="list-style-type: none"> • if the line id was not received in step 1, the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line None, call id b) =<(0, 0, 127), (1, 0, value b)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages (including the substring received in step 1) shall match "0123456789" • each {CC-INFO} message shall contain (call id b) =<(1, 0, value b)> <p>3. Verify end-to-end U-plane connection between IUT and TS_1</p> <p>4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message</p> |

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| TC_PT_NG1.N.15_BV_301 | Busy system notification |
| <p>Reference: Initial condition: Stimulus: Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.8.3 2 PPs registered (IUT is PP1, TS_2 is NG PP2), IUT and TS_2 attached to line 0 in "Single call" mode line, external call in T-10 (IUT+TS_2) initiated by PP2</p> <p>Initiate an outgoing call from IUT Send a {CC-INFO} message with IE <<SIGNAL>> set to the value 04H indicating 'Busy tone' and IE <<CALL-INFORMATION>> specifying (call id a, CS call disconnecting, reason=system busy) =<(1, 0, value a), (2, 1, 6), (2, 2, 0)> from TS_1</p> <p>Verify that the IUT indicates to the user that the system is busy</p> |

6.16 TC_PT_NG1.N.16 List access service tests cases

Test subgroup objectives: to check the IUT's behaviours regarding list access service procedures with the following considerations:

- NG1.N.6_2 "List change notification" procedure is not tested because there is no requirement on PP side related to the expected behaviour of the PP when it is notified.
- As "Negative Acknowledgement" command is foreseen to reject invalid PP command, NG1.N.6_11 "Negative Acknowledgement" procedure is not tested.
- As it is impossible to know when "List of supported lists" is open, NG1.N.6_16 "List of supported lists" procedure is not tested.
- The optional 'associated melody' field in contact list entry is not tested.

Test equipment implementation requirements for List access service tests cases

- There are several ways to implement List access service on PP side. For example, query could happen at different places during the sequence of a TC, optional commands can be supported or not, optional fields can be or not supported, settings can be read one by one or all in one read entries command, it is impossible to predict when the List of supported lists will be open, as a consequence, the tester should be flexible enough to accept several implementations of list access on PP side.
- When a list access is open, the "Query supported entry fields" command might be sent by the PP under test. If so, the test equipment shall send back a "Query supported entry fields confirm" with the list of supported entry fields in accordance with the fields defined in the lists content for PP tests (see Clause 4.1.1.1).
- When testing the PP, entries can be displayed one by one or several together depending on display capabilities of the tested IUT.
- When closing the list access, the "end session" command might not be sent by the PP under test. If so, the test case shall not fail. In case that "end session" is received from IUT, the test equipment shall acknowledge it by sending the "end session confirm" command.
- Each time a 'Read entries' command is specified in a test, either as condition for a stimulus, or as pass criterion, the tester shall allow that a 'Search entries' be used instead (and answer with a 'Search entries confirm'). Both command types may be interleaved in the same use case. This includes:
 - pure 'reading' use cases: TC_PT_NG1.N.16_BV_1701, 1702, 1703, 1704, 1705, 1801, 1802, 1803, 1901, 1902, 1903, 1904, 2001, 2002, 2003, 2101, 2102, 2103, 2105, 2106, 2110, 2201, 2202, 2301, 2302, 2303, 2601, 2602, 2603, 2604, 2605, 2606 and TC_PT_NG1.N.21_BV_401.
 - and 'reading plus editing' use cases: TC_PT_NG1.N.16_BV_2104, 2203, 2204, 2701, 2801, 2901, 2902, 3001, 3801, 4002, 4101, 4201, 4301, 4401, 4501, 4601, 4701, 4702, 4801, 4802, 4901, 4902, 5001, 5002, and 5101.

Test equipment implementation requirements for 'DECT system settings list' and 'list of supported lists'

- For the "DECT system settings list", each time a 'Read entries' command is specified in a test, either as condition for a stimulus, or as pass criterion, the tester shall allow that this command is omitted by the PT. Only for this list, the PT may use directly the 'Edit entries' without prior 'Read entries' command.
- For the "DECT system settings list" and the "list of supported lists", IUT should use a 'Number of sorting fields' value of '0' in the 'start session' command (not tested). The test equipment shall use a 'Number of sorting fields' value of '0' in the 'start session confirm':
 - This includes test cases where the "DECT system settings list" is used by IUT for PIN checking purpose only (if the 'internal names list' or 'line settings list' is accessed; this may happen even if the test case does not include any PIN protected field modification).

NOTE 1: The 'internal names list' may be accessed by IUT in internal call test cases (see Clause 6.24).

Test equipment implementation requirements for call lists and contact lists

Multiple instances of the 'contact number' field in the contact list (see also TS 102 527-3 [14], Clause 7.4.10.1, 'Field instances management' clause).

- In TC_PT_NG1.N.16_BV_2101 to TC_PT_NG1.N.16_BV_2110, when reading or editing a contact list entry:
 - The IUT may include the 'Contact number' field id any number of times in the request, depending on the number of requested contact numbers (including 0 times if the field is not requested). If the number of field id occurrences exceeds the number of supported instances (2), the test equipment shall ignore the exceeding occurrences.
 - The test equipment shall answer with *at most* the requested number of contact number instances. At least one contact number instance shall be sent by the test equipment (this instance shall be empty if there is no contact number available; there shall be no empty instance in any other case).
 - If a further save is done by the IUT for this entry (i.e. the previous request was an 'edit':
 - The IUT shall include at least all contact number instances received during the previous edit (possibly modified, or empty in order to request removal of the contact; see below).
 - The IUT may include additional contact numbers, provided that the total number of contact numbers included (received + additional) does not exceed the number of contact numbers requested during the previous edit.
 - The IUT may replace a received contact number with an empty instance (instance with length = 1) thus indicating to the test equipment that the contact number is to be removed. The test equipment shall not keep the empty instance, but discard the corresponding contact number instead.
- Minimum display requirements on IUT. If a pass criterion of the test case on PT side concerns the content of the display of the IUT the following remarks apply:
 - When reading the contact list, the IUT shall display at least the 'Name' field and 'Contact number' fields (at least contact number 1). The IUT may display additionally contact number 2 (especially if declared in Clause A.1.2 item PT_IXIT_1)
 - When reading an entry of the 'all calls list', the IUT shall display at least the 'Number' or 'Name' field and 'Date and Time' fields.
 - When reading an entry of any other calls list, the IUT shall display at least the 'Number' or 'Name' field and 'Date and Time' fields.
 - Display of all other fields on IUT is recommended but not mandatory.
- Flexibility in terms of 'read entries'/'search entries' command. For test cases where the IUT accesses a list via 'read entries'/'search entries' command, the test case shall allow several implementations of the IUT:
 - A given 'Read entries' or 'Search entries' command issued by IUT may read only some of the fields of the list.
 - Several 'Read entries' or 'Search entries' commands may be used by IUT for the same entries (e.g. Reading of some of the fields in one 'read entries' command and the other fields in another 'read entries' command).

Handling of the line name and line id fields in list access in test cases

Although not mentioned in all test cases, the line name and line id fields shall be handled correctly:

- IUT behaviour:
 - The IUT may handle or not a line name and line id fields in the call lists, contact lists and line settings list.

- Test equipment requirements:
 - The test equipment shall support both implementations of the IUT. For the contact list, if the IUT does not save the "line id" field when an entry is created, test equipment shall set the default value "All lines".
 - For Call lists: the test equipment shall implement and handle correctly "line name" and "line id" fields.
 - For Line settings list: the test equipment shall implement and handle correctly "line name" and "line id" fields.
 - For Contact list: the test equipment shall implement and handle correctly "line id" field.
 - Initial content of the various lists including line id values are defined in 4.1.1.1 list contents for test.
 - The test equipment shall use and check the following codings of the "line id" field:
 - For calls lists: the line identifier field sub type shall be "line identifier for external calls". Additionally the value "None" is not allowed.
 - For Line settings list, the list identifier sub type shall be "relating to".
 - For Contact list, the list identifier sub type shall be "relating to" or "All lines" values as specified in TS 102 527-3 [14], Clause 7.4.10.5.1.7.

Test equipment implementation requirements for PIN protected lists (DECT system setting, Line setting, or Internal names)

- The test equipment shall support the PIN checking when requested by the IUT to the user. In other words the test equipment shall support 'edit entries' and 'save entry' commands on the 'current PIN code' field. This request may occur at any time before starting or when accessing DECT system setting list, Line setting list, or Internal names list, even if non-protected fields are read or edited by the IUT. This is relevant at least in the following test cases:
 - Internal names list test cases: TC_PT_NG1.N.16_BV_2201, 2202, 2203, 2204.
 - DECT system setting list test cases: TC_PT_NG1.N.16_BV_2401, 2701, 2801, 2901, 3001, 3501.
 - Line setting list test cases: TC_PT_NG1.N.16_BV_2501, 3801, 4101, 4201, 4301, 4401, 4501, 4601, 4701, 4702, 4801, 4802, 4901, 4902, 5001, 5002, 5101.
 - Internal call test cases: TC_PT_GAP.N.31_BV_101.

NOTE 2: For other test cases where PIN protected fields are modified, PIN checking is definitely necessary on IUT and will be checked by the test equipment (see dedicated comment in related test cases).

Declarations (see Annex A):

- Following procedures are optional or conditional so the manufacturer shall declare if they are supported:
 - NG1.N.16_2 "List change notification".
 - NG1.N.16_4 "Query supported entry fields".
 - NG1.N.16_16 "List of supported lists".
 - NG1.N.16_18 "Outgoing calls list".
 - NG1.N.16_20 "All calls list".
 - NG1.N.16_23 "All incoming calls list".
 - NG1.N.16_26 "Virtual contact list and call list per line".
 - NG1.N.16_30 "FP IP address/type".
 - NG1.N.16_31 "FP IP address/value".
 - NG1.N.16_32 "FP IP address/subnet mask".

- NG1.N.16_33 "FP IP address/gateway".
 - NG1.N.16_34 "FP IP address/DNS server".
 - NG1.N.16_37 "FP version/Hardware version".
 - NG1.N.16_41 "Dialling prefix".
 - NG1.N.16_42 "FP melody".
 - NG1.N.16_43 "FP volume".
 - NG1.N.16_44 "Blocked number".
 - NG1.N.16_46 "Intrusion call".
 - NG1.N.16_47 "Permanent CLIR".
 - NG1.N.16_51 "Emission mode".
- The manufacturer shall declare the support of several 'contact number' fields in one entry of the contact list (see Annex A, Table A.2).
 - When the following Line settings list fields are supported, the manufacturer shall declare if the associated 'code' subfields can be edited (see Annex A, Table A.2):
 - Field 'Permanent CLIR': 'CLIR activation code' and 'CLIR deactivation code' subfields.
 - Field 'Call forwarding unconditional': 'CFU activation code' and 'CFU deactivation code' subfields.
 - Field 'Call forwarding on No Answer': 'CFNA activation code' and 'CFNA deactivation code' subfields.
 - Field 'Call forwarding on Busy subscriber': 'CFB activation code' and 'CFB deactivation code' subfields.

| TC_PT_NG1.N.16_BV_1701 | Missed calls list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.3 |
| Initial condition: | Missed calls test list content (see Clause 4.1.1.1.2) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Missed calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "VAN DER VYNC" entry (entry can be selected using the number "0247413706") 7. Send a {CC-CONNECT} message from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 01H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, counter= i, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> 4. For each entry read, verify that entry content is displayed on IUT in the correct sequence from the newest call to the oldest one 5. For each entry read, verify that entry content is displayed on IUT in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "0247413706" digits, and IE <<CALL-INFORMATION>> specifying (line 0, line 1, line 2 or None) =<(0, 0, 0 or 1 or 2 or 127)> 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

| TC_PT_NG1.N.16_BV_1702 | Missed calls list - Delete entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.3 |
| Initial condition: | Missed calls test list content (see Clause 4.1.1.1.2) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Missed calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, total nb=10, discriminator type=0, nb of sorting fields =1,sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Delete "M.UWE" entry (entry can be selected using the number "008989945270") 6. Send a <Delete entry confirm, session id=2, total nb of available entries = 9> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 01H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete entry, session id=2, entry identifier = identifier value of "M.UWE" entry > 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | Some IUT may open the contact list to display the name from the contact list |
| | Some IUT may send a READ entries command after deletion of one entry |

| TC_PT_NG1.N.16_BV_1703 | Missed calls list - Delete list - Read entries when empty |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.3 |
| Initial condition: | Missed calls test list content (see Clause 4.1.1.1.2) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Missed calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Delete the list 6. Send a <Delete list confirm, session id=3> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=3> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Open the Missed calls list from IUT 8. Send a {CC-CALL-PROC} message from TS_1, followed by a <Start session confirm, session id=4, total nb=0, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> 9. Close the list access service from IUT 10. If <End session> received then send <End session confirm, session id=4> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 01H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete list, session id=3> 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message 7. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> followed by a <Start session, List identifier = 01H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 8. Verify that IUT indicates that the list is empty 9. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |

| TC_PT_NG1.N.16_BV_1704 | Missed calls list - Transfer number from missed calls list to contact list |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.3 |
| Initial condition: | Missed calls test list content (see Clause 4.1.1.1.2) |
| | Contact test list content (see clause 4.1.1.1.6) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | T-00 |
| | 1. Open the Missed calls list from IUT |
| | 2. Send {CC-CALL-PROC} message from TS_1 |
| | 3. Send a <Start session confirm, session id=4, total nb=10, discriminator type=0, nb of sorting fields =1,sorting field id1 =3> from TS_1 |
| | 4. Send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the number i of requested entries |
| | 5. Select "JENDREZEJZAK" entry to save it in the contact list (entry can be selected using the number "497312456897") |
| | 6. Send a <Start session confirm, session id=5, total nb=10, discriminator type=0, nb of sorting fields =1,sorting field id1 =1> from TS_1 |
| | 7. Send a <Save entry confirm, session id=5, entry identifier= identifier value of created entry, position index=4, total nb of available entries= 11> from TS_1 |
| | Close the list access service from IUT |
| | 8. If <End session> received then send <End session confirm, session id=5> and <End session confirm, session id=4> from TS_1 |
| | Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> |
| | 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 01H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > |
| | 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> |
| | 4. Verify that "JENDREZEJZAK" entry content is displayed on IUT |
| | 5. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > |
| | 6. Verify that the IUT sends to TS_1 a <Save entry, session id=5, entry identifier=00H> followed by <data packet/data packet last> set to (Name= JENDREZEJZAK, First name= null or possible edited value, Contact number1 = "497312456897") and optionally (Associated melody= one octet value) |
| | Additionally, if a "Line Id" field is included, verify that its value is one of the following: |
| | - (3, 0) 'Related to' with line id 0 |
| | - (3, 1) 'Related to' with line id 1 |
| | - (4) "All lines" |
| | 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=5> and a <End session, session id=4>, and a {CC-RELEASE} message |
| Comments: | After selecting the "JENDREZEJZAK" entry in stimulus step 5, some IUT can re-read the entry |
| | Some IUT can release the missed call list session before establishing the contact list session |
| | IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' and 'save entry' commands of the current test case). Test case shall not fail because of this |

| TC_PT_NG1.N.16_BV_1705 | Missed calls list - Incoming first voice call during existing list access session |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.6.3 |
| Initial condition: | Missed calls test list content (see Clause 4.1.1.1.2) |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Missed calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=4, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Send a {CC-CONNECT} message from TS_1 followed by a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>, followed by a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <International number, Unknown, '44123456789'> >> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 6. If <End session> received then send <End session confirm, session id=4> from TS_1 Accept incoming call from IUT 7. Sends a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LIA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 01H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> 4. Verify that some entries are displayed on the IUT (no entry displayed also allowed in case IUT has no time to display). 5. Verify that the IUT presents the incoming call to the user: <ul style="list-style-type: none"> • either by indicating the call waiting to the receiving user (generating a call waiting tone and stopping the generation by itself) • or by ringing as for an incoming first call (and then stop the ringing by itself) Verify CLIP presentation on IUT display according to its display capabilities 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | The IUT may send Read entries command for pass criteria 3 more than one time |

| TC_PT_NG1.N.16_BV_1801 | Outgoing calls list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.4 |
| Initial condition: | Outgoing calls test list content (see Clause 4.1.1.1.3) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Outgoing calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "LAGADEC" entry (entry can be selected using the number "02298951214") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 02H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. For each entry read, verify that entry content is displayed on IUT in the correct sequence from the newest call to the oldest one 5. For each entry read, verify that entry content is displayed on IUT in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "02298951214" digits, and IE <<CALL-INFORMATION>> specifying (line 0, line 1, line 2 or None) =<(0, 0, 0 or 1 or 2 or 127)> 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

| | |
|-------------------------------|--|
| TC_PT_NG1.N.16_BV_1802 | Outgoing calls list - Delete entry |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.4 |
| Initial condition: | Outgoing calls test list content (see Clause 4.1.1.1.3) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | T-00 1. Open the Outgoing calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, total nb=10, discriminator type=0, nb of sorting fields =1,sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Delete "C.ALEXANDER" entry (entry can be selected using the number "00449876543210") 6. Send a <Delete entry confirm, session id=2, total nb of available entries = 9> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 |
| Pass criteria: | Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 02H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete entry, session id=2, entry identifier = identifier value of "C.ALEXANDER" entry > 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | Some IUT may send a READ entries command after deletion of one entry |

| TC_PT_NG1.N.16_BV_1803 | Outgoing calls list - Delete list - Read entries when empty |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.4 |
| Initial condition: | Outgoing calls list content (see Clause 4.1.1.1.3) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Outgoing calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1, 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1,sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Delete the list from IUT 6. Send a <Delete list confirm, session id=3> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=3> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Open the Outgoing calls list from IUT 8. Send a {CC-CALL-PROC} message from TS_1, 9. Send a <Start session confirm, session id=4, total nb=0, discriminator type=0, nb of sorting fields =1,sorting field id1 =3> from TS_1 10. Close the list access service from IUT 11. If <End session> received then send <End session confirm, session id=4> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 3. Verify that the IUT sends to TS_1 a <Start session, List identifier = 02H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 4. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 5. For each entry read, verify that entry content is displayed on IUT 6. Verify that the IUT sends to TS_1 a <Delete list, session id=3> 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message 8. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 9. Verify that the IUT sends to TS_1 a <Start session, List identifier = 02H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 10. Verify that IUT indicates that the list is empty 11. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |

| TC_PT_NG1.N.16_BV_1901 | Incoming accepted calls list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.5 |
| Initial condition: | Incoming accepted calls test list content (see Clause 4.1.1.1.4) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Incoming accepted calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "G. DEL PIETRO" entry (entry can be selected using the number "00550123456789") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 03H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. For each entry read, verify that entry content is displayed on IUT in the correct sequence from the newest call to the oldest one 5. For each entry read, verify that entry content is displayed on IUT in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "00550123456789" digits, and IE <<CALL-INFORMATION>> specifying (line 0, line 1, line 2 or None) =<(0, 0, 0 or 1 or 2 or 127)> 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

| TC_PT_NG1.N.16_BV_1902 | Incoming accepted calls list - Delete entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.5 |
| Initial condition: | Incoming accepted calls test list content (see Clause 4.1.1.1.4) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | T-00 1. Open the Incoming accepted calls list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, total nb=10, discriminator type=0, nb of sorting fields =1,sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Delete "D.LE BRAZ" entry (entry can be selected using the number "0425960406") 6. Send a <Delete entry confirm, session id=2, total nb of available entries = 9> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 03H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete entry, session id=2, entry identifier = identifier value of "D.LE BRAZ" entry > 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | Some IUT may send a READ entries command after deletion of one entry |

| TC_PT_NG1.N.16_BV_1903 | Incoming accepted calls list - Delete list - Read entries when empty |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.5 |
| Initial condition: | Incoming accepted calls list content (see Clause 4.1.1.1.4) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | T-00 |
| | 1. Open the Incoming accepted calls list from IUT |
| | 2. Send {CC-CALL-PROC} message from TS_1 |
| | 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 |
| | 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries |
| | 5. Delete the list |
| | 6. Send a <Delete list confirm, session id=3> from TS_1 |
| | Close the list access service from IUT |
| | 7. If <End session> received then send <End session confirm, session id=3> from TS_1 |
| | Send a {CC-RELEASE-COM} message from TS_1 |
| | Open the Incoming accepted calls list from IUT |
| | 8. Send {CC-CALL-PROC} message from TS_1 |
| | 9. Send a <Start session confirm, session id=4, total nb=0, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> |
| | 10. Close the list access service from IUT |
| | 11. If <End session> received then send <End session confirm, session id=4> from TS_1 |
| | Send a {CC-RELEASE-COM} message from TS_1 |
| | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE |
| | <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> |
| | 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 03H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > |
| | 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > |
| | 4. For each entry read, verify that entry content is displayed on IUT |
| | 5. Verify that the IUT sends to TS_1 a <Delete list, session id=3> |
| | 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message |
| | 7. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE |
| | <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> |
| | 8. Verify that the IUT sends to TS_1 a <Start session, List identifier = 03H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > |
| | 9. Verify that IUT indicates that the list is empty |
| | 10. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |
| Pass criteria: | |

| | |
|------------------------|---|
| TC_PT_NG1.N.16_BV_1904 | Incoming accepted calls list - Transfer number from Incoming accepted calls list to contact list |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.5 |
| Initial condition: | Incoming accepted calls test list content (see Clause 4.1.1.1.4), contact test list content FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Incoming accepted calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=4, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. Send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Select "0308980764" entry to save it in the contact list 6. Send a <Start session confirm, session id=5, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 7. Send a <Save entry confirm, session id=5, entry identifier= identifier value of created entry, position index=p, total nb of available entries= 11> from TS_1 Close the list access service from IUT 8. If <End session> received then send <End session confirm, session id=5> and <End session confirm, session id=4> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 03H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. Verify that "0308980764" entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 6. Verify that the IUT sends to TS_1 a <Save entry, session id=5, entry identifier=00H> followed by <data packet/data packet last> set to (Name= null or possible edited value, First name= null or possible edited value, Contact number1 = "0308980764") and optionally (Associated melody= one octet value) 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=5> and a <End session, session id=4>, and a {CC-RELEASE} message |
| Comments: | <p>After stimulus step 4, some IUT may ask to edit each field before saving the entry Some IUT can release the Incoming accepted calls list session before establishing the contact list session IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' and 'save entry' commands of the current test case). Test case shall not fail because of this</p> |

| TC_PT_NG1.N.16_BV_2101 | Contact list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | Contact test list content (see Clause 4.1.1.1.6) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Scroll down into the alphabetical list on IUT 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Scroll up into the alphabetical list on IUT 6. Phone back "WOJCIECHOSKI" entry (entry can be selected using the Contact number1 "0675000321") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H> 4. After each scrolling event, verify on the IUT's display that the scrolling through the entries was performed in the direction of ascending alphanumerical order (i.e. from ALEXANDER to WOJCIECHOSKI). 5. After each scrolling event, verify on the IUT's display that the scrolling through the entries was performed in the direction of descending alphanumerical order (i.e. from WOJCIECHOSKI to ALEXANDER). 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "0675000321" digits, and IE <<CALL-INFORMATION>> specifying (line 0, line 1, line 2 or None) =<(0, 0, 0 or 1 or 2 or 127)> 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this - In pass criterion 3, field id '03'H shall be present at least twice if the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1). See also at the beginning of Clause 6.16, "Multiple instances of the 'contact number' field in the contact list" Clause |

| TC_PT_NG1.N.16_BV_2102 | Contact list - Delete entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Contact calls test list content (see Clause 4.1.1.1.6) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Delete "FENJIRO" entry (entry can be selected using the Contact number1 "0490413002") 6. Send a <Delete entry confirm, session id=2, total nb of available entries = 9> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete entry, session id=2, entry identifier = identifier value of "FENJIRO" entry > 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - IUT may also indicate the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this - Some IUT may send a READ entries command after deletion of one entry - In pass criterion 3, field id '03'H shall be present at least twice if the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1). See also at the beginning of Clause 6.16, "Multiple instances of the 'contact number' field in the contact list" Clause |

| TC_PT_NG1.N.16_BV_2103 | Contact list - Delete list - Read entries when empty |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Contact list content (see Clause 4.1.1.1.6) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Delete the Contact list 6. Send a <Delete list confirm, session id=3> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=3> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Open the Contact list from IUT 8. Send {CC-CALL-PROC} message from TS_1 9. Send a <Start session confirm, session id=4, total nb=0, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> 10. Close the list access service from IUT 11. If <End session> received then send <End session confirm, session id=4> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete list, session id=3> 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message 7. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 8. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 9. Verify that IUT indicates that the list is empty 10. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this - In pass criterion 3, field id '03'H shall be present at least twice if the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1). See also at the beginning of Clause 6.16, 'Multiple instances of the 'contact number' field in the contact list' clause |

| TC_PT_NG1.N.16_BV_2104 | Contact list - Create entry - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Contact list content (see Clause 4.1.1.1.6) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Create a new entry on IUT with following fields: Name= "ZBERG", First name= "PETER", Contact number1= "003308123456". Optionally: Associated melody=a (if field supported by the IUT) Line id = Line L or "All lines" (if field supported by the IUT) 6. If no line Id was specified by the IUT in stimulus 5, store the entry in TS with a default Line Id field: subtype = 4 ("All lines"), no identifier value octet defined. Otherwise store the line Id supplied by the IUT Send a <Save entry confirm, session id=3, entry identifier=v, position index=11, total nb of available entries= 11> Select the "ZBERG" entry and edit it on IUT 7. Send a <Edit entry confirm, session id=3> followed by <data packet/data packet last> with entry content from TS_1 Modify the entry on IUT to: Name= "ZBERG", First name= "PETER", Contact number1= "06123321". If requested by IUT in Edit command: Associated melody=a (value received from stimulus 5) Line Id = "All lines" or "Relating to" Line L (depending on stimulus 5 and 6) 8. Send a <Save entry confirm, session id=3, entry identifier=v, position index=11, total nb of available entries= 11> Close the list access service from IUT 9. If <End session> received then send <End session confirm, session id=3> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message from TS_1 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 3. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 4. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > 5. For each entry read, verify that entry content is displayed on IUT 6. Verify that the IUT sends to TS_1 a <Save entry, session id=3, entry identifier=0 > followed by < data packet/data packet last> with entry previously created Additionally, if a "Line Id" field is included, verify that its value is one of the following: <ul style="list-style-type: none"> - (3, 0) 'Line identifier for external call' with line id 0 - (3, 1) 'Line identifier for external call' with line id 1 - (4) "All lines" 7. Verify that the IUT sends to TS_1 a <Edit entry, session id=3, entry identifier=v, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > 8. Verify that the IUT sends to TS_1 a <Save entry, session id=3, entry identifier=v > followed by < data packet/data packet last> with entry previously modified 9. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message |

| | |
|-----------|---|
| Comments: | <ul style="list-style-type: none"> - IUT may also handle the optional field identifier 04H (associated melody) in contact list entries. ('start session', 'read entries' or 'edit entry' commands of the current test case) Test case shall not fail because of this - Some IUT may send a READ entries command before editing an entry after stimulus step 6 - After saving new entry, IUT will probably read a number of entries in order to show the new entry in alphabetical order - In pass criterion 3, field id '03'H shall be present at least twice if the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1). See also at the beginning of Clause 6.16, "Multiple instances of the 'contact number' field in the contact list" clause |
|-----------|---|

| TC_PT_NG1.N.16_BV_2105 | Contact list - Create entry - Negative Acknowledgement |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Contact list content (see Clause 4.1.1.1.6) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Create a new entry on IUT with following fields: Name= "VALDO", First name= "ANDY", Contact number1= "123545". Optionally: Associated melody=a (if field supported by the IUT) Line id = Line L or "All lines" (if field supported by the IUT) 6. Send a <Negative acknowledgement, session id=3, reject reason= list full> from TS_1 7. Close the list access service from IUT 8. If <End session> received then send <End session confirm, session id=3> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends a <Save entry, session id=3, entry identifier=0 > from TS_1 followed by <data packet last> with entry previously created 6. Verify that the IUT indicates that the list is full 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this - In pass criterion 3, field id '03'H shall be present at least twice if the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1). See also at the beginning of Clause 6.16, 'Multiple instances of the 'contact number' field in the contact list' clause |

| TC_PT_NG1.N.16_BV_2106 | Contact list - Read entries during external call |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Contact test list content (see Clause 4.1.1.1.6) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | Established external call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a), |
| | 1. Open the Contact list from IUT |
| | 1a. if a request for putting (call id a) on-hold was received, send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a)> |
| | 2. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 |
| | 3. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index |
| | Scroll down into the alphabetical list on IUT |
| | 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index |
| | Scroll up into the alphabetical list on IUT |
| | 5. Close the list access session on IUT |
| | 6. Send a <End session confirm, session id=1> from TS_1 |
| | 7. Hang up on IUT |
| | 8. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT optionally puts (call id a) on-hold by sending a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 41H) and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> |
| | 1a. Verify that IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > |
| | 2. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > |
| | 3. After each scrolling event, verify on the IUT's display that the scrolling through the entries was performed in the direction of ascending alphanumerical order (i.e. from ALEXANDER to WOJCIECHOSKI). |
| | 4. After each scrolling event, verify on the IUT's display that the scrolling through the entries was performed in the direction of descending alphanumerical order (i.e. from WOJCIECHOSKI to ALEXANDER). |
| | 5. Verify that the IUT sends to TS_1 a <End session, session id=1> |
| | 6. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | - In step 1, IUT may first put the external call on hold by sending control code '1CH41H'. In that case, TS_1 shall send an hold confirmation via call information IE with call status set to 'CS call hold' in {CC_INFO} (in step 1a) |
| | - IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this |
| | - In pass criterion 2, field id '03'H shall be present at least twice if the manufacturer has declared the support of several 'Contact number' fields in the contact list on PT side (PT_IXIT_1). See also at the beginning of Clause 6.16, "Multiple instances of the 'contact number' field in the contact list" clause |

| TC_PT_NG1.N.16_BV_2110 | Contact list - Entry with several contact numbers |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Contact list content (see Clause 4.1.1.1.6) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries |
| | Scroll down into the alphabetical list on IUT |
| | <ol style="list-style-type: none"> 5. Select and read the "ALOUSSI" entry (entry can be selected using the contact number "0156891247") |
| | <ol style="list-style-type: none"> 6. Create a new entry on IUT with following fields: Name= "PARAGI", First name= "KLAUS", Contact number1= "0140506070" with 'fixed' property bit set. Contact number2= "0655443322" with 'mobile' property bit set. Optionally: Associated melody=a (if field supported by the IUT) Line id = Line L or "All lines" (if field supported by the IUT) |
| | <ol style="list-style-type: none"> 7. Send a <Save entry confirm, session id=3, entry identifier=v, position index=7, total nb of available entries= 11> |
| | Close the list access service from IUT |
| | <ol style="list-style-type: none"> 8. If <End session> received then send <End session confirm, session id=3> from TS_1 |
| | Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H > 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the "ALOUSSI" entry is correctly displayed: Name= "ALOUSSI", First name= "RAMIN", Contact number1= "0156891247". Contact number2= "0675000209". Optionally: Line id = Line 0 (if field supported by the IUT) |
| | <ol style="list-style-type: none"> 6. Verify that the IUT sends a <Save entry, session id=3, entry identifier=0 > from TS_1 followed by <data packet/data packet last> with entry previously created |
| | <ol style="list-style-type: none"> 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - The current test case is conditional to the PT_IXIT_1 declaration item on PT side (see Clause A.1.2). In pass criterion 3, field id '03'H shall be present at least twice. See also at the beginning of Clause 6.16, 'Multiple instances of the 'contact number' field in the contact list' clause - IUT may also indicate the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this - The created entry has two contact numbers of 10 digits each in stimulus 6, hence entry content will be distributed over 2 data packets - Some IUT may send a READ entries command before editing an entry after stimulus step 6 - After saving new entry, IUT will probably read a number of entries in order to show the new entry in alphabetical order |

| TC_PT_NG1.N.16_BV_2201 | Internal names list - Read entries - Initiate an internal call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.8 |
| Initial condition: | Internal names test list content (see Clause 4.1.1.1.7), IUT is PP1, TS_2 is NG PP2 |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Open the Internal names list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=4, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index and 'own' property bit set when IUT entry is read Browse into the list on IUT 5. Select and call internal party 2 "Living-Room" 6. Send a {CC-CONNECT} message from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 7. Hang up on IUT 8. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 06H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H> 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H> command 4. Verify that the internal names entries PP2, PP3, and PP9 are displayed on IUT (PP1 may be not displayed and entries can be displayed one by one or several together depending on display capabilities) 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, 32H) 6. Verify end-to-end U-plane connection between IUT and TS_1 7. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <p>The call interception field is PIN protected (see Clause 4.1.1.1.7). As a consequence, the IUT might request to the user, edit and save the Current PIN Code field in the DECT system settings list, in one the following sequences:</p> <ul style="list-style-type: none"> - Before opening the internal names list via start session or - Before reading an entry of the internal names list <p>All these implementations are accepted Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2202 | Internal names list - Delete entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.8 |
| Initial condition: | Internal names test list content (see Clause 4.1.1.1.7), IUT is PP1, TS_2 is NG PP2 |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Internal names list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, total nb=4, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index and 'own' property bit set when IUT entry is read Browse into the list on IUT 5. Delete "Boby room" entry (PP9) 6. Send a <Delete entry confirm, session id=2, total nb of available entries = 3> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 3. Verify that the IUT sends to TS_1 a <Start session, List identifier = 06H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H > 4. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H > 5. Verify that the internal names entries PP2, PP3 and PP9 are displayed on IUT (PP1 may be not displayed) 6. Verify that the IUT sends to TS_1 a <Delete entry, session id=2, entry identifier = identifier value of "Boby room" entry > 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | <p>Some IUT may send a READ entries command after deletion of one entry</p> <p>The call interception field is PIN protected (see Clause 4.1.1.1.7). As a consequence, the IUT will request to the user, edit and save the Current PIN Code field in the DECT system settings list, in one of the following sequences:</p> <ul style="list-style-type: none"> - Before opening the internal names list via start session or - Before reading an entry of the internal names list or - Before deleting the entry of the internal names list <p>All these implementations are accepted</p> <p>Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2203 | Internal names list - Edit entry - Save entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.8 |
| Initial condition: | Run TC_PT_NG1.N.16_BV_2202, IUT is PP1, TS_2 is NG PP2 T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Internal names list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=3, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index and 'own' property bit set when IUT entry is read Browse into the list on IUT 5. Select and edit "Living-room" entry (PP2) 6. Send a <Edit entry confirm, session id=3> from TS_1, followed by <data packet/data packet last> with PP2 entry content Modify the name of entry (PP2) to "Bedroom" 7. Send a <Save entry confirm, session id=3, entry identifier= entry identifier of PP2 entry, position index=2, total number of available entries=3> from TS_1 Close the list access service from IUT 8. If <End session> received then send <End session confirm, session id=3> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 06H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H > 4. Verify that the internal names entry PP2 and PP3 are displayed on IUT (PP1 may be not displayed) 5. Verify that the IUT sends to TS_1 a <Edit entry, session id=3, entry identifier= entry identifier of PP2 entry, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H > 6. Verify that the IUT sends to TS_1 <Save entry, session id=3, entry identifier= entry identifier of PP2 entry > followed by <data packet/data packet last> modifying "Name" field to "Bedroom" 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message |
| Comments: | <p>The call interception field is PIN protected (see Clause 4.1.1.1.7). As a consequence, the IUT might request to the user, edit and save the Current PIN Code field in the DECT system settings list, in one of the following sequences:</p> <ul style="list-style-type: none"> - Before opening the internal names list via start session or - Before reading an entry of the internal names list or - Before editing the entry of the internal names list <p>All these implementations are accepted</p> <p>Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2204 | Internal names list - Call interception - PIN protected - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.8 and 7.4.11.1 |
| Initial condition: | Internal names test list content (see Clause 4.1.1.1.7) with 'PIN protected' property bit set to 1 for 'Call interception' field of all entries |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the Internal names list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=3, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index and 'own' property bit set when IUT entry is read Browse into the list on IUT 5. Select and edit "Living-room" entry (PP2) 6. Send a <Start session confirm, session id=4, nb of sorting fields=0> from TS_1 7. For each <Read entries> received, send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the requested field(s) 8. Send to TS_1 a <Edit entry confirm, session id=4> followed by <data packet/data packet last> with current PIN code field set to (FFH, FFH, FFH, FFH) Enter "1234" as current PIN code value 9. Send to TS_1 a <Save entry confirm, session id=4, entry identifier= 1, position index=1, total number of available entries=1> 10. Send to TS_1 a <End session confirm, session id=4> 11. Send a <Edit entry confirm, session id=3> from TS_1, followed by <data packet/data packet last> with PP2 entry content Modify the Call interception of entry (PP2) to Allowed value 12. Send a <Save entry confirm, session id=3, entry identifier= entry identifier of PP2 entry, position index=2, total number of available entries=3> from TS_1 Close the list access service from IUT 13. If <End session> received then send <End session confirm, session id=3> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 06H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H > 4. Verify that the internal names entry PP2 and PP3 are displayed on IUT (IUT entry, i.e. PP1, may be not displayed) 5. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 6. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=1, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at least Current PIN code identifier 01H > 7. Verify that the IUT requires the user to enter the PIN code value Verify that the IUT sends to TS_1 a <Edit entry, session id=4, entry identifier=1, list entry field identifier 1= Current PIN code identifier 01H> 8. Verify that the IUT sends to TS_1 a <Save entry, session id=4, entry identifier=1>, followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 12H, 34H) 9. Verify that the IUT sends to TS_1 a <End session, session id=4> 10. Verify that the IUT sends to TS_1 a <Edit entry, session id=3, entry identifier= entry identifier of PP2 entry, list entry field identifier 1..n =01H, 02H, 03H > 11. Verify that the IUT sends to TS_1 <Save entry, session id=3, entry identifier= entry identifier of PP2 entry > followed by <data packet/data packet last> modifying "Call interception" field to 31H 12. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message |
| Comments: | <p>Instead of asking the PIN before editing a field protected by the FP, the IUT might also ask for PIN before opening the list via start session, or before reading a field, or before editing a field (although it is not protected by the FP), or before saving a field (either protected or not by the FP). All these implementations are accepted</p> <p>Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2301 | All incoming calls list - Read entries - Initiate an external call |
|----------------------------------|--|
| Reference: Initial condition: | TS 102 527-3 [14], Clause 7.4.10.5.11 All incoming calls test list content (see Clause 4.1.1.1.10) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | T-00 1. Open the All incoming calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Phone back "M.UWE" entry (entry can be selected using the number "008989945270") 6. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 7. Hang up on IUT 8. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 09H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H> 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 4. For each entry read, verify that entry content is displayed on IUT from the newest call to the oldest one 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "008989945270" digits, and IE <<CALL-INFORMATION>> specifying (line 0, line 1, line 2 or None) =<(0, 0, 0 or 1 or 2 or 127)> 6. Verify end-to-end U-plane connection between IUT and TS_1 7. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

| TC_PT_NG1.N.16_BV_2302 | All incoming calls list - Delete entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.11 |
| Initial condition: | All incoming calls test list content (see Clause 4.1.1.1.10) |
| | FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the All incoming calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, total nb=20, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Delete "WOJCIECHOSKI" entry (entry can be selected using the number "0675000321") 6. Send a <Delete entry confirm, session id=2, total nb of available entries = 19> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 3. Verify that the IUT sends to TS_1 a <Start session, List identifier = 09H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H> 4. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 5. For each entry read, verify that entry content is displayed on IUT 6. Verify that the IUT sends to TS_1 a <Delete entry, session id=2, entry identifier = identifier value of "WOJCIECHOSKI" entry > 7. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | Some IUT may send a READ entries command after deletion of one entry |

| | |
|-------------------------------|--|
| TC_PT_NG1.N.16_BV_2303 | All incoming calls list - Delete list - Read entries when empty |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.11 |
| Initial condition: | All incoming calls list content (see Clause 4.1.1.1.10) FP does not implement the NG1.N.16_26 "Virtual contact list and call list per line" procedure |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the All incoming calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the number i of requested entries 5. Delete the list 6. Send a <Delete list confirm, session id=3> from TS_1 Close the list access service from IUT 7. If <End session> received then send <End session confirm, session id=3> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Open the All incoming calls list from IUT 8. Send a {CC-CALL-PROC} message from TS_1 9. Send a <Start session confirm, session id=4, total nb=0, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 10. Close the list access service from IUT 11. If <End session> received then send <End session confirm, session id=4> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 09H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> 4. For each entry read, verify that entry content is displayed on IUT 5. Verify that the IUT sends to TS_1 a <Delete list, session id=3> 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=3>, and a {CC-RELEASE} message 7. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 8. Verify that the IUT sends to TS_1 a <Start session, List identifier = 09H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 9. Verify that IUT indicates that the list is empty 10. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |

| TC_PT_NG1.N.16_BV_2401 | DECT system settings list - Read entries |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.3 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 Send a {CIPHER-REQUEST} message from TS_1 3. Send a <Start session confirm, session id=1, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the requested field(s) Read all settings from IUT 5. Close the list access service on IUT 6. If <End session> received then send <End session confirm, session id=1> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = 02H, 09H, 0AH completed with optional settings supported (see Annex A, Table A.7) > 4. Verify that the DECT system settings parameters displayed on IUT match the DECT system settings list content (see Clause 4.1.1.1.8) 5. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <p>If <Query supported entry fields> received, TS_1 shall send back a <Query supported entry fields confirm, session id=1, number of editable entry fields=08H, list entry field identifier 1..n = 01H, 02H, 03H, 04H, 05H, 06H, 07H, 08H, number of non-editable entry fields=03H, list entry field identifier 1..n = 09H, 0AH, 0BH></p> <p>Settings fields can be read one by one, or all in the same <Read entries> command Settings will probably be displayed in several sub-menus, the PIN code and the Base reset will not be displayed at all</p> <p>It is allowed that the IUT does not read the fields 01H ("Current PIN code") and 03H ("Base Reset"). These fields are not tested in pass criteria 4</p> <p>See also DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2501 | Line settings list - Read entries |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the requested field(s) Read all line settings of line 1 and 2 from IUT 5. Close the list access service on IUT 6. If <End session> received then send <End session confirm, session id=1> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = 01H, 02H, 03H, 08H, 0BH, 0CH, 0DH completed with optional settings supported (see Annex A, Table A.7) > 4. Verify that the Line settings parameters displayed on IUT for line 1 and line 2 match the Line settings list contents (see Clause 4.1.1.1.9) 5. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <p>If <Query supported entry fields> received, TS_1 shall send back a <Query supported entry fields confirm, session id=1, number of editable entry fields=0CH, list entry field identifier 1..n = 01H, 03H, 04H, 05H, 06H, 07H, 08H, 09H, 0AH, 0BH, 0CH, 0DH), number of non-editable entry fields=01H, list entry field identifier 1..n = 02H)></p> <p>Settings fields can be read one by one, or all in the same <Read entries> command Settings will probably be displayed in several sub-menus</p> <p>IUT can open the internal names list to know the registered handsets list IUT can perform edit entry command in order to lock the entry after pass criteria 3 Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2601 | Virtual missed calls list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.5 and 7.4.10.5.3 |
| Initial condition: | Missed calls test list content (see Clause 4.1.1.1.2) |
| | FP implements the NG1.N.14 "Multiple lines" feature |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Missed calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "VAN DER VYNC" entry (entry can be selected using the number "0247413706") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id a) =<(0, 0, 1), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 01H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H> 4. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the newest call to the oldest one 5. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to "0247413706" digits and with an IE <<CALL-INFORMATION>> requesting the Provider 2 line (= <0, 0, 1>) 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | The PP shall filter the calls that are related to a given line thanks to the line identifier field |

| TC_PT_NG1.N.16_BV_2602 | Virtual outgoing calls list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.5 and 7.4.10.5.4 |
| Initial condition: | Outgoing calls test list content (see Clause 4.1.1.1.3) FP implements the NG1.N.14 "Multiple lines" feature T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Outgoing calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "LAGADEC" entry (entry can be selected using the number "02298951214") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 02H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the newest call to the oldest 5. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "02298951214" digits and with an IE <<CALL-INFORMATION>> requesting the Provider 1 line (=<0, 0, 0>) 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | The PP shall filter the calls that are related to a given line thanks to the line identifier field |

| TC_PT_NG1.N.16_BV_2603 | Virtual incoming accepted calls list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.5 and 7.4.10.5.5 |
| Initial condition: | Incoming accepted calls test list content (see Clause 4.1.1.1.4) FP implements the NG1.N.14 "Multiple lines" feature T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Incoming accepted calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "G. DEL PIETRO" entry (entry can be selected using the number "00550123456789") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 03H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H> 4. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the newest call to the oldest one 5. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "00550123456789" digits and with an IE <<CALL-INFORMATION>> requesting the Provider 1 line (= <0, 0, 0>) 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | The PP shall filter the calls that are related to a given line thanks to the line identifier field |

| TC_PT_NG1.N.16_BV_2604 | Virtual all calls list - Read entries - Initiate an external call |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.5 and 7.4.10.5.6 |
| Initial condition: | All calls test list content (see Clause 4.1.1.5) FP implements the NG1.N.14 "Multiple lines" feature T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the All calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=30, discriminator type=0, nb of sorting fields =1, sorting field id1 =4> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the newest call to the oldest one 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT from the oldest call to the newest one 6. Phone back "R.ALOUSSI" entry (entry can be selected using the number "065000209") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 04H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H, 06H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H> 4. For each entry read, verify that entry content is displayed on IUT and in the correct sequence from the newest call to the oldest one 5. For each entry read, verify that entry content is displayed on IUT, line by line, and in the correct sequence from the oldest call to the newest one 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "065000209" digits and with an IE <<CALL-INFORMATION>> requesting the Provider 1 line (=<0, 0, 0>) 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | The PP shall filter the calls that are related to a given line thanks to the line identifier field |

| TC_PT_NG1.N.16_BV_2605 | Virtual contact list - Read entries - Initiate an external call |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.5 and 7.4.10.5.7 |
| Initial condition: | Contact test list content (see Clause 4.1.1.1.6) |
| | FP implements the NG1.N.14 "Multiple lines" feature |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Contact list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =1> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Scroll down into the alphabetical list on IUT 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Scroll up into the alphabetical list on IUT 6. Phone back "WOJCIECHOSKI" entry (entry can be selected using the Contact number1 "0675000321") 7. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id a) =<(1, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 05H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter= i, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 05H> 4. After each scrolling event, verify on the IUT's display that the scrolling through the entries was performed in the direction of ascending alphanumerical order (i.e. from ALEXANDER to WOJCIECHOSKI). 5. After each scrolling event, verify on the IUT's display that the scrolling through the entries was performed in the direction of descending alphanumerical order (i.e. from WOJCIECHOSKI to ALEXANDER). 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "0675000321" digits and with an IE <<CALL-INFORMATION>> requesting the Provider 2 line (= <0, 0, 1>) 7. Verify end-to-end U-plane connection between IUT and TS_1 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <p>The PP shall filter the calls that are related to a given line thanks to the line identifier field</p> <p>IUT may also handle the optional field identifier 04H (associated melody) in contact list entries ('start session' or 'read entries' commands of the current test case). Test case shall not fail because of this</p> |

| TC_PT_NG1.N.16_BV_2606 | Virtual all incoming calls list - Read entries - Initiate an external call |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.5 and 7.4.10.5.11 |
| Initial condition: | All incoming calls test list content (see Clause 4.1.1.1.10) |
| | FP implements the NG1.N.14 "Multiple lines" feature |
| | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the All incoming calls list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the number i of requested entries from s start index Browse into the list on IUT 5. Phone back "M.UWE" entry (entry can be selected using the contact number "008989945270") 6. Send a {CC-CONNECT} message from TS_1 with an IE <<CODEC-LIST>> set to G.722 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 1, full VoIP line type information, call id a) =<(1, 0, 0), (0, 5, 1), (1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)> from TS_1 Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> from TS_1 7. Hang up on IUT 8. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 09H, nb of sorting fields =0> 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter=i, mark entries request= (00H, 7FH, or FFH), list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H, 06H, 07H > 4. For each entry read, verify that entry content is displayed on IUT, line by line, in the correct sequence from the newest call to the oldest one 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "008989945270" digits and with an IE <<CALL-INFORMATION>> requesting the Provider 2 line (= <0, 0, 1>) 6. Verify end-to-end U-plane connection between IUT and TS_1 7. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | The PP shall filter the calls that are related to a given line thanks to the line identifier field |

| TC_PT_NG1.N.16_BV_2701 | DECT system settings list - Current PIN code - New PIN code - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3, 7.4.11.3.1 and 7.4.11.3.13 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a {CIPHER-REQUEST} message from TS_1 4. Send a <Start session confirm, session id=1, nb of sorting fields=0> from TS_1 5. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select and edit the PIN code field on IUT 6. Send to TS_1 a <Edit entry confirm, session id=1> followed by <data packet/data packet last> with current PIN code field set to (FFH, FFH, FFH, FFH) Enter "1234" as old PIN code value 7. Send to TS_1 a <Save entry confirm, session id=1, entry identifier= 1, position index=1, total number of available entries=1> 8. Send to TS_1 a <Edit entry confirm, session id=1> followed by <data packet/data packet last> with new PIN code field set to (FFH, FFH, FFH, FFH) and 'PIN protected' property bit set to 1 Enter "6789" as new PIN code value 9. Send to TS_1 a <Save entry confirm, session id=1, entry identifier= 1, position index=1, total number of available entries=1> Close the list access service on IUT 10. If <End session> received then send <End session confirm, session id=1> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that IUT completes the cipher procedure at MAC level 3. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 4. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at the minimum PIN code identifier 01H> 5. Verify that the IUT requires the user to enter the old PIN code value Verify that the IUT sends to TS_1 a <Edit entry, session id=1, entry identifier=1, list entry field identifier 1= Current PIN code identifier 01H> 6. Verify that the IUT sends to TS_1 a <Save entry, session id=1, entry identifier=1>, followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 12H, 34H) 7. Verify that the IUT sends to TS_1 a <Edit entry, session id=1, entry identifier=1, list entry field identifier 1= New PIN code identifier 0DH> 8. Verify that the IUT sends to TS_1 a <Save entry, session id=1, entry identifier=1>, followed by <data packet/data packet last> with new PIN code field set to (FFH, FFH, 67H, 89H) 9. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <p>Start session can actually come before ciphering the link</p> <p>Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command</p> <p>For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 5 and pass criteria 4 shall not be tested</p> <p>See also DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2801 | DECT system settings list - Clock master - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3 and 7.4.11.3.2 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select and edit the Clock Master field on IUT 5. Send a <Edit entry confirm, session id=2> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the Clock Master field to "Portable Part" 6. Send a <Save entry confirm, session id=2, entry identifier= 1, position index=1, total number of available entries=1> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Clock master identifier 02H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=2, entry identifier=1, list entry field identifier 1= at the minimum Clock master identifier 02H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=2, entry identifier=1>, followed by <data packet/data packet last> with Clock Master field set to 31H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | <p>Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command</p> <p>For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 4 and pass criteria 3 shall not be tested</p> <p>See also DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2901 | DECT system settings list - Base reset - Edit entry - Save entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3 and 7.4.11.3.3 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), with 'PIN protected' property bit set to 0 for 'Base reset' field. |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=3, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=3> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select and edit the Base reset field on IUT 5. Send a <Edit entry confirm, session id=3> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the Base reset field to "Yes" 6. Send a <Save entry confirm, session id=3, entry identifier= 1, position index=1, total number of available entries=1> from TS_1 Send a {CC-RELEASE } message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=3, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Base reset identifier 03H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=3, entry identifier=1, list entry field identifier 1= at the minimum Base reset identifier 03H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=3, entry identifier=1>, followed by <data packet/data packet last> with Base reset field set to 31H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <p>Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command</p> <p>For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 4 and pass criteria 3 shall not be tested</p> <p>See also DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_2902 | DECT system settings list - Base reset - PIN protected - Edit entry - Save entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.1 and 7.4.11.3.3 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8) with 'PIN protected' property bit set to 1 for 'Base reset' field. |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=4, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the requested field(s) and with 'PIN protected' property bit set to 1 for 'Base reset' field Select and edit the Base reset field on IUT 5. Send to TS_1 a <Edit entry confirm, session id=4> followed by <data packet/data packet last> with current PIN code field set to (FFH, FFH, FFH, FFH) Enter "1234" as current PIN code value 6. Send to TS_1 a <Save entry confirm, session id=4, entry identifier= 1, position index=1, total number of available entries=1> 7. Send a <Edit entry confirm, session id=4> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the Base reset field to "Yes" 8. Send a <Save entry confirm, session id=4, entry identifier= 1, position index=1, total number of available entries=1> from TS_1 Close the list access service on IUT 9. If <End session> received then send <End session confirm, session id=4> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Base reset identifier 03H> 4. Verify that the IUT requires the user to enter the PIN code value Verify that the IUT sends to TS_1 a <Edit entry, session id=4, entry identifier=1, list entry field identifier 1= Current PIN code identifier 01H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=4, entry identifier=1>, followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 12H, 34H) 6. Verify that the IUT sends to TS_1 a <Edit entry, session id=4, entry identifier=1, list entry field identifier 1= at the minimum Base reset identifier 03H> 7. Verify that the IUT sends to TS_1 a <Save entry, session id=4 entry identifier=1>, followed by <data packet/data packet last> with Base reset field set to 31H, and other edited fields, if any, not modified 8. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |
| Comments: | <p>Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command</p> <p>Instead of asking the PIN before editing a field protected by the FP, the IUT might also ask for PIN before opening the list via start session, or before reading a field, or before editing a field (although it is not protected by the FP), or before saving a field (either protected or not by the FP). All these implementations are accepted</p> <p>For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 4 and pass criteria 3 shall not be tested</p> <p>See also DECT system settings list related requirements (see beginning of Clause 6.16)</p> |

| TC_PT_NG1.N.16_BV_3001 | DECT system settings list - FP IP address - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3, 7.4.11.3.4, 7.4.11.3.5, 7.4.11.3.6, 7.4.11.3.7 and 7.4.11.3.8 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1, 3. Send a <Start session confirm, session id=4, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select and edit the FP IP address field on IUT 5. Send a <Edit entry confirm, session id=4> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the FP IP address/type field to "DHCP" 6. Send a <Save entry confirm, session id=4, entry identifier= 1, position index=1, total number of available entries=1> from TS_1 Select and edit the FP IP address field on IUT 7. Send a <Edit entry confirm, session id=4> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the FP IP address/type field to "Static" Modify the FP IP address/value = 192.168.221.20 Modify the FP IP address/subnet mask = 255.255.255.0 Modify the FP IP address/gateway = 192.168.221.1 Modify the FP IP address/DNS server = 192.168.221.2 if declared (see Annex A, Table A.7) 8. Send a <Save entry confirm, session id=4, entry identifier= 1, position index=1, total number of available entries=1> from TS_1 Close the list access service on IUT 9. If <End session> received then send <End session confirm, session id=4> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = 01H, 02H, 03H, 09H, 0AH completed with optional settings supported (see Annex A, Table A.7) > 4. Verify that the IUT sends a <Edit entry, session id=4, entry identifier=1, list entry field identifier 1= at the minimum FP IP address identifiers 04H, 05H, 06H, 07H, 08H > 5. Verify that the IUT sends a <Save entry, session id=4, entry identifier=1>, followed by <data packet/data packet last> with FP IP address/type field set to (DHCP=1, static=0), and other edited fields, if any, not modified 6. Verify that the IUT sends a <Edit entry, session id=4, entry identifier=1, list entry field identifier 1= at the minimum FP IP address identifiers 04H, 05H, 06H, 07H, 08H > 7. Verify that the IUT sends a <Save entry, session id=4, entry identifier=1>, followed by <data packet/data packet last> with FP IP address/type field set to (DHCP=0, static=1) FP IP address/value set to (IPv4/6=0, 'C0A8DD14'H) FP IP address/subnet mask set to (IPv4/6=0, 'FFFFFF00'H) FP IP address/gateway set to (IPv4/6=0, 'C0A8DD01'H) FP IP address/DNS server set to (IPv4/6=0, 'C0A8DD02'H) if declared (see Annex A, Table A.7) other edited fields, if any, not modified 8. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |

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|-----------|--|
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 4 and pass criteria 3 shall not be tested - In pass criterion 7, IP address type is static, hence DHCP=0 and static=1 - In pass criterion 4 and 6, field id '07'H may be present several times. As the test equipment only supports one DNS server setting, occurrences other than the first one shall be ignored - In pass criteria 4 to 7 some of the IP address sub fields may not be supported by the IUT depending on the declarations NG1.N.16_30/31/32/33/34 (see Table A.7 in Clause A.1.3) - See also DECT system settings list related requirements (see beginning of Clause 6.16) |
|-----------|--|

| TC_PT_NG1.N.16_BV_3501 | DECT system settings list - FP version - Read entries |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3, 7.4.11.3.9, 7.4.11.3.10 and 7.4.11.3.11 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), |
| Stimulus: | <p>T-00</p> <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=5, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=5> from TS_1, followed by <data packet/data packet last> with the requested field(s) Browse into the FP version field(s) on the IUT 5. Close the list access service on IUT 6. If <End session> received then send <End session confirm, session id=5> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=5, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at the minimum FP version identifiers 09H, 0AH> (0BH if declared, see Annex A, Table A.7) > 4. Verify that the FP version fields are displayed on IUT Firmware version = "F1.2C8" Eeprom version = "E1.5C6" Hardware version = "H1.4A2" if declared (see Annex A, Table A.7) 5. Verify that the IUT sends to TS_1, optionally a <End session, session id=5>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read one by one, or all in the same <Read entries> command - For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 4 and pass criteria 3 shall not be tested - See also DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_3801 | Line settings list - Line name - Edit entry - Save entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.1 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select first line and edit the Line name field from IUT 5. Send a <Edit entry confirm, session id=1> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the Line name field to "Line for test" 6. Send a <Save entry confirm, session id=1, entry identifier= 1, position index=1, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=1> from TS_1 <p>Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE <<CALL-INFORMATION>> specifying (Relating to line 0) = <(0, 3, 0)></p> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Line name identifier 01H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=1, entry identifier=1, list entry field identifier 1= at the minimum Line name identifier 01H> (some other fields can be edited at the same time) 5. Verify that the IUT sends to TS_1 a <Save entry, session id=1, entry identifier=1>, followed by <data packet/data packet last> with Line name field set to "Line for test", and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4002 | Line settings list - Attached handsets - PIN protected - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.1 and 7.4.11.4.3 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9) with 'PIN protected' property bit set to 1 for 'Attached handset' field of line 2 (see Clause 4.1.1.1.9) |
| | DECT system settings list content (see Clause 4.1.1.1.8) |
| Stimulus: | T-00 |
| | 1. Open the Line settings list from IUT |
| | 2. Send a {CC-CALL-PROC} message from TS_1 |
| | 3. Send a <Start session confirm, session id=4, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 |
| | 4. For each <Read entries> received, send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the requested field(s) and with 'PIN protected' property bit set to 1 for 'Attached handsets' field |
| | Select second line and edit the Attached handsets field from IUT |
| | 5. Send a <Start session confirm, session id=5, nb of sorting fields=0> from TS_1 |
| | 6. For each <Read entries> received, send a <Read entries confirm, session id=5> from TS_1, followed by <data packet/data packet last> with the requested field(s) |
| | 7. Send to TS_1 a <Edit entry confirm, session id=5> followed by <data packet/data packet last> with current PIN code field set to (FFH, FFH, FFH, FFH) |
| | Enter "1234" as current PIN code value |
| | 8. Send to TS_1 a <Save entry confirm, session id=5, entry identifier= 1, position index=1, total number of available entries=1> |
| | 9. Send to TS_1 a <End session confirm, session id=5> |
| | 10. Send a <Edit entry confirm, session id=4> from TS_1, followed by <data packet/data packet last> with requested field(s) |
| | Terminate the edit entry without changing the entry content |
| | 11. Send a <Save entry confirm, session id=4, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 |
| | Close the list access service on IUT |
| | 12. If <End session> received then send <End session confirm, session id=4> from TS_1 |
| | Send a {CC-RELEASE-COM} message from TS_1 |
| | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE |
| | <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> |
| | 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > |
| | 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Attached handsets field identifier 03H> |
| | 4. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > |
| | 5. Verify that the IUT sends to TS_1 a <Read entries, session id=5, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at least Current PIN code identifier 01H > |
| | 6. Verify that the IUT requires the user to enter the PIN code value |
| | Verify that the IUT sends to TS_1 a <Edit entry, session id=5, entry identifier=1, list entry field identifier 1= Current PIN code identifier 01H> |
| | 7. Verify that the IUT sends to TS_1 a <Save entry, session id=5, entry identifier=1>, followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 12H, 34H) |
| | 8. Verify that the IUT sends to TS_1 a <End session, session id=5> |
| | 9. Verify that the IUT sends to TS_1 a <Edit entry, session id=4, entry identifier=2, list entry field identifier 1= at the minimum Attached handsets field identifier 03H> |
| | 10. Verify that the IUT sends to TS_1 a <Save entry, session id=4, entry identifier=2>, followed by one empty <data packet/data packet last> |
| | 11. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |
| | - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command |
| | - IUT can open the internal names list to know the registered handsets list |
| | Instead of asking the PIN before editing a field protected by the FP, the IUT might also ask for PIN before opening the list via start session, or before reading a field, or before editing a field (although it is not protected by the FP), or before saving a field (either protected or not by the FP). All these implementations are accepted |
| | Session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |
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| TC_PT_NG1.N.16_BV_4101 | Line settings list - Dialing prefix - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.4 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=4, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=4> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select first line and edit the Dialing prefix field from IUT 5. Send a <Edit entry confirm, session id=4> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the Dialing prefix field to "0033" 6. Send a <Save entry confirm, session id=4, entry identifier= 1, position index=1, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=4> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=4, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Dialing prefix identifier 04H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=4, entry identifier=1, list entry field identifier 1= at the minimum Dialing prefix identifier 04H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=4, entry identifier=1>, followed by <data packet/data packet last> with Dialing prefix field set to "0033", and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=4>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4201 | Line settings list - FP melody - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.5 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=5, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=5> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the FP melody field from IUT 5. Send a <Edit entry confirm, session id=5> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify FP melody field to melody 1 6. Send a <Save entry confirm, session id=5, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=5> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=5, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum FP melody identifier 05H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=5, entry identifier=2, list entry field identifier 1= at the minimum FP melody identifier 05H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=5, entry identifier=2>, followed by <data packet/data packet last> with FP melody field set to 01H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=5>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4301 | Line settings list - FP volume - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.6 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=6, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=6> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the FP volume field from IUT 5. Send a <Edit entry confirm, session id=6> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify FP volume field to volume 3 6. Send a <Save entry confirm, session id=6, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=6> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE-COM} message from TS_1 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=6, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum FP volume identifier 06H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=6, entry identifier=2, list entry field identifier 1= at the minimum FP volume identifier 06H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=6, entry identifier=2>, followed by <data packet/data packet last> with FP volume field set to 33H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=6>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4401 | Line settings list - Blocked number - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.4.7 and 7.4.10.1, 'Field instances management' entry. |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=7, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=7> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Blocked number field from IUT 5. Send a <Edit entry confirm, session id=6> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Blocked number field to "00" 6. Send a <Save entry confirm, session id=7, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=7> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=7, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Blocked number identifier 07H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=7, entry identifier=2, list entry field identifier 1= at the minimum Blocked number identifier 07H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=7, entry identifier=2>, followed by <data packet/data packet last> with Blocked number field set to "00", and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=7>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - In pass criterion 4, field id '07'H may be present several times. As the test equipment only supports one blocked number, occurrences other than the first one shall be ignored - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4501 | Line settings list - Multiple calls mode - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=8, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=8> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select first line and edit the Multiple calls mode field from IUT 5. Send a <Edit entry confirm, session id=8> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Multiple calls mode field to Multiple call 6. Send a <Save entry confirm, session id=8, entry identifier= 1, position index=1, total number of available entries=2> from TS_1 Close the list access service on IUT 7. Send a {CC- If <End session> received then send <End session confirm, session id=8> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE <<CALL-INFORMATION>> specifying (Relating to line 0) = <(0, 3, 0)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=8, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Multiple calls mode identifier 08H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=8, entry identifier=1, list entry field identifier 1= at the minimum Multiple calls mode identifier 08H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=8, entry identifier=1>, followed by <data packet/data packet last> with Multiple calls mode field set to 31H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=8>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4601 | Line settings list - Intrusion call - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=9, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=9> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select first line and edit the Intrusion call field from IUT 5. Send a <Edit entry confirm, session id=9> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Intrusion call field to Allowed 6. Send a <Save entry confirm, session id=9, entry identifier= 1, position index=1, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=9> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE <<CALL-INFORMATION>> specifying (Relating to line 0) = <(0, 3, 0)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=9, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Intrusion call identifier 09H> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=9, entry identifier=1, list entry field identifier 1= at the minimum Intrusion call identifier 09H> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=9, entry identifier=1>, followed by <data packet/data packet last> with Intrusion call field set to 31H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=9>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4701 | Line settings list - Permanent CLIR - Edit entry - Save entry - "Value" subfield |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=10, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=10> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select first line and edit the Permanent CLIR field from IUT 5. Send a <Edit entry confirm, session id=10> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Permanent CLIR field to "Value" subfield set to Activated 6. Send a <Save entry confirm, session id=10, entry identifier= 1, position index=1, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=10> from TS_1 <p>Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE <<CALL-INFORMATION>> specifying (Relating to line 0) = <(0, 3, 0)></p> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=10, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Permanent CLIR identifier 0AH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=10, entry identifier=1, list entry field identifier 1= at the minimum Permanent CLIR identifier 0AH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=10, entry identifier=1>, followed by <data packet/data packet last> with Permanent CLIR field set to Value=31H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=10>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_4702 | Line settings list - Permanent CLIR - Edit entry - Save entry - CLIR code subfields |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=10, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=10> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select first line and edit the Permanent CLIR field from IUT 5. Send a <Edit entry confirm, session id=10> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Permanent CLIR field to "CLIR activation code" subfield set to "#12" "CLIR deactivation code" subfield set to "*34" 6. Send a <Save entry confirm, session id=10, entry identifier= 1, position index=1, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=10> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE <<CALL-INFORMATION>> specifying (Relating to line 0) = <(0, 3, 0)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=10, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Permanent CLIR identifier 0AH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=10, entry identifier=1, list entry field identifier 1= at the minimum Permanent CLIR identifier 0AH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=10, entry identifier=1>, followed by <data packet/data packet last> with Permanent CLIR field set to CLIR activation code (including length) = 03H, 23H, 31H, 32H, CLIR deactivation code (including length) = 03H, 2AH, 33H, 34H 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=10>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

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|-------------------------------|---|
| TC_PT_NG1.N.16_BV_4801 | Line settings list - Call forwarding unconditional - Edit entry - Save entry - 'Value' and 'Call forwarding number' subfields |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=11, total nb=2, discriminator type=0, nb of sorting fields =1,sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=11 > from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Call forwarding unconditional field from IUT 5. Send a <Edit entry confirm, session id=11 > from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Call forwarding unconditional field to "Value" subfield set to Activated "Call forwarding number" subfield set to "0123456789" 6. Send a <Save entry confirm, session id=11, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=11> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 1) = <(0, 3, 1)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=11, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Call forwarding unconditional identifier 0BH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=11, entry identifier=2, list entry field identifier 1= at the minimum Call forwarding unconditional identifier 0BH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=11, entry identifier=2>, followed by <data packet/data packet last> with Call forwarding unconditional field set to Value=31H, Call forwarding number (including length) =0AH, 30H, 31H, 32H, 33H, 34H, 35H, 36H, 37H, 38H, 39H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=11 >, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

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|-------------------------------|--|
| TC_PT_NG1.N.16_BV_4802 | Line settings list - Call forwarding unconditional - Edit entry - Save entry - CFU codes subfields |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=11, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=11 > from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Call forwarding unconditional field from IUT 5. Send a <Edit entry confirm, session id=11 > from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Call forwarding unconditional field to "CFU activation code" subfield set to "**111" "CFU deactivation code" subfield set to "**112" 6. Send a <Save entry confirm, session id=11, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=11> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 1) = <(0, 3, 1)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=11, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Call forwarding unconditional identifier 0BH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=11, entry identifier=2, list entry field identifier 1= at the minimum Call forwarding unconditional identifier 0BH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=11, entry identifier=2>, followed by <data packet/data packet last> with Call forwarding unconditional field set to CFU activation code (including length) = 04H, 2AH, 31H, 31H, 31H, CFU deactivation code (including length) =04H, 2AH, 31H, 31H, 32H 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=11 >, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| | |
|------------------------|--|
| TC_PT_NG1.N.16_BV_4901 | Line settings list - Call forwarding on No answer - Edit entry - Save entry - 'Value' and 'Call forwarding number' subfields |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=12, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=12 > from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Call forwarding on No answer field from IUT 5. Send a <Edit entry confirm, session id=12 > from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Call forwarding on No answer field to "Value" subfield set to Activated "Call forwarding number" subfield set to "9876543210" 6. Send a <Save entry confirm, session id=12, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=12> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 1) = <(0, 3, 1)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=12, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Call forwarding on No answer identifier 0CH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=12 , entry identifier=2, list entry field identifier 1= at the minimum Call forwarding on No answer identifier 0CH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=12, entry identifier=2>, followed by <data packet/data packet last> with Call forwarding on No answer field set to Value=31H, Call forwarding number (including length) =0AH, 39H, 38H, 37H, 36H, 35H, 34H, 33H, 32H, 31H, 30H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=12 >, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

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|-------------------------------|--|
| TC_PT_NG1.N.16_BV_4902 | Line settings list - Call forwarding on No answer - Edit entry - Save entry - CFNA codes subfields |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=12, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=12 > from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Call forwarding on No answer field from IUT 5. Send a <Edit entry confirm, session id=12 > from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Call forwarding on No answer field to "Nb of seconds before call is forwarded" subfield set to 25 seconds "CFNA activation code" subfield set to "#20" "CFNA deactivation code" subfield set to "#21" 6. Send a <Save entry confirm, session id=12, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=12> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (=03H,88H,81H)> >> and IE<<CALL-INFORMATION>> specifying (Relating to line 1) =<(0, 3, 1)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=12, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Call forwarding on No answer identifier 0CH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=12 , entry identifier=2, list entry field identifier 1= at the minimum Call forwarding on No answer identifier 0CH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=12, entry identifier=2>, followed by <data packet/data packet last> with Call forwarding on No answer field set to Nb of seconds before call is forwarded = 19H, CFNA activation code (including length) = 03H, 23H, 32H, 30H, CFNA deactivation code (including length) =03H, 23H, 32H, 31H 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=12 >, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

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|-------------------------------|---|
| TC_PT_NG1.N.16_BV_5001 | Line settings list - Call forwarding on Busy subscriber - Edit entry - Save entry - 'Value' and 'Call forwarding number' subfields |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=13, total nb=2, discriminator type=0, nb of sorting fields =1,sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=13 > from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Call forwarding on Busy subscriber field from IUT 5. Send a <Edit entry confirm, session id=13 > from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Call forwarding on Busy subscriber field to "Value" subfield set to Activated "Call forwarding number" subfield set to "0123456789" 6. Send a <Save entry confirm, session id=13, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=13> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 1) = <(0, 3, 1)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=13, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Call forwarding on Busy subscriber identifier 0DH > 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=13, entry identifier=2, list entry field identifier 1= at the minimum Call forwarding on Busy subscriber identifier 0DH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=13, entry identifier=2>, followed by <data packet/data packet last> with Call forwarding on Busy subscriber field set to Value=31H, Call forwarding number (including length) =0AH, 30H, 31H, 32H, 33H, 34H, 35H, 36H, 37H, 38H, 39H, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=13 >, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

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|-------------------------------|--|
| TC_PT_NG1.N.16_BV_5002 | Line settings list - Call forwarding on Busy subscriber - Edit entry - Save entry - CFB codes subfields |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | Line settings list content (see Clause 4.1.1.1.9), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the Line settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=13, total nb=2, discriminator type=0, nb of sorting fields =1, sorting field id1 =2> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=13 > from TS_1, followed by <data packet/data packet last> with the requested field(s) Select second line and edit the Call forwarding on Busy subscriber field from IUT 5. Send a <Edit entry confirm, session id=13 > from TS_1, followed by <data packet/data packet last> with requested field(s) Modify Call forwarding on Busy subscriber field to "CFB activation code" subfield set to "*44" "CFB deactivation code" subfield set to "*55" 6. Send a <Save entry confirm, session id=13, entry identifier= 2, position index=2, total number of available entries=2> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=13> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 Send a {FACILITY} message from TS_1 with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1> (=03H,88H,81H)> >> and IE<<CALL-INFORMATION>> specifying (Relating to line 1) =0, 3, 1> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 08H, nb of sorting fields = n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=13, start index=s, direction=0, counter=i, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Call forwarding on Busy subscriber identifier 0DH > 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=13, entry identifier=2, list entry field identifier 1= at the minimum Call forwarding on Busy subscriber identifier 0DH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=13, entry identifier=2>, followed by <data packet/data packet last> with Call forwarding on Busy subscriber field set to CFB activation code (including length) = 03H, 2AH, 34H, 34H, CFB deactivation code (including length) =03H, 2AH, 35H, 35H 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=13 >, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - Possible session with DECT system settings list implies fulfilment of DECT system settings list related requirements (see beginning of Clause 6.16) |

| TC_PT_NG1.N.16_BV_5101 | DECT system settings list - Emission mode - Edit entry - Save entry |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3 and 7.4.11.3.12 |
| Initial condition: | DECT system settings list content (see Clause 4.1.1.1.8), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Open the DECT system settings list from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=2, nb of sorting fields=0> from TS_1 4. For each <Read entries> received, send a <Read entries confirm, session id=2> from TS_1, followed by <data packet/data packet last> with the requested field(s) Select and edit the Emission mode field on IUT 5. Send a <Edit entry confirm, session id=2> from TS_1, followed by <data packet/data packet last> with requested field(s) Modify the Emission mode field to "activated" 6. Send a <Save entry confirm, session id=2, entry identifier= 1, position index=1, total number of available entries=1> from TS_1 Close the list access service on IUT 7. If <End session> received then send <End session confirm, session id=2> from TS_1 Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 07H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=2, start index=s, direction=0, counter=1, mark entries request= do not care value, list entry field identifier 1..n = at the minimum Emission mode identifier 0CH> 4. Verify that the IUT sends to TS_1 a <Edit entry, session id=2, entry identifier=1, list entry field identifier 1= at the minimum Emission mode identifier 0CH> 5. Verify that the IUT sends to TS_1 a <Save entry, session id=2, entry identifier=1>, followed by <data packet/data packet last> with Emission mode bit NEM set to 1B, and other edited fields, if any, not modified 6. Verify that the IUT sends to TS_1, optionally a <End session, session id=2>, and a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - Settings fields can be read (or edited) one by one, or all in the same <Read entries> (respectively <Edit entry>) command - For this list, it is allowed that the IUT sends directly an <edit entries> without any prior <read entries> command. If this is the case, no <Read entries> will be received by the tester in stimulus 4 and pass criteria 3 shall not be tested - See also DECT system settings list related requirements (see beginning of Clause 6.16) |

6.17 TC_PT_NG1.N.17 Calling line identity restriction tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Calling line identity restriction with the following considerations:

- As NG1.N.17_2 "Permanent CLIR mode (all calls)" procedure includes only FP requirements, there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.N.17 "Calling line identity restriction" feature is optional on PP side, so the manufacturer shall declare if it is supported.

| TC_PT_NG1.N.17_BV_301 | Temporary CLIR mode (call by call) |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.12.3 |
| Initial condition: | "Permanent CLIR" field on line 0 set to the following value: "Value" subfield set to 30H (deactivated) |
| Stimulus: | T-00 |
| | <ol style="list-style-type: none"> 1. Perform an outgoing call with restricted presentation on line 0 to "0123456789" phone number from IUT 2. (2.1) None (2.2) If line id (only) was received in step 1 then send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 2)> (2.3) Else send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 3. Hang up on IUT 4. Perform an outgoing call without restricted presentation on line 0 to "0123456789" phone number from IUT 5. (5.1) None (5.2) If line id (only) was received in step 4 then send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 2)> (5.3) Else send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 6. Hang up on IUT |
| Pass criteria: | <ol style="list-style-type: none"> 1. 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', and possibly IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 2. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 1 (i.e. in subcase 2.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 0, call id a) =<(0, 0, 0), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "<temporary CLIR digits>0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "<temporary CLIR digits>0123456789" (possibly the whole string) • the concatenated substrings of "<temporary CLIR digits>0123456789" in all {CC-INFO} messages shall match "<temporary CLIR digits>0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a) 3. Verify that the IUT sends to TS_1 a {CC-RELEASE} message 4. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', and possibly IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, 0)> 5. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 4 (i.e. in subcase 5.3), the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line 0, call id a) =<(0, 0, 0), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to a leading substring of "0123456789" (possibly the whole string) • all subsequent {CC-INFO} messages (and the first one also if it does not contain the line id) shall contain each an IE <<MULTI-KEYPAD>> set to a substring of "0123456789" (possibly the whole string) • the concatenated substrings of "0123456789" in all {CC-INFO} messages shall match "0123456789" • each {CC-INFO} message shall contain (call id a) =<(1, 0, value a)> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.18 TC_PT_NG1.N.18 Call forwarding (external calls) tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Call forwarding (external calls) with the following considerations:

- As NG1.N.18_1 "Call forwarding common requirements" procedure is tested when testing NG1.N.16_25 "Line settings list" procedure for the corresponding settings, there is no test case defined for this procedure.

- As NG1.N.18_2 "External Call Forwarding Unconditional (CFU) to external number" procedure includes only FP requirements, there is no test case defined for this procedure.
- As NG1.N.18_3 "External Call Forwarding on No Answer (CFNA) to external number" procedure includes only FP requirements, there is no test case defined for this procedure.
- As NG1.N.18_4 "External Call Forwarding on Busy subscriber (CFB) to external number" procedure includes only FP requirements, there is no test case defined for this procedure.

6.19 TC_PT_NG1.N.19 DTMF handling tests cases

Test subgroup objectives: to check the IUT's behaviours regarding DTMF handling with the following considerations:

- As NG1.N.19_3 "Downlink DTMF reception" procedure includes only FP requirements, there is no test case defined for this procedure.
- As NG1.N.19_4 "Local DTMF feedback of dialled digits" procedure includes only MMI requirements on PP side, there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.N.19_1 "Uplink DTMF transmission at call setup when FP connected to classic switching network" is conditional, so the manufacturer shall declare if it is supported.

| | |
|------------------------------|---|
| TC_PT_NG1.N.19_BV_101 | Uplink DTMF transmission at call setup when FP connected to classic switching network |
| Reference: | TS 102 527-3 [14], Clause 7.4.14.1.1 |
| Initial condition: | T-00 |
| Stimulus: | Initiate an outgoing call from IUT and press each telephone digit key (0-9, *,#) on IUT |
| Pass criteria: | Verify on TS_1 side that the PP does not generate any in band audio DTMF and that keypad information is received for each digit pressed |

| | |
|------------------------------|---|
| TC_PT_NG1.N.19_BV_201 | Uplink DTMF transmission when connected |
| Reference: | TS 102 527-3 [14], Clause 7.4.14.1.2 |
| Initial condition: | T-10 (IUT+TS_1) |
| Stimulus: | Press each telephone digit key (0-9, *,#) on IUT |
| Pass criteria: | Verify on TS_1 side that the PP does not generate any in band audio DTMF and that keypad information is received for each digit |

6.20 TC_PT_NG1.N.20 Tones provision tests cases

Test subgroup objectives: to check the IUT's behaviours regarding tone provision with the following considerations:

- The PT shall support two methods for providing tones: IE <<SIGNAL>> signal method (NG1.N.20_2 "Tones provision by the system" procedure) and in band method (NG1.N.20_3 "Transparency to tones provision by the network or PABX" procedure).
- To limit the number of tests, TC_PT_NG1.N.20 tests cases include only tone tests for a first call. Tone tests related to parallel calls are merged with corresponding TCs (see TC_PT_NG1.N.6 and TC_PT_NG1.N.7 tests cases) as it is mandatory on PP side to support "Tones provision by the system" procedure.
- As the U-plane connection using the IE <<Progress Indicator>> is mandatory in EN 300 444 [12] on PP side, there is no test case for the NG1.N.20_3 "Transparency to tones provision by the network or PABX" procedure. Only the NG1.N.20_2 "Tones provision by the system" procedure is tested.
- Ring-back tone on internal call, included in NG1.N.20_2 "Tones provision by the system" procedure, is tested when running NG1.N.8 "Call transfer" test cases, so there is no test case defined for this requirement.

Declarations (see Annex A):

- Following tones are optional so the manufacturer shall declare if they are supported:
 - NG1.N.20_2 "Dial tone".

- NG1.N.20_2 "Off-hook warning tone".
- NG1.N.20_2 "Network congestion tone (external calls only)".

| TC_PT_NG1.N.20_BV_201 | Tones provision by the system - Ring-back tone and Busy tone |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call to "1234567890" phone number from IUT Send a {CC-CALL-PROC} followed by a {CC-ALERTING} message with IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' from TS_1 2. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 04H indicating 'Busy tone on' from TS_1 3. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 3FH indicating 'Tones off' from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT generates a ring-back tone 2. Verify that the IUT generates a busy tone 3. Verify that the IUT stops the tone generation |

| TC_PT_NG1.N.20_BV_203 | Tones provision by the system - Intercept tone, Negative acknowledgement tone and Call waiting tone |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | T-10 (IUT+TS_1) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' from TS_1 2. Initiate outgoing parallel call from IUT Send a {CC-INFO} message with IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' from TS_1 3. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 07H indicating 'Call waiting tone on' from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT generates an intercept tone and stops the generation by itself 2. Verify that the IUT generates a negative acknowledgement tone and stops the generation by itself 3. Verify that the IUT generates a call-waiting tone and stops the generation by itself |
| Comments: | In principle, the tone generation is independent of the codec itself |

| TC_PT_NG1.N.20_BV_206 | Tones provision by the system - Dial tone |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT without sending digits. Send a {CC-SETUP-ACK} message with IE <<SIGNAL>> with the value 00H indicating 'Dial tone on' from TS_1 2. Send a {CC-CONNECT} message with IE <<SIGNAL>> with the value 3FH indicating 'Tones off' from TS_1 3. Hang up from IUT 4. Perform an outgoing call from IUT without sending digits. Send a {CC-CONNECT} message with IE <<SIGNAL>> with the value 00H indicating 'Dial tone on' from TS_1 5. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 3FH indicating 'Tones off' from TS_1 6. Hang up from IUT |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT generates a dial-tone tone 2. Verify that the IUT stops the tone generation 3. Verify that the IUT sends to TS_1 a {CC-RELEASE} message 4. Verify that the IUT generates a dial-tone tone 5. Verify that the IUT stops the tone generation 6. Verify that the IUT send to TS_1 a {CC-RELEASE} message |
| Comments: | In step 1 to 3, test equipment behaves as an 'Non-early CC-CONNECT' implementation In step 4 to 6, test equipment behaves as an 'Early CC-CONNECT' implementation |

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|------------------------------|--|
| TC_PT_NG1.N.20_BV_207 | Tones provision by the system -Off-hook warning tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT. Send a {CC-CONNECT} message from TS_1 followed by a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 08H indicating Off-hook warning tone on' 2. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 3FH indicating 'Tones off' from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT generates an Off-hook warning tone 2. Verify that the IUT stops the tone generation |

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|------------------------------|--|
| TC_PT_NG1.N.20_BV_208 | Tones provision by the system - Network congestion tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT. Send a {CC-CONNECT} message with IE <<SIGNAL>> with the value 03H indicating Network congestion tone on' from TS_1 2. Send a {CC-INFO} message with IE <<SIGNAL>> with the value 3FH indicating 'Tones off' from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT generates a Network congestion tone 2. Verify that the IUT stops the tone generation |

6.21 TC_PT_NG1.N.21 Headset management tests cases

Test subgroup objectives: to check the IUT's behaviours regarding headset management with the following consideration:

- As NG1.N.21_6 "Switching headset to handset (headset initiated)" procedure is tested together with NG1.N.21_3 "Headset incoming call" procedure, there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.N.21 "Headset management" feature is conditional on PP side, so the manufacturer shall declare if it is supported.
- NG1.N.21_4 "Re-dial of last outgoing call" procedure is optional on PP side, so the manufacturer shall declare if it is supported.
- NG1.N.21_5 "Re-dial of last incoming call" procedure is optional on PP side, so the manufacturer shall declare if it is supported.
- NG1.N.21_6 "Switching from headset to handset (headset initiated)" procedure is optional on PP side, so the manufacturer shall declare if it is supported.

| | |
|------------------------------|--|
| TC_PT_NG1.N.21_BV_101 | Headset capability during subscription registration |
| Reference: | TS 102 527-3 [14], Clause 7.4.16.1 |
| Initial condition: | No access rights on IUT AC set to '0000' value on TS_1 |
| Stimulus: | A44 set to 1 on TS_1 Perform an access rights request from IUT |
| Pass criteria: | Verify that the IUT includes in the {ACCESS-RIGHTS-REQUEST} message an IE <<TERMINAL-CAPABILITY>> with following capabilities declared: <ul style="list-style-type: none"> • Support of the "Headset management" feature in Profile indicator_7 field (octet 4f) Verify that the registration is successful |

| | |
|------------------------------|--|
| TC_PT_NG1.N.21_BV_102 | Headset capability during location registration |
| Reference: | TS 102 527-3 [14], Clause 7.4.16.1 |
| Initial condition: | T-00 |
| Stimulus: | Perform a location registration request from IUT (Switch IUT off and on again) |
| Pass criteria: | Verify that the IUT includes in the {LOCATE-REQUEST} message an IE <<TERMINAL-CAPABILITY>> with following capabilities declared: <ul style="list-style-type: none"> o Support of the "Headset management" feature in Profile indicator_7 field (octet 4f) |
| TC_PT_NG1.N.21_BV_201 | Headset call interception - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.16.2 |
| Initial condition: | 2 PPs registered (IUT is HPP PP1, TS_2 is NG PP2), "Call interception" set to 31H ("allowed") for PP2 entry in Internal names list, G.722 external call in T-10 (IUT+TS_2) initiated by TS_2 on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT 2. Send a {CC-CALL-PROC} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call proc) = <(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 3)> and IE <<CODEC LIST>> selecting G.722 followed by a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) = <(1, 0, value a), (2, 1, 5)> 3. Hang up from IUT 4. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE << MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits 2. Verify end-to-end U-plane connection between IUT and TS_1 3. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| TC_PT_NG1.N.21_BV_301 | Headset incoming call - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.16.3 |
| Initial condition: | 2 PPs registered (IUT is HPP PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | Perform incoming call G.722 (full paging (Long slot; j = 640), G.722 prioritized) from TS_1. Call pick up on IUT |
| Pass criteria: | Verify that the IUT selects a codec only in one of the following messages: {CC-ALERTING} and {CC-CONNECT} (other messages not allowed) Verify end-to-end U-plane connection between IUT and TS_1 |
| TC_PT_NG1.N.21_BV_401 | Re-dial of last outgoing call |
| Reference: | TS 102 527-3 [14], Clause 7.4.16.4 |
| Initial condition: | Outgoing calls test list content (see Clause 4.1.1.1.3) T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Re-dial the last outgoing call from IUT 2. Send a {CC-CALL-PROC} message from TS_1 3. Send a <Start session confirm, session id=1, total nb=10, discriminator type=0, nb of sorting fields =1, sorting field id1 =3> from TS_1 4. Send a <Read entries confirm, session id=1> from TS_1, followed by <data packet/data packet last> with first entry content 5. Send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) = <(1, 0, value a), (2, 1, 5)> 6. Hang up on IUT 7. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes>>> 2. Verify that the IUT sends to TS_1 a <Start session, List identifier = 02H, nb of sorting fields =n (n ≥ 0) followed by n sorting field identifiers among 01H, 02H, 03H, 04H, 05H > 3. Verify that the IUT sends to TS_1 a <Read entries, session id=1, start index=1, direction=0, counter= 1, mark entries request= do not care value, list entry field identifier 1..n = some or all identifiers among 01H, 02H, 03H, 04H, 05H > 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to "008989945270" digits 5. Verify end-to-end U-plane connection between IUT and TS_1 6. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

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|---|--|
| TC_PT_NG1.N.21_BV_501 | Re-dial of last incoming call |
| Reference: Initial condition: Stimulus: | <p>TS 102 527-3 [14], Clause 7.4.16.5</p> <p>T-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', IE << CALLING PARTY NUMBER =<unknown, unknown, '0123456789'>, and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>> 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-RELEASE} message from TS_1 3. Redial the last incoming call from IUT 4. (4.1) None (4.2) If line id (only) was received in step 3 then send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup ack) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 2)> (4.3) Else send a {CC-SETUP-ACK} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> 5. If the line information was not sent in step 4 (i.e. in subcase 4.3) then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a) =<(0, 0, 0), (0, 5, 1), (1, 0, value a)> In all cases, send a {CC-CALL-PROC} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call proc) =<(1, 0, value a), (2, 1, 3)> In all cases, send a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 6. Hang up on IUT 7. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT rings 2. Verify that the IUT send to TS_1 a {CC-RELEASE-COM} message 3. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup', and possibly: <ul style="list-style-type: none"> • IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> 4. Verify that the IUT sends to TS_1 one or several {CC-INFO} messages, such that: <ul style="list-style-type: none"> • if the line id was not received in step 3, the first {CC-INFO} message shall contain an IE <<CALL-INFORMATION>> specifying (line None, call id a) =<(0, 0, 127), (1, 0, value a)>, and may contain an IE <<MULTI-KEYPAD>> set to "0123456789" • the subsequent {CC-INFO} message shall contain an IE <<MULTI-KEYPAD>> set to "0123456789" and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 5. Verify end-to-end U-plane connection between IUT and TS_1 6. Verify that the IUT send to TS_1 a {CC-RELEASE } message |

| TC_PT_NG1.N.21_BV_601 | Headset incoming call - G.726 call - Switching from headset to handset (headset initiated) |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.16.3 and 7.4.16.6 |
| Initial condition: | 2 PPs registered (IUT is HPP PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform incoming call G.726 (short paging (full slot), G.726 prioritized) from TS_1. Call pick up on IUT 2. Perform an unannounced call transfer on IUT towards all PPs 3. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> If dialing information was not received in step 1 then send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Else send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> 4. None 5. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>, followed by a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT selects a codec only in one of the following messages: {CC-ALERTING} and {CC-CONNECT} (other messages not allowed) Verify end-to-end U-plane connection between IUT and TS_1 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> set to 17H digit, and possibly together with 2AH digit 3. If dialing information was not received in step 2 then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 2AH in and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 34H) digits and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 5. Verify that the IUT send to TS_1 a {CC-RELEASE-COM} message |

| TC_PT_NG1.N.21_BV_701 | Headset side - Headset call interception - G.726 call - Switching from headset to handset (handset initiated) |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.16.2 |
| Initial condition: | 2 PPs registered (IUT is HPP PP1, TS_2 is NG PP2), "Call interception" set to 31H ("allowed") for PP2 entry in Internal names list, G.726 external call in T-10 (IUT+TS_2) initiated by TS_2 on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT 2. Send a {CC-CALL-PROC} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call proc) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 3)> followed by a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> and IE <<CODEC LIST>> selecting G.726 3. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on', IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> and IE <<CALL-INFORMATION>> specifying (call id a, CS call intercepted) =<(1, 0, value a), (2, 1, 10)> as a result of switching from headset to handset request from TS_2 4. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-RELEASE } message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits 2. Verify end-to-end U-plane connection between IUT and TS_1 3. Verify that the IUT generates an Intercept tone 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

| | |
|------------------------------|---|
| TC_PT_NG1.N.21_BV_705 | Handset side - Headset call interception - G.722 call - Switching from headset to handset (handset initiated) |
| Reference: | TS 102 527-3 [14], Clauses 7.4.16.2 and 7.4.16.7 |
| Initial condition: | 2 PPs registered (IUT is NG PP1, TS_2 is HPP PP2), "Call interception" set to 31H ("allowed") for PP2 entry in Internal names list, G.722 external call in T-10 (IUT+TS_1) initiated by IUT on line 0 (call id a) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on', IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> and IE <<CALL-INFORMATION>> specifying (call id a, CS call intercepted) =<(1, 0, value a), (2, 1, 10)> as a result of headset call interception request from TS_2 2. Send a {CC-INFO} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-RELEASE } message from TS_1 3. Perform a switching from headset to handset request from IUT 4. Send a {CC-CALL-PROC} message from TS_1 with IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call proc) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 3)> followed by a {CC-CONNECT} message from TS_1 with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 5. Hang up from IUT 6. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT generates an Intercept tone 2. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 3. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE << MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits 4. Verify end-to-end U-plane connection between IUT and TS_1 5. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.22 TC_PT_NG1.N.22 Handling of lines where second calls are signalled in-band tests cases

Test subgroup objectives: to check the IUT's behaviours regarding handling of lines where second calls are signalled in-band with the following consideration:

- NG1.N.22_3 "Off-hook CLIP enabled 'double call with in-band signalling' line" procedure is not tested as the PT requirements are tested with NG1.N.7 "Common parallel call procedures" feature.

NOTE: Off-hook CLIP is also called "CLIP phase II". See definition Clause 3.1.

| | |
|------------------------------|---|
| TC_PT_NG1.N.22_BV_401 | Use of transparent commands on DCIBS lines (Basic or Off-hook CLIP enabled) or any other line |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.10.4 |
| Initial condition: | External call in T-10 (IUT+TS_1) initiated by IUT on line 1 specifying <(NDT=connected to a network with low delay (e.g. PSTN/ISDN), SCT=Second calls are handled with in-band signalling (e.g. PSTN lines), (call id a)> |
| Stimulus: | Send a transparent command from IUT |
| Pass criteria: | Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 15H, and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> |

6.23 TC_PT_GAP.N.30 Calling Line Identification Presentation tests cases

Test subgroup objectives: to check the IUT's behaviours when receiving CLIP.

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|-----------------------------|--|
| TC_PT_GAP.N.30_BV_01 | Incoming call with calling party number in {CC-SETUP} |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.41 |
| Initial condition: | T-00 |
| Stimulus: | Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', IE << CALLING PARTY NUMBER =<unknown, unknown, '0123456789012'>, and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>>> |
| Pass criteria: | Verify by checking CLIP presentation according to its display capabilities that the IUT is able to handle <<CALLING PARTY NUMBER>> in {CC-SETUP} |

| | |
|-----------------------------|--|
| TC_PT_GAP.N.30_BV_02 | Incoming call with calling party number in {CC-INFO} |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.41 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>>> Send a {CC-INFO} message from TS_1 with IE << CALLING PARTY NUMBER =<National number, National standard plan, '987654321098'> >> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a) >>> |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT send to TS_1 a {CC-ALERTING} message Verify by checking CLIP presentation according to its display capabilities that the IUT is able to handle <<CALLING PARTY NUMBER>> in {CC-INFO} |

6.24 TC_PT_GAP.N.31 Internal call tests cases

Test subgroup objectives: to check the IUT's behaviours when handling internal call with the following consideration:

- As GAP.N.31_2 "Internal call keypad" is tested implicitly when testing GAP.N.31_1 "Internal call setup", there is no test case defined for this procedure.
- As GAP.N.31_5 "UTF-8 CNIP" is tested implicitly when testing GAP.N.31_4 "Internal Call CNIP", there is no test case defined for this procedure.

Declarations (see Annex A):

- GAP.N.31_6 "Internal call codec priority" procedure can be not supported (see TS 102 527-3 [14], Clause 7.4.3.9.2). So the manufacturer shall declare if it is supported.

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|------------------------------|---|
| TC_PT_GAP.N.31_BV_101 | Internal call setup - call class checking |
| Reference: | TS 102 527-1 [13], Clause 7.3.6 EN 300 444 [12], Clause 14.4.3 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | Perform an internal outgoing call on IUT towards PP2 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with EITHER: <ul style="list-style-type: none"> • an IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> OR <ul style="list-style-type: none"> • an IE <<BASIC-SERVICE = <Internal call setup, Wideband speech default setup attributes> >> 2. IF List access service was setup then verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>> with <Keypad information = 17H + (IA5 coding of terminal identity number in decimal of PP2, or 2AH in case of internal general call) > ELSE Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<MULTI-KEYPAD>>. with <Keypad information = IA5 coding of terminal identity number in decimal of PP2, or 2AH in case of internal general call > |
| Comments: | IUT could access to internal names list, and/or initiate internal general call, to initiate internal call |

| | |
|------------------------------|---|
| TC_PT_GAP.N.31_BV_301 | Internal call CLIP |
| Reference: | EN 300 444 [12], Clause 8.43 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | Perform an incoming internal call from TS_1 with an IE <<CALLING PARTY NUMBER>> set to EN 300 444 [12], Clause 8.43, Table 78d content and <Calling party address = IA5 coding of terminal identity number in decimal of PP2> |
| Pass criteria: | Verify by checking CLIP presentation according to its display capabilities that the IUT is able to handle internal call CLIP. |
| Comments: | Internal CLIP is the terminal Identity number of the calling part |

| | |
|------------------------------|---|
| TC_PT_GAP.N.31_BV_401 | Internal call CNIP |
| Reference: | EN 300 444 [12], Clause 8.44 TS 102 527-3 [14], Clause 7.4.17.2 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | Perform an incoming internal call from TS_1 with IE <<CALLING PARTY NAME>> set to EN 300 444 [12], Clause 8.44, Table 78e content and <Calling party name= 'TESTER çöü'> |
| Pass criteria: | Verify by checking CNIP presentation on IUT display of 'TESTER çöü' that the IUT is able to handle internal call UTF-8 <<CALLING PARTY NAME>> without crashing |
| Comments: | For UTF-8 characters the PP is not able to display among "ç", "ö", "ü", the PP should use a replacement character (replacement character is left free to the manufacturer) UTF-8 characters encoding: <ul style="list-style-type: none"> • "ç": LATIN SMALL LETTER C WITH CEDILLA 'c3a7'H • "ö": LATIN SMALL LETTER O WITH DIAERESIS 'c3b6'H • "ü": LATIN SMALL LETTER U WITH DIAERESIS 'c3bc'H |

| | |
|------------------------------|---|
| TC_PT_GAP.N.31_BV_601 | Internal call codec priority - outgoing call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.9 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | 1. Perform an internal outgoing call on IUT towards PP2 2. TS_2 will choose G.722 codec in a {CC-CONNECT} message 3. Send a {CC-RELEASE} from TS_2 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 either: <ul style="list-style-type: none"> • if specified at call setup phase, G.722 in IE <<CODEC LIST>> with highest priority; or • if not specified at call setup phase, G.722 in IE <<CODEC LIST>> with highest priority at last location registration 2. Verify by checking end-to-end U-plane connection that the IUT is able to establish G.722 internal outgoing call 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} |

| | |
|------------------------------|---|
| TC_PT_GAP.N.31_BV_602 | Internal call codec priority - incoming call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.9 |
| Initial condition: | 2 PPs registered (IUT is PP1, TS_2 is NG PP2), T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an internal G.722 outgoing call on PP2 towards IUT 2. Call pick up on IUT 3. Hang up on IUT |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT presents the internal call to the user (ringing or display) 2. Verify that the IUT selects G.722 codec in IE <<CODEC LIST>> only in one of the following messages: {CC-ALERTING} and {CC-CONNECT} (other messages not allowed) Verify by checking end-to-end U-plane connection that the IUT is able to establish G.722 internal incoming call 3. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |

6.25 TC_PT_GAP.N.34 Calling Name Identification Presentation tests cases

Test subgroup objectives: to check the IUT's behaviours when receiving CNIP with the following consideration:

- As GAP.N.34_2 "UTF-8 CNIP" is tested implicitly when testing GAP.N.34_1 "Calling Name Identification Presentation (CNIP) Indication", there is no test case defined for this procedure.

| | |
|------------------------------|--|
| TC_PT_GAP.N.34_BV_101 | Incoming call with calling party name in {CC-SETUP} |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.42 TS 102 527-3 [14], Clause 7.4.17.2 |
| Initial condition: | T-00 |
| Stimulus: | Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, Network provided, 'CNIP1 ààà' >> >, and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>>> |
| Pass criteria: | Verify by checking CNIP presentation on IUT display of 'CNIP1 ààà' that the IUT is able to handle UTF-8 <<CALLING PARTY NAME>> in {CC-SETUP} without crashing |
| Comments: | For UTF-8 characters the PP is not able to display among "à", "à", "ä", the PP should use a replacement character (replacement character is left free to the manufacturer) UTF-8 characters encoding: <ul style="list-style-type: none"> • "à": LATIN SMALL LETTER A WITH CIRCUMFLEX 'c3a2'H • "à": LATIN SMALL LETTER A WITH GRAVE 'c3a0'H • "ä": LATIN SMALL LETTER A WITH DIAERESIS 'c3a4'H |

| | |
|------------------------------|---|
| TC_PT_GAP.N.34_BV_102 | Incoming call with calling party name in {CC-INFO} |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.42 TS 102 527-3 [14], Clause 7.4.17.2 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>>> 2. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, User-provided, verified and passed, 'CNIP2 éèè' >> > and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a) >>> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT send to TS_1 a {CC-ALERTING} message 2. Verify by checking CNIP presentation on IUT display of 'CNIP2 éèè' that the IUT is able to handle UTF-8 <<CALLING PARTY NAME>> in {CC-INFO} without crashing |
| Comments: | For UTF-8 characters the PP is not able to display among "é", "è", "ë", the PP should use a replacement character (replacement character is left free to the manufacturer). UTF-8 characters encoding: <ul style="list-style-type: none"> • "é": LATIN SMALL LETTER E WITH ACUTE 'c3a9'H • "è": LATIN SMALL LETTER E WITH GRAVE 'c3a8'H • "ë": LATIN SMALL LETTER E WITH DIAERESIS 'c3ab'H |

| | |
|------------------------------|--|
| TC_PT_GAP.N.34_BV_103 | Incoming call with CLIP and CNIP in {CC-INFO} |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13, 8.41 and 8.42 TS 102 527-3 [14], Clause 7.4.17.2 |
| Initial condition: | T-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> set to 'Normal call setup', IE <<SIGNAL>> set to 41H indicating 'Alerting on - pattern 1', and IE <<CALL-INFORMATION>> specifying (line 0, full VoIP line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, 1), (1, 0, value a), (2, 1, 1)>>> 2. Send a {CC-INFO} message from TS_1 with IE <<CALLING PARTY NUMBER = <National number, National standard plan, '987654321098' >> and an IE <<CALLING PARTY NAME = < Presentation allowed, UTF-8, User-provided, verified and passed, 'CLIP∅CNIP' >> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a) >>> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT send to TS_1 a {CC-ALERTING} message 2. Verify by checking CNIP presentation on IUT display of 'CLIP∅CNIP', and CLIP presentation, if displays, according to its display capabilities, that the IUT is able to handle both <<CALLING PARTY NUMBER>> and UTF-8 <<CALLING PARTY NAME>> in {CC-INFO} without crashing |
| Comments: | <p>In case both CLIP and CNIP are sent to the PP, it is sufficient to display CNIP. It is optional to display both.</p> <p>If the PP is not able to display "∅" UTF-8 character, the PP should use a replacement character (replacement character is left free to the manufacturer).</p> <p>UTF-8 character encoding:</p> <ul style="list-style-type: none"> • "∅": LATIN SMALL LETTER O WITH STROKE 'c3b8'H |

6.26 TC_PT_GAP.N.35 Enhanced security tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Enhanced security features with the following consideration:

- As GAP.N.35_4 "subscriptions requirements" procedure specifies only FP requirements, there is no test case defined for this procedure.

Test equipment implementation requirements for enhanced security test cases

- The 'reserved' field (bits a32 to a47) of Mt control messages for early encryption ("start encryption with cipher key-index", with command encoding 10xxB) shall contain the value 0000H.

Declarations (see Annex A):

- GAP.N.35_2 "Re-keying during a call" procedure is optional on PP side, so the manufacturer shall declare if it is supported.
- GAP.N.35_3 "Early encryption" procedure is optional on PP side, so the manufacturer shall declare if it is supported.

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|------------------------------|--|
| TC_PT_GAP.N.35_BV_101 | Encryption of all calls |
| Reference: | EN 300 444 [12], Clause 8.45.1 |
| Initial condition: | T-00. |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT 2. Send a {CC-CONNECT} message from TS_1 followed by a {AUTHENTICATION-REQUEST} message from TS_1. 3. TS_1 sends a {CIPHER_REQUEST} message. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message. 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message 3. Verify that IUT activates encryption on MAC layer. Verify that encryption is activated and verify end-to-end U-plane connection. |

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|------------------------------|--|
| TC_PT_GAP.N.35_BV_201 | Indication of Support of 'Re-keying' and 'early encryption' in terminal capabilities during registration |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | TS_1 indicates the support of 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (a42bit) |
| Stimulus: | A44 set to 1 on TS_1. Perform an access rights request from IUT |
| Pass criteria: | Verify that the IUT includes in the {ACCESS-RIGHTS-REQUEST} message an IE <<Terminal-capability>> with following capabilities declared <ul style="list-style-type: none"> • support of 'Re-keying' and 'early encryption' in Profile indicator_7 field (octet 4f) |

| | |
|------------------------------|--|
| TC_PT_GAP.N.35_BV_202 | Indication of Support of 'Re-keying' and 'early encryption' in terminal capabilities during location registration |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | T-00. TS_1 indicates the support of 'Re-keying' and 'early encryption' in extended higher layer capabilities part 2 (a42 bit) |
| Stimulus: | Perform a location registration request from IUT (Switch IUT off and on again) |
| Pass criteria: | Verify that the IUT includes in the {LOCATE-REQUEST} message an IE <<Terminal-capability>> with following capabilities declared: <ul style="list-style-type: none"> • support of 'Re-keying' and 'early encryption' in Profile indicator_7 field (octet 4f) |

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|------------------------------|---|
| TC_PT_GAP.N.35_BV_203 | Re-keying procedure |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | T-00. TS_1 indicates the support of 'Re-keying' and 'early encryption' in extended higher layer capabilities part 2 (a42 bit). |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call from IUT 2. Send a {CC-CONNECT} message from TS_1 followed by a {AUTHENTICATION-REQUEST} message from TS_1 TS_1 saves generated DCK as DCK_1 3. TS_1 sends a {CIPHER_REQUEST} message 4. TS_1 sends a {AUTHENTICATION-REQUEST} message. TS_1 saves generated DCK as DCK_2. 5. TS_1 sends a {CIPHER_REQUEST} message |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message. 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message 3. Verify that IUT activates encryption on MAC layer. Verify that encryption is activated with DCK_1 and verify end-to-end U-plane connection. 4. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message 5. Verify that IUT activates encryption on MAC layer. Verify that encryption is activated with DCK_2 and verify end-to-end U-plane connection |

| TC_PT_GAP.N.35_BV_301 | Assignment of default cipher key and usage of early encryption during incoming call |
|------------------------------|--|
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | TS_1 is in registration mode ('Access Rights supported' higher layer capability bit is set to 1). TS_1 indicates the support of 'Re-keying' and 'early encryption' in the Extended higher layer capabilities part 2 (a42 bit) |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends an {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 and default cipher key index 0001 and saves DCK as Def_DCK_1. 3. Send a {CC-SETUP} from TS_1 in order to perform an incoming call with full paging (Long slot; j = 640), G.722 prioritized. 4. Nothing 5. Invoke call answering on IUT 6. TS_1 sends a {CC-CONNECT_ACK}. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful subscription registration. Verify that IUT indicates the support of 'Re-keying' and 'early encryption' in the terminal capability. 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message. Verify that connection is released on MAC layer. 3. Verify that IUT establishes MAC connection with immediate encryption activation using Def_DCK_1 with default cipher key index 0001 and sends an encrypted {LCE-PAGE-RESPONSE} message. 4. Verify that IUT sends to TS_1 a {CC-ALERTING} message 5. Verify that IUT sends to TS_1 a {CC-CONNECT} message 6. Verify end-to-end U-plane connection. |

| TC_PT_GAP.N.35_BV_302 | Usage of early encryption during outgoing call |
|------------------------------|---|
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | T-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 with default cipher key index 0001 (i.e. TC_PT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke outgoing call at IUT 2. TS_1 sends a {CC-CONNECT} message. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT establishes MAC connection with immediate encryption activation using Def_DCK_1 with default cipher key index 0001 Verify that IUT sends to TS_1 an encrypted {CC-SETUP} message 2. Verify end-to-end U-plane connection. |

| TC_PT_GAP.N.35_BV_303 | Usage of early encryption for MM procedure |
|------------------------------|---|
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | T-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 with default cipher key index 0001 (i.e. TC_PT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | Switch IUT off and on. |
| Pass criteria: | Verify that IUT performs MAC connection establishment with immediate encryption activation using Def_DCK_1 with default cipher key index 0001 and sends to TS_1 {LOCATE-REQUEST} message on the already encrypted link. |

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|------------------------------|--|
| TC_PT_GAP.N.35_BV_304 | Overwriting a default cipher key by assigning a new default cipher key with the same index |
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | T-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 with Default cipher key index 0001 (i.e. TC_PT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke outgoing call at IUT. 2. TS_1 sends a {CC-CONNECT} message. 3. TS_1 sends a {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 and default cipher key index 0001 and saves DCK as Def_DCK_2. 4. TS_1 sends a {CC-RELEASE} message. 5. TS_1 initiates release of MAC connection. 6. Invoke outgoing call at IUT. 7. TS_1 sends a {CC-CONNECT} message. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT establishes MAC connection with immediate encryption activation using Def_DCK_1 with default cipher key index 0001 Verify that IUT sends to TS_1 an encrypted {CC-SETUP} message. 2. Verify end-to-end U-plane connection. 3. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message. 4. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message. 5. Verify that MAC connection is released. 6. Verify that IUT establishes MAC connection with immediate encryption activation using Def_DCK_2 with default cipher key index 0001 Verify that IUT sends to TS_1 an encrypted {CC-SETUP} message. 7. Verify end-to-end U-plane connection. |
| Comments: | Def_DCK_2 shall be different than Def_DCK_1. This is automatically achieved in case e.g. the random values in the {AUTHENTICATION-REQUEST} message are different |

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|------------------------------|---|
| TC_PT_GAP.N.35_BV_305 | Assign two default cipher keys with different indices. |
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | T-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 with Default cipher key index 0001 (i.e. TC_PT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke outgoing call at IUT. 2. TS_1 sends a {CC-CONNECT} message. 3. TS_1 sends a {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 and default cipher key index 0002 and saves DCK as Def_DCK_2. 4. TS_1 sends a {CC-RELEASE} message. 5. TS_1 initiates release of MAC connection. 6. Invoke outgoing call at IUT 7. TS_1 sends a {CC-CONNECT} message. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT establishes MAC connection with immediate encryption activation using Def_DCK_1 with default cipher key index 0001 Verify that IUT sends to TS_1 an encrypted {CC-SETUP} message. 2. Verify end-to-end U-plane connection. 3. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message. 4. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message. 5. Verify that MAC connection is released. 6. Verify that IUT establishes MAC connection with immediate encryption activation using either Def_DCK_1 with default cipher key index 0001 or Def_DCK_2 with default cipher key index 0002 Verify that IUT sends to TS_1 an encrypted {CC-SETUP} message. 7. Verify end-to-end U-plane connection. |
| Comments: | Def_DCK_2 shall be different than Def_DCK_1. This is automatically achieved in case e.g. the random values in the {AUTHENTICATION-REQUEST} message are different |

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| TC_PT_GAP.N.35_BV_306 | PP releases connection in case FP rejects early encryption on MAC layer |
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | T-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 with default cipher key index 0001 (i.e. TC_PT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke outgoing call at IUT 2. TS_1 rejects start of encryption with cipher key index 0001 on MAC layer. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT establishes MAC connection and initiates encryption activation using Def_DCK_1 with default cipher key index 0001 2. Verify that PP releases connection on MAC layer within 10 seconds |

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|------------------------------|--|
| TC_PT_GAP.N.35_BV_501 | Release of unexpectedly unencrypted outgoing call in call proceeding state |
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends a {LOCATE-ACCEPT} message. Invoke outgoing call at IUT. 3. TS_1 sends a {CC-SETUP-ACK} message. (Optionally dial some digits on IUT). 4. TS_1 sends a {CC-CALL-PROC} to IUT. TS_1 performs authentication of PP and FT initiated cipher switching. 5. TS_1 sends a {CC-RELEASE} message. 6. TS_1 initiates release of MAC-connection. 7. Invoke outgoing call at IUT. 8. TS_1 sends a {CC-SETUP-ACK} message. (Optionally dial some digits on IUT). 9. TS_1 sends a {CC-CALL-PROC} message to IUT. TS_1 does not perform authentication of PP and FT initiated cipher switching. Start timer T001 (60s). |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration. Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message. 2. Verify that IUT sends to TS_1 a {CC-SETUP} message. 3. No specific pass criteria. 4. Verify successful authentication of PP and successful FT initiated cipher switching. Verify end-to-end U-plane connection. 5. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message. 6. Verify successful release of MAC-connection. 7. Verify that IUT establishes link and sends to TS_1 a {CC-SETUP} message 8. No specific pass criteria. 9. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON = <Security attack assumed> >> before T.001 expiry. |
| Comments: | In pass criteria 7, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link. |

| TC_PT_GAP.N.35_BV_502 | Release of unexpectedly unencrypted outgoing call in connect state |
|-----------------------|--|
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends a {LOCATE-ACCEPT} message. Invoke outgoing call at IUT. 3. TS_1 sends a {CC-CONNECT} message to IUT. TS_1 performs authentication of PP and FT initiated cipher switching. 4. TS_1 sends a {CC-RELEASE} message. 5. TS_1 initiates release of MAC-connection. 6. Invoke outgoing call at IUT. 7. TS_1 sends a {CC-CONNECT} message to IUT. TS_1 does not perform authentication of PP and FT initiated cipher switching Start timer T001 (60s). |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration. Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message. 2. Verify that IUT sends to TS_1 a {CC-SETUP} message. 3. Verify successful authentication of PP and successful FT initiated cipher switching. Verify end-to-end U-plane connection. 4. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message. 5. Verify successful release of MAC-connection. 6. Verify that IUT establishes link and sends to TS_1 a {CC-SETUP} message. 7. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON= <Security attack assumed> >> before T.001 expiry. |
| Comments: | In pass criteria 7, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link. |

| TC_PT_GAP.N.35_BV_503 | Release of unexpectedly unencrypted incoming call in alerting state |
|-----------------------|--|
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends a {LOCATE-ACCEPT} message. TS_1 performs authentication of PP and FT initiated cipher switching. 3. TS_1 sends a {CC-SETUP}. 4. TS_1 sends a {CC-RELEASE} message. 5. TS_1 initiates release of MAC-connection. 6. Send a {CC-SETUP} from TS_1 in order to perform an incoming call with full paging (Long slot; j = 640), G.722 prioritized. 7. TS_1 does not perform authentication of PP and FT initiated cipher switching Start timer T001 (60s). |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration. Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message. 2. Verify successful authentication of PP and successful FT initiated cipher switching. 3. Verify that IUT sends to TS_1 a {CC-ALERTING} message. 4. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message 5. Verify successful release of MAC-connection. 6. Verify that IUT sends to TS_1 a {CC-ALERTING} message. 7. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON= <Security attack assumed> >> before T.001 expiry. |
| Comments: | In pass criteria 7, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link. |

| TC_PT_GAP.N.35_BV_504 | Release of unexpectedly unencrypted incoming call in connect state. |
|-----------------------|--|
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported.. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends a {LOCATE-ACCEPT} message. TS_1 sends a {CC-SETUP}. 3. Answer call at IUT. 4. TS_1 sends a {CC-CONNECT-ACK} message to IUT. TS_1 performs authentication of PP and FT initiated cipher switching. 5. TS_1 sends a {CC-RELEASE} message. 6. TS_1 initiates release of MAC-connection. 7. Send a {CC-SETUP} from TS_1 in order to perform an incoming call with full paging (Long slot; j = 640), G.722 prioritized. 8. Void. 9. Answer call at IUT within 10 seconds. 10. TS_1 sends a {CC-CONNECT-ACK} message to IUT. TS_1 does not perform authentication of PP and FT initiated cipher switching Start timer T001 (60s). |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration. Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message. 2. Verify that IUT sends to TS_1 a {CC-ALERTING} message. 3. Verify that IUT sends to TS_1 a {CC-CONNECT} message. 4. Verify successful authentication of PP and successful FT initiated cipher switching. Verify end-to-end U-plane connection. 5. Verify that IUT sends to TS_1 a {CC-RELEASE-COM}. 6. Verify successful release of MAC-connection. 7. Void. 8. Verify that IUT sends to TS_1 a {CC-ALERTING} message. 9. Verify that IUT sends to TS_1 a {CC-CONNECT} message. 10. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON = <Security attack assumed > >> before T.001 expiry. |
| Comments: | In pass criteria 10, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link. |

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| TC_PT_GAP.N.35_BV_505 | Release of unexpectedly unencrypted outgoing call in connect state after switching encryption support in FT off |
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends a {LOCATE-ACCEPT} message. Invoke outgoing call at IUT. 3. TS_1 sends a {CC-CONNECT} to IUT. TS_1 performs authentication of PP and FT initiated cipher switching. 4. TS_1 sends a {CC-RELEASE} message. 5. TS_1 initiates release of MAC-connection. 6. TS_1 switches encryption support to 'off' and broadcasts that standard ciphering is not supported (bit a37=0 in higher layer capabilities) for 20 seconds. Afterwards invoke outgoing call at IUT. 7. TS_1 sends a {CC-CONNECT} to IUT. TS_1 does not perform authentication of PP and FT initiated cipher switching Start timer T001 (60s). |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration. Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message. 2. Verify that IUT sends to TS_1 a {CC-SETUP} message. 3. Verify successful authentication of PP and successful FT initiated cipher switching. Verify end-to-end U-plane connection. 4. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message. 5. Verify successful release of MAC-connection. 6. Verify that IUT establishes link and sends to TS_1 a {CC-SETUP} message. 7. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON = <Security attack assumed> >> before T.001 expiry. |
| Comments: | In pass criteria 7, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link. |

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|------------------------------|--|
| TC_PT_GAP.N.35_BV_506 | Release of unexpectedly unencrypted outgoing call in connect state despite of successful authentication |
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT. 2. TS_1 sends a {LOCATE-ACCEPT} message. Invoke outgoing call at IUT. 3. TS_1 sends a {CC-CONNECT} message to IUT. TS_1 performs authentication of PP and FT initiated cipher switching. 4. TS_1 sends a {CC-RELEASE} message. 5. TS_1 initiates release of MAC-connection. 6. Invoke outgoing call at IUT. 7. TS_1 sends a {CC-CONNECT} message to IUT. TS_1 sends a {AUTHENTICATION-REQUEST} message to IUT. 8. TS_1 does not perform FT initiated cipher switching Start timer T001 (60s). |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration. Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message. 2. Verify that IUT sends to TS_1 a {CC-SETUP} message. 3. Verify successful authentication of PP and successful FT initiated cipher switching. Verify end-to-end U-plane connection. 4. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message. 5. Verify successful release of MAC-connection. 6. Verify that IUT establishes link and sends to TS_1 a {CC-SETUP} message. 7. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message. 8. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON= <Security attack assumed> >> before T.001 expiry. |
| Comments: | In pass criteria 8, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link |

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| TC_PT_GAP.N.35_BV_507 | Release of unexpectedly unencrypted incoming call in connect state despite of successful authentication. |
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | IUT has no access rights. TS_1 is in registration mode (bit a44 is set). TS_1 broadcasts that standard ciphering is supported (bit a37=1 in higher layer capabilities) and that 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (bit a42) is not supported. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke registration procedure at IUT 2. TS_1 sends a {LOCATE-ACCEPT} message TS_1 sends a {CC-SETUP} message 3. Answer call at IUT 4. TS_1 sends a {CC-CONNECT-ACK} message to IUT TS_1 performs authentication of PP and FT initiated cipher switching 5. TS_1 sends a {CC-RELEASE} message 6. TS_1 initiates release of MAC-connection 7. Send a {CC-SETUP} from TS_1 in order to perform an incoming call with full paging (Long slot; j = 640), G.722 prioritized 8. Void 9. Answer call at IUT within 10 seconds 10. TS_1 sends a {CC-CONNECT-ACK} message to IUT TS_1 sends a {AUTHENTICATION-REQUEST} message to IUT 11. TS_1 does not perform FT initiated cipher switching Start timer T001 (60s) |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful registration Verify that IUT sends to TS_1 a {LOCATE-REQUEST} message 2. Verify that IUT sends to TS_1 a {CC-ALERTING} message 3. Verify that IUT sends to TS_1 a {CC-CONNECT} message 4. Verify successful authentication of PP and successful FT initiated cipher switching. Verify end-to-end U-plane connection 5. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} 6. Verify successful release of MAC-connection 7. Void 8. Verify that IUT sends to TS_1 a {CC-ALERTING} message 9. Verify that IUT sends to TS_1 a {CC-CONNECT} message 10. Verify that IUT sends to TS_1 a {AUTHENTICATION-REPLY} message 11. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<RELEASE REASON = <Security attack assumed > >> before T.001 expiry |
| Comments: | In pass criteria 11, the PP will check the status of the link 15 seconds after CC-SETUP. However test equipment shall leave some flexibility (up to 60 seconds) before checking the CC-RELEASE-COM for example if the IUT queries the user before releasing the link |

6.27 TC_PT_NG1.A.1 Easy PIN code registration tests cases

Test subgroup objectives: to check the IUT's behaviours regarding easy PIN-code registration.

Declarations (see Annex A):

- NG1.A.1_3 "Base station name selection" procedure is optional. So the manufacturer shall declare if it is supported.

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| TC_PT_NG1.A.1_BV_101 | Registration mode automatic access |
| Reference: | TS 102 527-3 [14], Clause 7.10.1.3.1 |
| Initial condition: | IUT not registered and powered off |
| Stimulus: | Switch on IUT |
| Pass criteria: | Verify that the IUT starts in a mode where the user is directly invited to trigger the access rights procedure |

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| TC_PT_NG1.A.1_BV_201 | Searching mode and PIN code requests |
| Reference: | TS 102 527-3 [14], Clause 7.10.1.1.1 |
| Initial condition: | IUT not registered, 'Access Rights supported' capability bit of TS_1 set to 1, AC set to '1234' value" |
| Stimulus: | Start the access rights procedure on the IUT |
| Pass criteria: | Verify that the IUT prompts the user to enter the PIN code |

| TC_PT_NG1.A.1_BV_301 | Base station name selection |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.10.1.3.2 |
| Initial condition: | IUT not registered, 'Access Rights supported' capability bit of TS_1 set to 1 AC set to '1234' value, FP name set to 'NG-DECT Part 3 FP tester' (17 characters max.). |
| Stimulus: | <ol style="list-style-type: none"> 1. Start the access rights procedure on the IUT 2. Select TS_1 name 'NG-DECT Part 3 FP tester' for registration 3. Enter '1234' as PIN value on the IUT 4. Perform an outgoing call from IUT |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT displays the 'NG-DECT Part 3 FP tester' base station name 2. Verify that the IUT prompts the user to enter the PIN code value 3. Verify that the registration procedure is successful on IUT 4. Verify that the IUT sends to TS_1 a {CC-SETUP} message |

| TC_PT_NG1.A.1_BV_401 | Registration user feedback |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.10.1.3.3 |
| Initial condition: | IUT not registered, 'Access Rights supported' capability bit of TS_1 set to 0, AC set to '1234' value |
| Stimulus: | <ol style="list-style-type: none"> 1. Start the access rights procedure on IUT 2. Wait for the end of the procedure on IUT 3. Set 'Access Rights supported' capability bit to 1 on TS_1 Start the access rights procedure on the IUT 4. Perform an Easy PIN code registration procedure using '5678' as PIN value on IUT 5. Start the access rights procedure on the IUT 6. Perform an Easy PIN code registration procedure using '1234' as PIN value on IUT 7. Perform an outgoing call from IUT 8. Hang up on IUT 9. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT gives a feedback to the user of the registration process: "Registration in progress state" 2. Verify that the IUT gives a feedback to the user of the registration process: "Registration error state" 3. Verify that the IUT gives a feedback to the user of the registration process: "Registration in progress state" 4. Verify that the IUT gives a feedback to the user of the registration process: "Registration error state" 5. Verify that the IUT gives a feedback to the user of the registration process: "Registration in progress state" 6. Verify that the IUT gives a feedback to the user of the registration process: "Registration success state" 7. Verify that the IUT sends to TS_1 a {CC-SETUP} message 8. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| Comments: | <p>The purpose of the steps of this test case are the following:</p> <p>Step 1: The user initiates a subscription registration on the IUT. This registration will fail, reason for failure: FT a44 bit unset on the test equipment.</p> <p>Step 2: At the end of the registration window time on PT side, the user is reported a failure (as feedback displayed to PT user).</p> <p>Step 3: With FT a44 bit set on tester side, the user initiates again a new subscription registration on the PT, but as the AC code of the FT is not the default '0000', the PT will prompt the user for a PIN code (see step 4).</p> <p>Step 4: The user enters a wrong PIN code ('5678') on PT side, and observes failure.</p> <p>Step 5: The user initiates a (successful) subscription registration on PT side.</p> <p>Step 6: The user enters the right PIN code ('1234') on PT side, and observes success.</p> <p>Step 7: The user sets up an outgoing call to confirm successful access rights procedure on PT side.</p> <p>Step 8: The user hangs up.</p> <p>Step 9: The tester terminates the release of the call.</p> |

6.28 TC_PT_NG1.A.2 Easy pairing registration tests cases

Test subgroup objectives: to check the IUT's behaviours regarding easy pairing registration taking into account the following considerations:

- As NG1.A.2_1 "Easy pairing description" is tested implicitly when testing NG1.A.2_4 "Searching mode request", there is no test case defined for this procedure.
- As NG1.A.2_2 "Registration mode automatic access" is tested when testing NG1.A.2_4 "Searching mode request", there is no test case defined for this procedure.
- As NG1.A.2_3 "Base station limited registration mode" is a FP capacity, there is no PP test case defined for this procedure.
- As NG1.A.2_5 "Base station name selection" is tested when testing NG1.A.1_3 "Base station name selection", there is no test case defined for this procedure.
- As NG1.A.2_6 "Registration user feedback" is tested when testing NG1.A.1_4 "Registration user feedback", there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.A.1_3 "Base station name selection" is optional. So the manufacturer shall declare if it is supported.

| | |
|-----------------------------|--|
| TC_PT_NG1.A.2_BV_401 | Searching mode request (default PIN) |
| Reference: | TS 102 527-3 [14], Clause 7.10.1.2.3 |
| Initial condition: | IUT not registered and powered off, 'Access Rights supported' higher layer capability bit of TS_1 set to 1, AC set to '0000' value |
| Stimulus: | 1. Switch on IUT 2. Start the access rights procedure on IUT |
| Pass criteria: | 1. Verify that the IUT starts in a mode where the user is directly invited to trigger the access rights procedure 2. Verify that the IUT does not prompt the user to enter the PIN code and that the registration is successful |

| | |
|-----------------------------|---|
| TC_PT_NG1.A.2_BV_402 | Searching mode request (switching back to PIN entry) |
| Reference: | TS 102 527-3 [14], Clause 7.10.1.2.3 |
| Initial condition: | IUT not registered, 'Access Rights supported' higher layer capability bit of TS_1 set to 1, AC set to '1234' value |
| Stimulus: | 1. Start the access rights procedure on IUT 2. When prompt, enter '1234' PIN code on IUT |
| Pass criteria: | 1. Verify that the IUT prompts the user to enter the PIN code 2. Verify that the registration is then successful |

6.29 TC_PT_NG1.A.3 Handset locator tests cases

Test subgroup objectives: to check the IUT's behaviours regarding handset locator.

| | |
|-----------------------------|---|
| TC_PT_NG1.A.3_BV_101 | Handset locator |
| Reference: | TS 102 527-3 [14], Clause 7.10.2 |
| Initial condition: | T-00, IUT ringing capabilities enabled |
| Stimulus: | Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> specifying <Call class = Normal call setup> >>, IE <<Calling Party name>> whose <Presentation indicator> field is set to 'Handset locator', and with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup) = <(1, 0, value a), (2, 1, 1)> (without any line identifier) |
| Pass criteria: | Verify that the IUT rings |

7 Fixed Part Test specification

This clause includes lists of the test groups relevant for a NG-DECT fixed part. Test cases are ordered like network features followed by application features (TS 102 527-3 [14], Clauses 6.4 and 6.9).

The NG-DECT fixed part under test shall be connected to a network when running the tests suite.

7.1 TC_FT_NG1.N.1 Codec negotiation tests cases

Test subgroup objectives: to check the IUT's behaviours when negotiating a codec.

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_BV_101 | Exchange of codec list during subscription registration |
| Reference: | TS 102 527-1 [13], Clauses 7.3.1 and 7.3.7 |
| Initial condition: | F-00. |
| Stimulus: | Perform an access rights request from TS_1 |
| Pass criteria: | Verify that the IUT includes in the {ACCESS-RIGHTS-ACCEPT} message an IE <<Codec-list>> with G.722 codec, G.726 codec, and "Codec negotiation possible" indications |
| TC_FT_NG1.N.1_BV_102 | Exchange of codec list during location registration |
| Reference: | TS 102 527-1 [13], Clause 7.3.1 |
| Initial condition: | F-00 |
| Stimulus: | Perform a location registration request from TS_1 |
| Pass criteria: | Verify that the IUT includes in the {LOCATE-ACCEPT} message an IE <<Codec-list>> with G.722 codec, G.726 codec, and "Codec negotiation possible" indications |
| TC_FT_NG1.N.1_BV_103 | NG-DECT Part 1 higher layer capabilities |
| Reference: | EN 300 175-5 [5], Clause F.3 |
| Initial condition: | F-00. |
| Stimulus: | Perform an access rights request from TS_1 |
| Pass criteria: | Verify that "NG-DECT Wideband voice" FP higher layer capability bit is set to 1 (= Extended higher layer capabilities (part 2) a24 bit) |
| TC_FT_NG1.N.1_BV_104 | NG-DECT Part 3 higher layer capabilities |
| Reference: | EN 300 175-5 [5], Clause F.3 |
| Initial condition: | F-00. |
| Stimulus: | Perform an access rights request from TS_1 |
| Pass criteria: | Verify that "NG-DECT Extended wideband voice supported" higher layer capability bit is set to 1 (= Extended higher layer capabilities (part 2) a29 bit) |
| TC_FT_NG1.N.1_BV_201 | Basic service wideband speech |
| Reference: | TS 102 527-1 [13], Clause 7.3.2 |
| Initial condition: | F-00 |
| Stimulus: | Perform an incoming call towards IUT from Phone_A |
| Pass criteria: | Verify that the IUT sets "wideband speech default" attribute IE <<Basic-service>> in {CC-SETUP} message |

| | |
|-----------------------------|--|
| TC_FT_NG1.N.1_BV_301 | Outgoing G.722 call using long slot MAC setup |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.722 outgoing call in long slot mode from TS_1 to Phone A supporting G.722. |
| Pass criteria: | Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) Verify by checking end-to-end U-plane connection that the IUT is able to establish G.722 outgoing call |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722 |

| | |
|-----------------------------|--|
| TC_FT_NG1.N.1_BV_302 | Outgoing G.726 call using full slot MAC setup |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.726 outgoing call in full slot mode from TS_1 to Phone C supporting only G.726 |
| Pass criteria: | Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) Verify by checking end-to-end U-plane connection that the IUT is able to establish G.726 outgoing call |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.722 codec and then switch to G.726 codec instead of selecting directly G.726 |

| | |
|-----------------------------|--|
| TC_FT_NG1.N.1_BV_303 | Outgoing G.722 call using full slot MAC setup |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.722 outgoing call (long slot) modifying an established full slot connection from TS_1 to a Phone A supporting G.722. |
| Pass criteria: | Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) Verify by checking end-to-end U-plane connection that the IUT is able to establish G.722 outgoing call |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722 |

| | |
|-----------------------------|--|
| TC_FT_NG1.N.1_BV_304 | Outgoing G.726 call using long slot MAC setup |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.726 outgoing call (full slot) modifying an established long slot connection from TS_1 to Phone C supporting only G.726 |
| Pass criteria: | Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) Verify by checking end-to-end U-plane connection that the IUT is able to establish G.726 outgoing call |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.722 codec and then switch to G.726 codec instead of selecting directly G.726 |

| | |
|-----------------------------|--|
| TC_FT_NG1.N.1_BV_305 | Outgoing G.722call, fall back to G.726 codec when full to long slot type modification fails |
| Reference: | TS 102 527-1 [13], Clause 7.3.3 EN 300 444 [12], Clause 8.1, Figure 1 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a G.722 outgoing call in full slot mode from TS_1 to Phone A supporting G.722 and G.726. 2. TS_1 will not perform the full to long slot type modification successfully. If TS_1 will have initiated the slot type modification, TS_1 will switch to G.726, indicating so by sending {IWU-INFO} |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) 2. Verify by checking end-to-end U-plane connection that the IUT is able to fall back to G.726 when full to long slot type modification fails |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722. In that case, the full to long slot type modification will be initiated by IUT after test equipment will have accepted the fall back to G.726 by sending {CC-SERVICE-CHANGE-ACCEPT} |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_BV_306 | Outgoing call without sending any IE <<CODEC-LIST>> in {CC-SETUP} |
| Reference: | TS 102 527-1 [13], Clause 7.3.3, see Annex D, Table D.3 for IE <<CODEC-LIST>> values in locate |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a location registration request with an IE <<Codec-list>> set to <Negotiation indicator=codec negotiation, G.722, User specific 64 kbit/s, G.726> from TS_1 2. Perform an outgoing call (full slot) from TS_1 without sending any IE <<Codec-list>> in {CC-SETUP} message to Phone A supporting G.722 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT includes in the {LOCATE-ACCEPT} message an IE <<Codec-list>> with at least G.722 and G.726 codecs 2. Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) Verify G.722 end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722 |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_BV_307 | Outgoing call with an IE <<CODEC-LIST>> in {CC-SETUP} different from previous sent during location registration |
| Reference: | TS 102 527-1 [13], Clause 7.3.3, see Annex D, Table D.3 for IE <<CODEC-LIST>> values in locate |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a location registration request with an IE <<Codec-list>> set to <Negotiation indicator=codec negotiation, G.722, G.711, G.726> from TS_1 2. Perform an outgoing call (long slot) from TS_1 with an IE <<Codec-list>> set to <Negotiation indicator=codec negotiation, G.722, G.726> in {CC-SETUP} message to Phone A supporting G.722 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT includes in the {LOCATE-ACCEPT} message an IE <<Codec-list>> with at least G.722 and G.726 codecs 2. Verify that the IUT selects a codec only in one of the following messages: {CC-SETUP-ACK}, {CC-CALL-PROC}, {CC-ALERTING}, or {CC-CONNECT} message (other messages not allowed) Verify G.722 end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | Test case shall fail if IE <<CODEC-LIST>> is sent in more than one CC message The IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722 |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_BV_321 | Incoming call G.722 |
| Reference: | TS 102 527-1 [13], Clauses 7.3.3 and D.1.3 Figure D.7 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.722 incoming call towards IUT from phone A. TS_1 sends {CC-ALERTING}, and chooses G.722 in {CC-CONNECT} |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able to process G.722 incoming call |
| Comments: | Short paging format (as defined in EN 300 175-5 [5], Clause 8.2.1) and full paging format with TPUI address structure (as defined in EN 300 175-5 [5], Clause 8.2.2) can be used within the {LCE-REQUEST-PAGE} message. As a consequence after G.722 was chosen, IUT might initiate a full to long slot type modification at MAC layer if necessary |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_BV_322 | Incoming call G.726 |
| Reference: | TS 102 527-1 [13], Clauses 7.3.3 and D.1.3.1 Figure D.7 with G.726 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.726 incoming call towards IUT from phone C. TS_1 chooses G.726 in {CC-ALERTING}, and sends {CC-CONNECT} |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able to process G.726 incoming call |
| Comments: | Short paging format (as defined in EN 300 175-5 [5], Clause 8.2.1) and full paging format with TPUI address structure (as defined in EN 300 175-5 [5], Clause 8.2.2) can be used within the {LCE-REQUEST-PAGE} message. As a consequence after G.726 was chosen, IUT might initiate a long to full slot type modification at MAC layer if necessary |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_BV_323 | Incoming call G.722, negotiation results in G.726 |
| Reference: | TS 102 527-1 [13], Clauses 7.3.3 and D.1.3.2, Figure D.8 |
| Initial condition: | F-00 |
| Stimulus: | Perform a G.722 incoming call towards IUT from phone A. TS_1 chooses G.726 in {CC-ALERTING}, and sends {CC-CONNECT} after long to full slot modification |
| Pass criteria: | Verify by checking end-to-end U-plane connection that the IUT is able to process an incoming call G.722 finally negotiated in G.726 |
| Comments: | Short paging format (as defined in EN 300 175-5 [5], Clause 8.2.1) and full paging format with TPUI address structure (as defined in EN 300 175-5 [5], Clause 8.2.2) can be used within the {LCE-REQUEST-PAGE} message. As a consequence after G.726 was chosen, IUT might initiate long to full slot type modification at MAC layer if necessary |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_WC_101 | Outgoing call Wideband at NG-DECT Part 1 Golden Device PT (Golden Device A) |
| Reference: | TS 102 527-1 [13], Clause D.1.2.1, D.1.2.2 |
| Initial condition: | T-00, A wideband corded SIP phone (SIP-WB-PH) is connected to the SIP server. Golden Device PT registered to IUT |
| Stimulus: | Perform an outgoing call from Golden Device PT to the SIP-WB-PH. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that a test audio signal (e.g. sine wave 6 kHz) transmitted to/from the corded phone can be heard on both ends |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.1_WC_103 | Incoming call Wideband at NG-DECT Part 1 Golden Device PT (Golden Device A) |
| Reference: | TS 102 527-1 [13], Clause D.1.3.1 |
| Initial condition: | T-00, A wideband corded SIP phone (SIP-WB-PH) is connected to the SIP server. Golden Device PT is registered to the IUT |
| Stimulus: | An outgoing call is established from the corded wideband phone (SIP-WB-PH) to the IUT. The call is answered on the Golden Device PT. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that a test audio signal (e.g. sine wave 6 kHz) transmitted to/from the corded phone can be heard on both ends |

| | |
|-----------------------------|--|
| TC_FT_NG1.N.1_WC_105 | Service change at NG-DECT Part 1 Golden Device PT (Golden Device A) |
| Reference: | TS 102 527-1 [13], Clause D.1.4.1 |
| Initial condition: | A wideband corded SIP phone (SIP-WB-PH) and a narrow band corded SIP phone (SIP-NB-PH) are connected to the SIP server |
| Stimulus: | G.722 call is established via outgoing call from Golden Device PT to the SIP-WB-PH. Perform a call transfer from the corded wideband phone (SIP-WB-PH) to the corded narrowband phone (SIP-NB-PH) initiated by the corded wideband phone. This results in the SIP server re-negotiating from wideband to narrowband. |
| Pass criteria: | Verify by checking end-to-end U-plane connection that a test audio signal (e.g. sine wave 2 kHz) transmitted to/from the corded phone can be heard on both ends |

7.2 TC_FT_NG1.N.2 Codec switching tests cases

Test subgroup objectives: to check the IUT's behaviours during codec switching with the following consideration:

- As a codec change initiates by a PP during an established communication does not correspond to a common use case, there is no test case defined for this feature on FP side.

7.3 TC_FT_NG1.N.3 Missed call notification tests cases

Test subgroup objectives: to check the IUT's ability to handle missed call notification with the following consideration:

- NG1.N.3_2 "Missed call notification" procedure is also tested when testing NG1.N.16_17 "Missed calls list" procedure due to the "Simultaneous 'list change indication'" requirement.

| | |
|-----------------------------|---|
| TC_FT_NG1.N.3_BV_201 | Missed call notification after PP location registration |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A in order to present an incoming call on the IUT 1a. Send a {CC-ALERTING} message from TS_1 Hang up on Phone A 2. Perform a location registration request from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> 1a. Verify that the IUT sends in any order: <ul style="list-style-type: none"> • to TS_1 a {CC-RELEASE} message • to TS_1 and TS_2, a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, A new external missed voice call just arrived, 1 >(<=01H,81H,81H> < List change indication, Missed calls list, do not care value>(<=03H,81H,xxH>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 2. Verify that the IUT sends a {FACILITY} to TS_1 message with IE <<EVENTS NOTIFICATION= <Missed call, No new missed call arrived, 1>(<=01H,82H,81H>) < List change indication, Missed calls list, do not care value>(<=03H,81H,xxH>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> |

7.4 TC_FT_NG1.N.4 Voice message waiting notification tests cases

Test subgroup objectives: to check the IUT's ability to handle voice message waiting notification.

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|-----------------------------|---|
| TC_FT_NG1.N.4_BV_201 | Voice message waiting notification, activation |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.2, Table 14 |
| Initial condition: | Support of voice mailbox service 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), external call in F-10 (TS_2+IUT) |
| Stimulus: | Leave one voice message in the mailbox of line 0 from Phone A |
| Pass criteria: | Verify that the IUT sends a {FACILITY} message, with IE <<EVENTS NOTIFICATION= <Message waiting, voice, 1>(<00H,81H,81H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)>, to TS_1 and TS_2 |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.4_BV_202 | Voice message waiting notification, deactivation |
| Reference: | TS 102 527-3 [14], Clause 7.4.1.2, Table 14 |
| Initial condition: | Support of voice mailbox service 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), external call in F-10 (TS_2+IUT) Voice message waiting notified on line 0 (Run TC_FT_NG1.N.4_BV_201) |
| Stimulus: | Consult the voice mailbox |
| Pass criteria: | Verify that the IUT sends a {FACILITY} message, with IE <<EVENTS NOTIFICATION= <Message waiting, voice, 0>(<00H,81H,80H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)>, to TS_1 and TS_2 |
| Comments: | The most convenient way to perform the stimulus seems to use a handset provided by the manufacturer |

7.5 TC_FT_NG1.N.5 Date and time synchronization tests cases

Test subgroup objectives: to check the IUT's behaviours regarding date and time synchronization.

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|-----------------------------|--|
| TC_FT_NG1.N.5_BV_101 | FT initiated Date and Time synchronization |
| Reference: | TS 102 527-3 [14], Clauses 7.4.2.1 and 7.4.2, Table 16 |
| Initial condition: | F-00, "Clock master" field equal to "FP" |
| Stimulus: | Provide date and time to the IUT |
| Pass criteria: | Verify that the IUT sends to TS_1 a {FACILITY} message with corresponding date and time in IE <<TIME-DATE = <11B, 00H, (last 2 digits of the year, month, day, hour, minute, second, time zone)> >> coded in BCD format with the nibble carrying the most significant digit transmitted in bits 8-5 of each octet |
| Comments: | Several ways may exist to provide date and time to the IUT: NTP-request, incoming call, web configuration, ... |

| | |
|-----------------------------|---|
| TC_FT_NG1.N.5_BV_102 | PT initiated Date and Time synchronization |
| Reference: | TS 102 527-3 [14], Clauses 7.4.2.2 and 7.4.2, Table 16 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Clock master" field equal to "PP", F-00 |
| Stimulus: | Send a {FACILITY} message for date and time synchronization with IE <<TIME-DATE = <Time and Date, The current time/date, (35H, 07H, 18H, 13H, 22H, 12H, 00H)> >> from TS_1 to IUT |
| Pass criteria: | Verify that the IUT sends to TS_2 a {FACILITY} message with IE <<TIME-DATE = <Time and Date, The current time/date, (35H, 07H, 18H, 13H, 22H, do not care value, 00H)> >> |
| Comments: | Some IUT may not allow to configure the seconds. As a result, octet 6 seconds is not tested |

7.6 TC_FT_NG1.N.6 Parallel calls tests cases

Test subgroup objectives: to check the IUT's behaviours regarding parallel calls common requirements with the following consideration:

- As NG1.N.6_2 "Control messages" and NG1.N.6_3 "Sending keypad information" procedures are tested implicitly when testing NG1.N.7 "Common parallel call" procedures (external or internal), there is no test case defined for these two procedures.

| TC_FT_NG1.N.6_BV_401 | Codec change for parallel calls from G.722 to G.726 |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is GAP PP2), G.722 external call in F-10 (TS_1+IUT) initiated by Phone A on line 0 (call id a), TS_1 selected G.722 when negotiating codec |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to 17H digit from TS_1 <ul style="list-style-type: none"> if (X=2 AND Y=2): Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to terminal Id of PP2 and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1. if (X=3 AND not already sent): Send a {CC-ALERTING} message from TS_2, followed by a {CC-CONNECT} message from TS_2. if (Y=3 AND not already sent): Send a {CC-SERVICE-ACCEPT} message from TS_1, followed by an {IWU-INFO} message with an IE <<CODEC-LIST>> set to G.726 from TS_1; if (X=4): Wait until Y=4; if (Y=4): Wait until X=4; |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Set X = 2 and Y=2; Verify that either (only one option): <ul style="list-style-type: none"> X=2 AND IUT sends to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' In that case, set X=3 Y=2 AND IUT sends to TS_1 a {CC-SERVICE-CHANGE} message with an IE <<CODEC-LIST>> set to G.726 In that case, set Y=3 X=3 AND IUT sends to TS_2 a {CC-CONNECT-ACK} message AND IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> In that case, set X = 4 Y=3 AND IUT sends to TS_1 a {IWU-INFO} message with an IE <<CODEC-LIST>> set to G.726 In that case, set Y = 4 X=4 AND Y=4 AND There is end-to-end U-plane connection between TS_1 and TS_2 |
| Comments: | <p>Repeat stimulus 2 unless X=4 AND Y=4</p> <ul style="list-style-type: none"> After pass criteria 1, the CC-SERVICE-CHANGE / ACCEPT may be performed at any time by the IUT X and Y are internal state variables of the tester indicating the step respectively reached by the two independent tasks 'second call establishment', and 'service change' stimulus 2 and pass criterion 2 are repeated until X=4 and Y=4 (cf. end of pass criterion 2) in pass criterion 2, only one received message is handled for one use of pass criterion 2: if another message is waiting to be handled, it will be handled after next use of stimulus 2 |

| TC_FT_NG1.N.6_BV_402 | Codec change for parallel calls from G.726 to G.722 |
|---|---|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.3</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), G.726 external call in F-10 (TS_1+IUT) initiated by Phone C on line 0 (call id a), TS_1 selected G.726 when negotiating codec</p> <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to 1CH 15H digits and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone B number and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 3. Pick up call on Phone B 4. Send a {CC-SERVICE-ACCEPT} message from TS_1 5. Send a {IWU-INFO} message with an IE <<CODEC-LIST>> set to G.722 from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup ack) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 2)> 2. Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone B rings. 3. Verify that the IUT sends to TS_1 a {CC-SERVICE-CHANGE} message with an IE <<CODEC-LIST>> set to G.722 4. Verify that the IUT sends to TS_1 a {IWU-INFO} message with an IE <<CODEC-LIST>> set to G.722 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> <p>Verify end-to-end U-plane connection between TS_1 and Phone B</p> <ul style="list-style-type: none"> - First part of pass criterion 5 (end to end connection with 'CS call connect') and pass criterion 3 (service change) are both awaited as a result of stimulus 3 (call pick-up), but in any order. In other words, first part of pass criteria 5 'CS call connect' may be fulfilled at the beginning of pass criterion 3 or 4 - The {IWU-INFO} message received from IUT in pass criterion 4 may be sent before or after stimulus 5; IUT and TS_1 shall send their respective {IWU-INFO} messages regardless of reception of {IWU-INFO} from the other side |

| TC_FT_NG1.N.6_BV_501 | Sending negative acknowledgement - invalid call toggle request |
|--|---|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clauses 7.4.3.4 and 7.4.3.5.3</p> <p>F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a)</p> <p>Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 31H) digits and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1</p> <p>Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' • an IE <<CALL-INFORMATION>> specifying (call id b, CS call idle, control code failed) =<(1, 0, value b), (2, 1, 0), (2, 2, 3)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages |

| TC_FT_NG1.N.6_BV_601 | Busy system notification |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.8.3 and 7.4.3.5.1 |
| Initial condition: | "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 30H ("not allowed") on line 0 |
| Stimulus: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A, one parallel external call on hold on line 0 (call id b) with Phone B |
| Pass criteria: | Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to 1CH 15H digits from TS_1 |
| Comments: | <p>Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • If declared (see Annex A, Table A.26), an IE <<SIGNAL>> with the value 04H indicating 'Busy tone on' else verify on TS_1 that the busy tone generated by network or PABX can be heard • an IE <<CALL-INFORMATION>> specifying (call id c, CS call disconnecting, system busy) =< (1, 0, value c), (2, 1, 6), (2, 2, 0)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>And after some time-out, verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<CALL-INFORMATION>> specifying (call id c, CS idle) =< (1, 0, value c), (2, 1, 0) > • an IE <<SIGNAL>> with the value 3FH indicating 'Tones off' when declared (see Annex A, Table A.26) |
| Comments: | This test case is only used if FT_IXIT_15 is not supported (in other words if FP supports only up to 2 parallel call on a PP-FP pair) |

7.7 TC_FT_NG1.N.7 Common parallel call procedures tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Common parallel call procedures (external or internal).

Declarations (see Annex A):

- When NG1.N.22 "Handling of lines where second calls are signalled in-band" feature is supported on a line, the manufacturer shall declare if the following procedures are supported within this line:
 - Call release and call release rejection.
 - Call waiting rejection (from PP to FP).
 - Putting a call on hold (external).

| TC_FT_NG1.N.7_BV_101 | Outgoing parallel call initiation (external), FP managed line selection |
|---|---|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.5.1 Figure 5</p> <p>External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to 1CH 15H digits from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone B number and IE <<CALL-INFORMATION>> specifying (line None, call id b) =<(0, 0, 127), (1, 0, value b)> from TS_1 3. Call pick up on Phone B <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line u, line type information u, call id b) =<(0, 0, lidu), (0, 5, ltu), (1, 0, value b)> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone B rings. 3. Verify that the IUT sends to TS_1 a {INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B <p>Any line can be selected by the IUT</p> <p>When initiating the outgoing parallel call, tones can be generated in narrow band. Hence, the IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722</p> |

| TC_FT_NG1.N.7_BV_102 | Outgoing parallel call initiation (internal) |
|--|--|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.5.1</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2),</p> <p>External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to 17H digit from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to terminal Id of PP2 and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 3. Send a {CC-ALERTING} message from TS_2 Send a {CC-CONNECT} message from TS_2 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> 3. Verify that the IUT sends to TS_2 a {CC-CONNECT-ACK} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and TS_2 |

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|---|---|
| TC_FT_NG1.N.7_BV_103 | Outgoing parallel call initiation (external), line selection using <<CALL-INFORMATION>> IE in {CC-INFO} |
| Reference: Initial condition: Stimulus: Pass criteria: | <p>TS 102 527-3 [14], Clause 7.4.3.5.1, Figure 4</p> <p>External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <ol style="list-style-type: none"> Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone B number and IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, lid0), (1, 0, value b)> Call pick up on Phone B <ol style="list-style-type: none"> Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> Verify that the IUT sends a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone B rings. Verify that the IUT sends to TS_1 a {INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B |

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| TC_FT_NG1.N.7_BV_201 | Call waiting indication (external) - CLIP on call waiting indication - End of call waiting indication |
| Reference: Initial condition: Stimulus: Pass criteria: | <p>TS 102 527-3 [14], Clause 7.4.3.5.2</p> <p>External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <ol style="list-style-type: none"> Perform an incoming external call towards IUT from Phone B on line 0 Hang up on Phone B <ol style="list-style-type: none"> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> an IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on' when declared (see Annex A, Table A.26) an IE <<CALLING PARTY NUMBER>> with <calling party address= Phone B number> an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> |
| Comments: | <p>If the 'Second call type' bit of the 'Line type information' received in step 1 is 'Second calls are handled with in-band signalling', the 'CS idle' in pass criteria 2 may be sent upon timeout by the FP. For such lines, the tester should not abort the test case before CS idle is received</p> <p>As this could take up to several minutes after Phone B hangs up (step 2) in some implementations, the test equipment shall display appropriate display to request the user to wait</p> |

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| TC_FT_NG1.N.7_BV_202 | Call waiting indication (internal) - CLIP on call waiting indication - End of call waiting indication |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' from TS_2 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to terminal Id of PP1 and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2 3. Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2: <ul style="list-style-type: none"> • (for 'non-early {CC-CONNECT}' implementation) a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>, • (for 'early {CC-CONNECT}' implementation) a {CC-CONNECT} message, with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> |
| Comments: | In pass criteria 1, early CC-CONNECT and non-early CC-CONNECT cases are covered for the internal call. Test equipment shall allow both implementations. However it is not the main purpose of the test case to check behaviour of IUT toward TS_2 |

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| TC_FT_NG1.N.7_BV_301 | Call toggle (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.3 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A, one parallel external call on hold on line 0 (call id b) with Phone B |
| Stimulus: | 1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 31H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 31H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call hold) =<(1, 0, value b), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A |

| TC_FT_NG1.N.7_BV_302 | Call toggle (internal) |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), One parallel internal call initiated by TS_1 (call id b) with TS_2, put on hold |
| Stimulus: | One external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 31H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 31H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and TS_2 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call hold) =<(1, 0, value b), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | <p>In pass criterion 1 (and respectively 2), IUT may additionally send call status 'CS call connect' (respectively 'CS call hold') to TS_2 (target PP on hold). But this shall not be part of the pass criteria as not explicitly defined in TS 102 527-3 [14]</p> <p>When initiating the outgoing parallel external call in initial condition, tones can be generated in narrow band. Hence, the IUT may first negotiate G.726 codec and then switch to G.722 codec instead of selecting directly G.722</p> |

| TC_FT_NG1.N.7_BV_401 | Call release and call release rejection - Resuming a call put on-hold |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.4 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A, one parallel external call on hold on line 0 (call id b) with Phone B |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 42H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> Verify on Phone A that the call was released (i.e. Idle mode or Off-hook warning tone) Verify that end-to-end U-plane connection is not established between TS_1 and Phone B. 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B |
| Comments: | In pass criterion 1, the IUT is not supposed to re-connect automatically the first call (and the audio thereof) without an explicit request from the tester |

| TC_FT_NG1.N.7_BV_601 | Call waiting acceptance (from PP to FP) (external) |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.6 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | 1. Perform an incoming external call towards IUT from Phone B on line 0 |
| Stimulus: | 2. Send a {CC-INFO} message from TS_1 with IE << MULTI-KEYPAD >> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B |

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|-----------------------------|--|
| TC_FT_NG1.N.7_BV_602 | Call waiting acceptance (from PP to FP) (internal) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.6 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' from TS_2 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to terminal Id of PP1 and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2 3. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_2: <ul style="list-style-type: none"> - (for 'non-early {CC-CONNECT}' implementation) a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>, - (for 'early {CC-CONNECT}' implementation) a {CC-CONNECT} message, with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify that the IUT sends to TS_2: <ul style="list-style-type: none"> - (for 'non-early {CC-CONNECT}' implementation) a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> - (for 'early {CC-CONNECT}' implementation) a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and TS_2 |
| Comments: | In pass criterion 3, the IUT may send to TS_2 additional call statuses (CS call proc, CS call alerting) (in {CC-CALL-PROC} and {CC-ALERTING} respectively for a 'non-early {CC-CONNECT}' implementation; in {CC-INFO} messages for an 'early {CC-CONNECT}' implementation) |

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| TC_FT_NG1.N.7_BV_701 | Active call release with replacement (from PP to FP) - call waiting (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.12 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming external call towards IUT from Phone B on line 0 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 38H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B Verify on Phone A that the call was released (i.e. Idle mode or Off-hook warning tone). |

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| TC_FT_NG1.N.7_BV_702 | Active call release with replacement (from PP to FP) - call on-hold (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.12 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A, one parallel external call on hold on line 0 (call id b) with Phone B |
| Stimulus: | Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 38H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B |
| TC_FT_NG1.N.7_BV_801 | Call waiting rejection (from PP to FP) (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.7 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | 1. Perform an incoming external call towards IUT from Phone B on line 0 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 36H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (2, 1, 1)> 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| TC_FT_NG1.N.7_BV_901 | Putting a call on hold (external) - Resuming a call put on-hold |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.8 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 41H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)>from TS_1 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 42H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)>from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> Verify that end-to-end U-plane connection is not established between TS_1 and Phone A 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | In pass criterion 1, it is to the responsibility of the IUT to play mute patterns |

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| TC_FT_NG1.N.7_BV_902 | Putting a call on hold (internal) - Resuming a call put on-hold |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.8 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Internal call in F-10 (TS_1+TS_2) with call id a |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 41H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 42H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> Verify that end-to-end U-plane connection is not established between TS_1 and TS_2 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and TS_2 |
| Comments: | In pass criterion 1, it is the responsibility of the IUT to play mute patterns; In pass criterion 1 (and respectively 2), IUT may additionally send call status 'CS call hold' (respectively 'CS call connect') to TS_2 (target PP put on hold). But this shall not be part of the pass criteria as not explicitly defined in TS 102 527-3 [14] |

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| TC_FT_NG1.N.7_BV_1201 | CNIP on call waiting indication (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.5.11 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | Perform an incoming external call on line 0 towards IUT from Phone B (CNIP B) |
| Pass criteria: | <p>Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<CALLING PARTY NAME =< Presentation indicator=do not care value, Used alphabet= DECT standard or UTF-8, Screening indicator= do not care value, calling party name = name of Phone B> >> • an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages |
| Comments: | UTF-8 CNIP can be received if the FP is designed for a network capable of sending UTF-8 CNIP |

| TC_FT_NG1.N.7_BV_1202 | CNIP on call waiting indication (internal) |
|---|--|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.5.11</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <p>1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' from TS_2</p> <p>2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to HANDSET_TS_1_NUMBER and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2</p> <p>1. Verify that the IUT sends to TS_2:</p> <ul style="list-style-type: none"> • (for 'non-early {CC-CONNECT}' implementation) a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>, • (for 'early {CC-CONNECT}' implementation) a {CC-CONNECT} message, with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> <p>2. Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<CALLING PARTY NAME = < Presentation allowed, DECT standard or UTF-8, User-provided, verified and passed, HANDSET_TS_2_NAME > >> • an IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>In pass criterion 1, early CC-CONNECT and non-early CC-CONNECT cases are covered for the internal call. Test equipment shall allow both implementations. However it is not the main purpose of the test case to check behaviour of IUT toward TS_2</p> |

7.8 TC_FT_NG1.N.8 Call transfer tests cases

Test subgroup objectives: to check the IUT's behaviours regarding call transfer.

Test equipment implementation requirements in case the call transfer fails

Test equipment shall allow implementations, where after final pass criteria, the IUT represents the original call to the TS_1 (as an incoming CC-SETUP) in case the call transfer was not completed (TS_2 not responding the call).

For example in TC_FT_NG1.N.8_BV_401, the call transfer is not completed correctly (not accepted on TS_2) so TS_1 may send an additional CC-RELEASE at the end of the test if the IUT re-presents the original call.

| TC_FT_NG1.N.8_BV_101 | Call transfer (external) - announced |
|--|---|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.6.1</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <p>1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, IA5 coding of terminal identity number in decimal of TS_2) digits from TS_1</p> <p>1a. Send a {CC-ALERTING} message from TS_2</p> <p>2. Send a {CC-CONNECT} message from TS_2</p> <p>3. Send a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 34H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1</p> <p>4. Send a {CC-RELEASE-COM} message from TS_1</p> <p>1. Verify that the IUT sends the following messages:</p> <p>1.1- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)></p> <p>1.2- to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)></p> <p>1.3- optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>>; if this is the case, verify that this IE contains correct call ID and call status (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)></p> <p>1a. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<SIGNAL>> with the value 01H indicating 'ring back tone on' and if IE <<CALL-INFORMATION>> is included verify that this IE contains correct call ID and call status (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)></p> <p>2. Verify that the IUT sends:</p> <p>2.1- to TS_2 a {CC-CONNECT-ACK} message</p> <p>2.2- to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)></p> <p>2.3- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b),(2, 1, 5)></p> <p>2.4- to TS_1 in the same message containing the call status indication or different {CC-INFO} messages an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off'</p> <p>Verify end-to-end U-plane connection between TS_1 and TS_2</p> <p>3. Verify that the IUT sends</p> <p>3.1- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying either:</p> <ul style="list-style-type: none"> - (3.1) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> OR- (3.2) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>; <p>3.2- then optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying either:</p> <ul style="list-style-type: none"> - (if 3.1) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> OR - (if 3.2) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>; <p>3.3- and then mandatorily to TS_1 a {CC-RELEASE} message</p> <p>Verify that the IUT sends</p> <p>3.4- to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS call connect) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 5)></p> <p>4. Verify end-to-end U-plane connection between TS_2 and Phone A</p> |
| <p>Comments</p> | <p>The IUT shall respect TS 102 527-3 [14], clause 7.4.3.6 regarding the sending order of messages to TS_1 and TS_2.</p> <p>However, on tester side and within a given pass criterion, the sequence of messages received shall only be checked individually for each PP (TS_1 and TS_2) as the FP might not be able to guarantee the reception order of messages that target different PPs. More specifically, this applies to the following sequences:</p> <ul style="list-style-type: none"> - for pass criterion 1: (1.1, 1.3) to TS_1 and (1.2) to TS_2 (1.3 optional) - for pass criterion 2: (2.3, 2.4) to TS_1 and (2.1, 2.2) to TS_2 - for pass criterion 3: (3.1, 3.2, 3.3) to TS_1 and (3.4) to TS_2 (3.2 optional) |

| TC_FT_NG1.N.8_BV_201 | Call transfer (external) - unannounced |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.6 and 7.4.3.6.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), |
| Stimulus: | external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| | 1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, IA5 coding of terminal identity number in decimal of TS_2) digits from TS_1 |
| | 1a. Send a {CC-ALERTING} message from TS_2 |
| | 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 34H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| | 3. Send a {CC-RELEASE-COM} message from TS_1 |
| | Send a {CC-CONNECT} message from TS_2 |
| Pass criteria: | 1. Verify that the IUT sends the following messages: |
| | 1.1- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> |
| | 1.2- to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> |
| | 1.3- optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>>; if this is the case verify that this IE contains correct call ID and call status (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> |
| | 1a. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' and if IE <<CALL-INFORMATION>> is included verify that this IE contains correct call ID and call status (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)> |
| | 2. Verify that the IUT sends the following messages: |
| | 2.1- to TS_1 in the same message containing the call status indication or different {CC-INFO} message an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' |
| | 2.2- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying either: |
| | - (2.1) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> OR |
| | - (2.2) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>; |
| | 2.3- then optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying: |
| | - (if 2.1) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> OR |
| | - (if 2.2) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>; |
| | 2.4- and then mandatorily to TS_1 a {CC-RELEASE} message |
| | Verify that the IUT sends: |
| | 2.5- to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying: (line 0, line type information, call id b, updated call id a, CS call under transfer) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 12)> |
| | 3. Verify that the IUT sends to TS_2 a {CC-CONNECT-ACK} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> |
| | Verify end-to-end U-plane connection between TS_2 and Phone A |
| Comments | The IUT shall respect TS 102 527-3 [14], clause 7.4.3.6 regarding the sending order of messages to TS_1 and TS_2. |
| | However, on tester side and within a given pass criterion, the sequence of messages received shall only be checked individually for each PP (TS_1 and TS_2) as the FP might not be able to guarantee the reception order of messages that target different PPs. More specifically, this applies to the following sequences: |
| | - for pass criterion 1: (1.1, 1.3) to TS_1 and (1.2) to TS_2 (1.3 optional) |
| | - for pass criterion 2: (2.1, 2.2, 2.3, 2.4) to TS_1 and (2.5) to TS_2 (2.3 optional) |

| TC_FT_NG1.N.8_BV_301 | Call re-injection to the system (external) - announced |
|--|--|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clauses 7.4.3.6, 7.4.3.6.3 and 7.4.15.2.1</p> <p>3 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2, Golden Device A is NG PP3), external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A</p> <p>1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, IA5 coding of internal general call = 2AH) digits from TS_1</p> <p>1a. Send a {CC-ALERTING} message from TS_2</p> <p>2. Send a {CC-CONNECT} message from TS_2</p> <p>3. Send a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 34H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1</p> <p>4. Send a {CC-RELEASE-COM} message from TS_1</p> <p>1. Verify that the IUT sends the following messages:</p> <p>1.1- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)></p> <p>1.2- to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> and that Golden Device A rings</p> <p>1.3- optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>>; if this is the case, verify that this IE contains correct call id and call status (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)></p> <p>1a. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<SIGNAL>> with the value 01H indicating 'ring back' tone on' and if IE <<CALL-INFORMATION>> is included verify that this IE contains correct call id and call status (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)></p> <p>2. Verify that the IUT sends the following messages:</p> <p>2.1- to TS_2 a {CC-CONNECT-ACK} message</p> <p>2.2- to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)></p> <p>2.3- to TS_1 a {CC-INFO} message an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off'</p> <p>2.4- to TS_1 in the same or different {CC-INFO} message, the IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)></p> <p>Verify that Golden Device A stops ringing</p> <p>Verify end-to-end U-plane connection between TS_1 and TS_2</p> <p>3. Verify that the IUT sends the following messages:</p> <p>3.1- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying either:</p> <ul style="list-style-type: none"> - (3.1) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> OR - (3.2) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>; <p>3.2- then optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying:</p> <ul style="list-style-type: none"> - (if 3.1) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> OR - (if 3.2) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>; <p>3.3- then mandatorily to TS_1 a {CC-RELEASE} message</p> <p>Verify that the IUT sends:</p> <p>3.4- to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS call connect) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 5)></p> <p>4. Verify end-to-end U-plane connection between TS_2 and Phone A</p> |
| <p>Comments:</p> | <p>In Pass criterion 1a, IE <<SIGNAL>> 'ring back' tone on can be also received earlier in pass criterion 1 after the 'CS call hold' call status indication</p> <p>The IUT shall respect TS 102 527-3 [14], clause 7.4.3.6 regarding the sending order of messages to TS_1 and TS_2.</p> <p>However, on tester side and within a given pass criterion, the sequence of messages received shall only be checked individually for each PP (TS_1 and TS_2) as the FP might not be able to guarantee the reception order of messages that target different PPs. More specifically, this applies to the following sequences:</p> <ul style="list-style-type: none"> - for pass criterion 1: (1.1, 1.3) to TS_1 and (1.2) to TS_2 (1.3 optional) - for pass criterion 2: (2.3, 2.4) to TS_1 and (2.1, 2.2) to TS_2 - for pass criterion 3: (3.1, 3.2, 3.3) to TS_1 and (3.4) to TS_2 (3.2 optional) |

| TC_FT_NG1.N.8_BV_302 | Call re-injection to the system (external) - unannounced |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.6, 7.4.3.6.3 and 7.4.15.2.1 |
| Initial condition: | 3 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2, Golden Device A is NG PP3), external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, IA5 coding of internal general call = 2AH) digits from TS_1 |
| | <ol style="list-style-type: none"> 1a. Send a {CC-ALERTING} message from TS_2 |
| | <ol style="list-style-type: none"> 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 34H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| | <ol style="list-style-type: none"> 3. Send a {CC-RELEASE-COM} message from TS_1 |
| | Send a {CC-CONNECT} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends the following messages: <ol style="list-style-type: none"> 1.1- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> 1.2- to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> and that Golden Device A rings 1.3- optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>>; if this is the case, verify that this IE contains correct call id and call status (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> |
| | <ol style="list-style-type: none"> 1a. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' and if IE <<CALL-INFORMATION>> is included verify that this IE contains correct call id and call status (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)> |
| | <ol style="list-style-type: none"> 2. Verify that the IUT sends the following messages: <ol style="list-style-type: none"> 2.1- to TS_1 in the same message containing the call status indication or different {CC-INFO} message an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' 2.2- to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying either: <ul style="list-style-type: none"> - (2.1) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> OR - (2.2) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>; 2.3- then optionally to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying <ul style="list-style-type: none"> - (if 2.1) (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> OR - (if 2.2) (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>; 2.4- and then mandatorily to TS_1 a {CC-RELEASE} message |
| | Verify that the IUT sends: |
| | <ol style="list-style-type: none"> 2.5- to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS call under transfer) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 12)> |
| | <ol style="list-style-type: none"> 3. Verify that the IUT sends to TS_2 a {CC-CONNECT-ACK} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> |
| | Verify that Golden Device A stops ringing |
| | Verify end-to-end U-plane connection between TS_2 and Phone_A |
| Comments | <p>The IUT shall respect TS 102 527-3 [14], clause 7.4.3.6 regarding the sending order of messages to TS_1 and TS_2.</p> <p>However, on tester side and within a given pass criterion, the sequence of messages received shall only be checked individually for each PP (TS_1 and TS_2) as the FP might not be able to guarantee the reception order of messages that target different PPs. More specifically, this applies to the following sequences:</p> <ul style="list-style-type: none"> - for pass criterion 1: (1.1, 1.3) to TS_1 and (1.2) to TS_2 (1.3 optional) - for pass criterion 2: (2.1, 2.2, 2.3, 2.4) to TS_1 and (2.5) to TS_2 (2.3 optional) |

| TC_FT_NG1.N.8_BV_401 | Remote party CLIP on call transfer |
|----------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.6.4 and 7.4.3.6.5, Figure 18 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_1+IUT) initiated by Phone A on line 0 (call id a) with TS_1 |
| Stimulus: | 1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, IA5 coding of terminal identity number in decimal of TS_2) digits from TS_1 |
| | 2. Send a CC-ALERTING message from TS_2 |
| | Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 34H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> |
| | Verify that the IUT sends to TS_2 in the {CC-SETUP} or in a {CC-INFO} message an IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP1 >>> and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> |
| | 2. Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALLING PARTY NUMBER = <Number type= number type of phone A received in initial condition, Numbering plan id = numbering plan of phone A received in initial condition, Presentation indicator= presentation indicator of phone A received in initial condition, Screening indicator= screening indicator of phone A received in initial condition, Calling party address= Phone A number >>> and with IE <<CALL-INFORMATION>> specifying either (call id b) = <(1,0, value b> or (call id a) =<(1, 0, value a)> |
| Comments: | <ul style="list-style-type: none"> - In pass criterion 2, the fields of the IE<<CALLING PARTY NUMBER>> transmitted to TS_2 shall be the same as the one received during the initial condition on TS_1 - In pass criterion 2, call id b is used if Phone A CLIP is sent together with 'CS call under transfer call status' (and call id update from b to a), call id a is used if this CLIP is sent in a subsequent {CC-INFO} message - Test equipment shall allow implementations, where after pass criteria 2, the IUT represents the original call to the TS_1 (as an incoming CC-SETUP). TS_1 may for example send an additional CC-RELEASE |

| TC_FT_NG1.N.8_BV_501 | Remote party CNIP on call transfer |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.3.6.5, Figure 18 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_1+IUT) initiated by Phone A on line 0 (call id a) with TS_1 |
| Stimulus: | 1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H, HANDSET_TS_2_NUMBER) digits from TS_1 |
| | 2. Send a CC-ALERTING message from TS_2 |
| | Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 34H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id b, CS call setup) =<(1, 0, value b), (2, 1, 1)> |
| | Verify that the IUT sends to TS_2 in the {CC-SETUP} or a {CC-INFO} message an IE <<CALLING PARTY NAME = < Presentation allowed, DECT standard or UTF-8, User-provided, verified and passed, HANDSET_TS_1_NAME >>> and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> |
| | 2. Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALLING PARTY NAME =< Presentation indicator= presentation indicator of phone A received in initial condition, Used alphabet= UTF-8, Screening indicator= screening indicator of phone A received in initial condition, Calling party name= Phone A name >>> and with IE <<CALL-INFORMATION>> specifying either (call id b) = <(1,0, value b> or (call id a) =<(1, 0, value a)> |
| Comments: | <ul style="list-style-type: none"> - In pass criterion 2, the fields of the IE<<CALLING PARTY NAME>> transmitted to TS_2 shall be the same as the one received during the initial condition on TS_1 - In pass criterion 2, call id b is used if Phone A CNIP is sent together with 'CS call under transfer call status' (and call id update from b to a), call id a is used if this CNIP is sent in a subsequent {CC-INFO} message |

7.9 TC_FT_NG1.N.9 3-party conference with established external and/or internal calls tests cases

Test subgroup objectives: to check the IUT's behaviours regarding 3-party conference with established external and/or internal calls.

Declarations (see Annex A):

- NG1.N.9 "3-party conference with established external and/or internal calls" feature is optional on FP side, so the manufacturer shall declare if it is supported.
- 3-party conference with two established external calls can be base station or network dependent, so the manufacturer shall declare if it is supported.
- 3-party conference with two established external calls on two different lines can be base station or network dependent, so the manufacturer shall declare if it is supported in addition to the NG1.N.14 "Multiple lines" feature support.

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| TC_FT_NG1.N.9_BV_101 | 3-party conference with established external and internal calls - release from non initiating internal party |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.7 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_1+IUT) initiated by Phone_A on line 0 (call id a), one parallel internal call on hold (call id b) with TS_2 |
| Stimulus: | <ol style="list-style-type: none"> 1. Nothing 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 32H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 3. Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that "3-party conference" higher layer capability bit is set to 1 (= Extended higher layer capabilities (part 2) a33 bit) 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id not chosen for the conference, CS idle) =<(1, 0, value a or b), (2, 1, 0)>, <ul style="list-style-type: none"> If the call id chosen for the conference is call id b then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, updated call id b, CS conference connect) =<(1, 0, value a), (1, 1, value b), (2, 1, 11)>, <ul style="list-style-type: none"> and to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value), (2, 1, 11)> Else verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)>, <ul style="list-style-type: none"> and to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> 3. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message <ul style="list-style-type: none"> Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id chosen for the conference, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a or b), (2, 1, 5)> and IE <<CLIP>> with <Calling party address> field set to Phone A number Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | 'Call id chosen for the conference': chosen by the FP among the involved calls, either the on-hold call id (call id b) or the active call id (call id a). The other call id is the 'call id not chosen for the conference' (respectively call id a or call id b) |

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| TC_FT_NG1.N.9_BV_102 | 3-party conference with established external and internal calls - release of external party from initiating PP |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.7 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External G.722 call in F-10 (TS_1+IUT) initiated by Phone_A on line 0 (call id a), one parallel internal G.726 call on hold (call id b) with TS_2 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 32H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id not chosen for the conference, CS idle) =<(1, 0, value a or b), (2, 1, 0)>, If the call id chosen for the conference is call id b then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, updated call id b, CS conference connect) =<(1, 0, value a), (1, 1, value b), (2, 1, 11)>, and to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value), (2, 1, 11)> Else verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)>, and to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_2 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 2. Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CALL-INFORMATION>> specifying (call id chosen for the conference, CS call connect) =<(1, 0, value a or b), (2, 1, 5)> and IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP2> >> Verify that the IUT sends to TS_2 in one or several {CC-INFO} messages an IE <<CALL-INFORMATION>> specifying (call id chosen for the conference, CS call connect) =<(1, 0, value a or b), (2, 1, 5)> and IE <<CALLING PARTY NUMBER = <Network specific number, Private plan, IA5 coding of terminal identity number in decimal of PP1> >> Verify end-to-end U-plane connection between TS_1 and TS_2 |
| Comments: | 'Call id chosen for the conference': chosen by the FP among the involved calls, either the on-hold call id (call id b) or the active call id (call id a). The other call id is the 'call id not chosen for the conference' (respectively call id a or call id b) |

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| TC_FT_NG1.N.9_BV_103 | 3-party conference with established external calls - release from initiating party |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.7 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by Phone_A on line 0 (call id a), one parallel external call on hold on line 0 (call id b) with Phone B |
| Stimulus: | 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 32H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 2. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id not chosen for the conference, CS idle) =<(1, 0, value a or b), (2, 1, 0)>, If the call id chosen for the conference is call id b then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, updated call id b, CS conference connect) =<(1, 0, value a), (1, 1, value b), (2, 1, 11)> Else verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and Phone B Verify end-to-end U-plane connection between Phone A and Phone B 2. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | 'Call id chosen for the conference': chosen by the FP among the involved calls, either the on-hold call id (call id b) or the active call id (call id a). The other call id is the 'call id not chosen for the conference' (respectively call id a or call id b) |

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| TC_FT_NG1.N.9_BV_104 | 3-party conference with established external calls on two different lines - release from initiating party |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.7 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by Phone_A on line 0 (call id a), one parallel external call on hold on line 1 (call id b) with Phone B |
| Stimulus: | 1. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 32H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 2. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id not chosen for the conference, CS idle) =<(1, 0, value a or b), (2, 1, 0)>, If the call id chosen for the conference is call id b then verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, updated call id b, CS conference connect) =<(1, 0, value a), (1, 1, value b), (2, 1, 11)> Else verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and Phone B Verify end-to-end U-plane connection between Phone A and Phone B 2. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | 'Call id chosen for the conference': chosen by the FP among the involved calls, either the on-hold call id (call id b) or the active call id (call id a). The other call id is the 'call id not chosen for the conference' (respectively call id a or call id b) |

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| TC_FT_NG1.N.9_BV_105 | Three-party conference call – Extended Higher Layer Capabilities (Part 2) |
| Test purpose | Verify that the FP IUT sets the "Three party conference call (external or external)" attribute in the Extended higher layer capabilities (Part 2) |
| Reference: | TS 102 527-3 [14], Clause 7.4.9.2.3 |
| Initial condition: | F-00 |
| Time sequence: | s1 [TS_1 >> IUT] Perform an access rights request a1 [IUT >> TS_1] The "three-party conference call" attribute (bit a31) of the Extended higher layer capabilities (part 2) is set to 1 |
| Pass criteria: | Verify the answer |
| Comments | |

7.10 TC_FT_NG1.N.10 Intrusion call tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Intrusion call.

Declarations (see Annex A):

- NG1.N.10 "Intrusion call" feature is optional on FP side, so the manufacturer shall declare if it is supported.
- When NG1.N.14 "Multiple lines" procedure is declared, following behaviours and corresponding test cases are exclusive:
 - FP implements 'non early CC-CONNECT': TC_FT_NG1.N.10_BV_101, 103, 105, 201, 203.
 - FP implements 'early CC-CONNECT': TC_FT_NG1.N.10_BV_102, 104, 106, 202, 204.

Table 17: Summary of call intrusion test cases on FT side

| Type of intrusion | Message for line id specification | Non-early {CC-CONNECT} implementation | Early {CC-CONNECT} implementation |
|---|-----------------------------------|--|--|
| Implicit call intrusion | {CC-SETUP} | TC_FT_NG1.N.10_BV_101 (narrowband call) | TC_FT_NG1.N.10_BV_102 (narrowband call) |
| | {CC-INFO} | TC_FT_NG1.N.10_BV_105 | TC_FT_NG1.N.10_BV_106 |
| Explicit call intrusion (line intrusion) | {CC-SETUP} | TC_FT_NG1.N.10_BV_103 | TC_FT_NG1.N.10_BV_104 |
| | {CC-INFO} | TC_FT_NG1.N.10_BV_203 | TC_FT_NG1.N.10_BV_204 |
| Explicit call intrusion (handset intrusion) | N/A | TC_FT_NG1.N.10_BV_201 | TC_FT_NG1.N.10_BV_202 |
| NOTE 1: Tests cases are exclusive: IF FP implements 'non early CC CONNECT' on line 0 THEN run the five tests TC_FT_NG1.N.10_BV_101, 105, 103, 202, 201 ELSE run TC_FT_NG1.N.10_BV_102, 106, 104, 204, 201a (see Table A.16 FT_IXIT_22). | | | |
| NOTE 2: Test TC_FT_NG1.N.10_BV_301 testing FP side capability bit is not represented in the table. | | | |

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| TC_FT_NG1.N.10_BV_101 | Implicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) - release from intruder - G.726 call |
| <p>Reference: Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.3.8.1 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 G.726 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone C</p> <p>1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' and with IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)></p> <p>2. Send a {CC-RELEASE} message from TS_2</p> <p>1. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 11)></p> <p>Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on') • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify end-to-end U-plane connection between TS_1 and Phone C Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone C</p> <p>2. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CLIP>> with <Calling party address> field set to Phone C number and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 5)></p> <p>Verify end-to-end U-plane connection between TS_1 and Phone C</p> <ul style="list-style-type: none"> - This test case includes test of correct narrowband conference call establishment in G.726 - The CLIP in pass criteria 3 is an 'artificial' CLIP created by the FP as the first call was an outgoing call - In pass criterion 1, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_102 | Implicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation) - release from intruder - G.726 call |
| Reference: Initial condition: | TS 102 527-3 [14], Clause 7.4.3.8.1 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 |
| Stimulus: | G.726 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone C 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' and with IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 2. Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> followed by a {CC-INFO} message with IE <<SIGNAL>> with value 02H indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: |
| Comments: | <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone C Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone C 2. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CLIP>> with <Calling party address> field set to Phone C number and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone C |
| Pass criteria: | <ul style="list-style-type: none"> - This test case includes test of correct narrowband conference call establishment in G.726 - The CLIP in pass criteria 3 is an 'artificial' CLIP created by the FP as the first call was an outgoing call - In pass criterion 1, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_103 | Explicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) with targeted line specified in {CC-SETUP} - release from intruder - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.1 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup', IE <<MULTI-KEYPAD >> set to (1CH, 40H) digits, and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> |
| Pass criteria: | 2. Send a {CC-RELEASE} message from TS_2 1. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on', and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A 2. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CLIP>> with <Calling party address> field set to Phone A number and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | <ul style="list-style-type: none"> - The CLIP in pass criteria 3 is an 'artificial' CLIP created by the FP as the first call was an outgoing call - In pass criterion 1, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_104 | Explicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation) with targeted line specified in {CC-SETUP} - release from intruder - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.1 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to only line 0 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup', IE << MULTI-KEYPAD >> set to (1CH, 40H) digits, and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> |
| Pass criteria: | 2. Send a {CC-RELEASE} message from TS_2 1. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> followed by a {CC-INFO} message with IE <<SIGNAL>> with value 02H indicating 'Intercept tone on' and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: |
| Comments: | <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A</p> <p>2. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CLIP>> with <Calling party address> field set to Phone A number and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A</p> <ul style="list-style-type: none"> - The CLIP in pass criteria 3 is an 'artificial' CLIP created by the FP as the first call was an outgoing call - In pass criterion 1, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_105 | Implicit call intrusion into a line in "single call" mode on a multiple line system (non early CC-CONNECT implementation) with targeted line specified in { CC-INFO } - release from intruder - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.1 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 attached to line 0, PP2 attached to line 0 and line 1 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a { CC-SETUP } message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' 2. Send a { CC-INFO } message from TS_2 with IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, lid0), (1, 0, value b)> 3. Send a { CC-RELEASE } message from TS_2 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2 a { CC-SETUP-ACK } message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_2 a { CC-CONNECT } message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different { CC-INFO } messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A 3. Verify that the IUT sends to TS_2 a { CC-RELEASE-COM } message Verify that the IUT sends to TS_1 in one or several { CC-INFO } messages an IE <<CLIP>> with <Calling party address> field set to Phone A number and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | <ul style="list-style-type: none"> - The CLIP in pass criteria 3 is an 'artificial' CLIP created by the FP as the first call was an outgoing call - In pass criterion 2, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_106 | Implicit call intrusion into a line in "single call" mode on a multiple line system (early CC-CONNECT implementation) with targeted line specified in {CC-INFO} - release from intruder - G.722 call |
| Reference: Initial condition: | TS 102 527-3 [14], Clause 7.4.3.8.1 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 attached to line 0, PP2 attached to line 0 and line 1 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' 2. Send a {CC-INFO} message from TS_2 with IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, lid0), (1, 0, value b)> 3. Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_2 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2>> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A 3. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_1 in one or several {CC-INFO} messages an IE <<CLIP>> with <Calling party address> field set to Phone A number and IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | The CLIP in pass criteria 3 is an 'artificial' CLIP created by the FP as the first call was an outgoing call |

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| TC_FT_NG1.N.10_BV_201 | Explicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) - handset intrusion - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to line 0 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' and with IE <<MULTI-KEYPAD >> set to (1CH, 40H) digits 2. Send a {CC-INFO} message from TS_2 with IE <<MULTI-KEYPAD >> set to (17H, 31H) digits and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>. |
| Pass criteria: | 1. Verify that IUT sends to TS_2 a {CC-SETUP-ACK} with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>. 2. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: |
| Comments: | <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A</p> |
| Pass criteria: | 1. Verify that IUT sends to TS_2 a {CC-SETUP-ACK} with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>. 2. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: |
| Comments: | <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A</p> |
| Comments: | - In pass criterion 2, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_202 | Explicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation)- handset intrusion - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to line 0 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' and IE << MULTI-KEYPAD >> set to (1CH, 40H) digits |
| Pass criteria: | 2. Send a {CC-INFO} message from TS_2 with IE << MULTI-KEYPAD >> set to (17H, 31H) digits and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> specifying (call id b) =<(1, 0, value b)> but no call status, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> |
| Comment | 1. Verify that IUT sends to TS_2 a {CC-CONNECT} with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> but no call status, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on', and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A |
| | - In pass criterion 2, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_203 | Explicit call intrusion into a line in "single call" mode (non-early {CC-CONNECT} implementation) - line intrusion with target in {CC-INFO} - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to line 0 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| | 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' and with IE <<MULTI-KEYPAD >> set to (1CH, 40H) digits 2. Send a {CC-INFO} message from TS_2 with IE <<CALL-INFORMATION>> specifying (line 0 call id b) =<(0, 0, lid0), (1, 0, value b)> |
| Pass criteria: | 1. Verify that IUT sends to TS_2 a {CC-SETUP-ACK} with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)>. 2. Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A |
| Comments: | In pass criterion 2, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_204 | Explicit call intrusion into a line in "single call" mode (early {CC-CONNECT} implementation)- line intrusion with target in {CC-INFO} - G.722 call |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.8.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 31H ("allowed") on line 0, PP1 and PP2 attached to line 0 |
| Stimulus: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A 1. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE>> 'Normal call setup' and with IE <<MULTI-KEYPAD >> set to (1CH, 40H) digits 2. Send a {CC-INFO} message from TS_2 with IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, lid0), (1, 0, value b)> |
| Pass criteria: | 1. Verify that IUT sends to TS_2 a {CC-CONNECT} with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> but no call status, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 2. Verify that the IUT sends to TS_2 {CC-INFO} message with IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on', and with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, updated call id a, CS conference connect) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (1, 1, value a), (2, 1, 11)> Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'Intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> • an IE <<CALL-INFORMATION>> specifying (call id a, CS conference connect) =<(1, 0, value a), (2, 1, 11)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_1 and TS_2 Verify end-to-end U-plane connection between TS_2 and Phone A |
| Comment | In pass criterion 2, the <<SIGNAL>> IE may be sent alternatively in a separate {CC-INFO} message following the indicated message; in that case, the call id shall be present in both messages |

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| TC_FT_NG1.N.10_BV_301 | Intrusion call – Extended Higher Layer Capabilities (Part 2) |
| Test purpose | Verify that the FP IUT sets the "Intrusion call" attribute in the Extended higher layer capabilities (Part 2) |
| Reference: | TS 102 527-3 [14], Clause 7.4.9.2.3 |
| Initial condition: | F-00 |
| Time sequence: | s1 [TS_1 >> IUT] Perform an access rights request a1 [IUT >> TS_1] "Intrusion call" attribute (bit a32) of the Extended higher layer capabilities (Part 2) is set to 1 |
| Pass criteria: | Verify the answer |
| Comments | |

7.11 TC_FT_NG1.N.11 Call deflection (external or internal) tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Call deflection (external or internal) with the following consideration:

- As NG1.N.11_3 "Call deflection control messages" procedure is tested when testing NG1.N.11_1 "Call deflection (internal)" procedure and NG1.N.11_2 "Call deflection (external)" procedure, there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.N.11 "Call deflection (external or internal)" feature is optional on FP side, so the manufacturer shall declare if it is supported.

- NG1.N.11_1 "Call deflection (internal)" procedure is mandatory on FP side but it only makes sense if NG1.N.14 "Multiple lines" procedure is declared.

| TC_FT_NG1.N.11_BV_101 | Call deflection (internal) in multiple lines context |
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| Reference: | TS 102 527-3 [14], Clause 7.4.4.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0, PP2 is attached to line 1, F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A 2. Send a {CC-ALERTING} message from TS_1 Wait for 3 seconds before sending a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 39H, 17H, Terminal id of PP2) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Send a {CC-RELEASE-COM} message from TS_1 4. Send a {CC-ALERTING} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> Verify that the IUT does not send to TS_2 a {CC-SETUP} message 2. Verify that the IUT optionally sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>, and then mandatorily sends to TS_1 a {CC-RELEASE} message 3. Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, 0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> |
| Comments: | Although PP2 is only attached to line 1, it may receive a call from line 0 as a result of call deflection |

| TC_FT_NG1.N.11_BV_201 | Call deflection (external) - first incoming call deflection |
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| Reference: | TS 102 527-3 [14], Clause 7.4.4.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 and PP2 attached to line 0 F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Switch on IUT 2. Perform an incoming call on line 0 towards IUT from Phone A 3. Send a {CC-ALERTING} message from TS_1 Send a {CC-ALERTING} message from TS_2 Wait for 3 seconds before sending a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 39H, 15H, Phone B number) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 4. Send a {CC-RELEASE-COM} message from TS_1 Send a {CC-RELEASE-COM} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that "Call deflection" higher layer capability bit is set to 1 (= Extended higher layer capabilities (part 2) a31 bit) 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> 3. Verify that the IUT optionally sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)>, and then mandatorily sends to TS_1 a {CC-RELEASE} message Verify that the IUT optionally sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)>, and then mandatorily sends to TS_2 a {CC-RELEASE} message 4. Verify that Phone B rings |
| Comments: | <ul style="list-style-type: none"> - Call deflection request impacts all PPs receiving the incoming call (all stop ringing) - Call id a and call id b may be equal or different (per-PP call ids on external incoming call) |

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| TC_FT_NG1.N.11_BV_202 | Call deflection (external) - call waiting deflection |
| Reference: | TS 102 527-3 [14], Clause 7.4.4.2 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming external call towards IUT from Phone B on line 0 2. Wait for 3 seconds before sending a {CC-INFO} message with IE <<MULTI-KEYPAD >> set to (1CH, 39H, 15H, Phone C number) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on' when declared (see Annex A, Table A.26) • an IE <<CALLING PARTY NUMBER>> with <calling party address= Phone B number> • an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> Verify that Phone C rings |

7.12 TC_FT_NG1.N.12 Line identification tests cases

Test subgroup objectives: to check the IUT's behaviours regarding line identification with the following considerations:

- NG1.N.12_3 "Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE" procedure in {CC-SETUP} message is tested with NG1.N.13_2 "Call identifier assignment on outgoing call (FP to PP)" procedure.
- NG1.N.12_6 "General line identification requirements for external incoming calls" and NG1.N.12_7 "Line identification for a first external incoming call" procedures are tested with NG1.N.7_2 "Call waiting indication (external or internal)" and NG1.N.13_3 "Call identifier assignment on incoming call (FP to PP)" procedures.
- No backward compatibility tests in front of a GAP PP are foreseen as these tests will be done when running EN 300 444 [12] tests.

Declarations (see Annex A):

- Following behaviours and corresponding test cases are exclusive:
 - FP implements 'non early CC-CONNECT': TC_FT_NG1.N.12_BV_301, TC_FT_NG1.N.12_GC_401, TC_FT_NG1.N.12_BV_501.
 - FP implements 'early CC-CONNECT': TC_FT_NG1.N.12_BV_302, TC_FT_NG1.N.12_GC_402, TC_FT_NG1.N.12_BV_502.

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| TC_FT_NG1.N.12_BV_301 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE in {CC-INFO} (non early CC-CONNECT implementation) |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.5.2.2 F-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' from TS_1 1a. Send a <Start session, list identifier = 08H, nb of sorting fields =0> from TS_1 1b. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 08H> from TS_1 1c. Send a <End session, session id=n> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (line 0, call id a) =<(0, 0, lid0), (1, 0, value a)> from TS_1 3. Send a {CC-RELEASE} message from TS_1 4. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' from TS_1 5. Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, lid0), (1, 0, value b)>, followed by a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 6. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> and verify that this {CC-SETUP-ACK} message does not contain a line identifier 1a. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=m, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =2> 1b. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (at least for line 0) 1c. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 2. Verify that the IUT sends a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a)> Verify that IUT sends to TS_1 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone B rings 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 4. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 5. Verify that the IUT sends a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> Verify that IUT sends to TS_1 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message <p>The FP call identifier assignment method is left free to implementation; 'call id a' will be equal to 'call b' if IUT implements the "no re-use method"</p> |

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| TC_FT_NG1.N.12_BV_302 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE in {CC-INFO} (early CC-CONNECT implementation) |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.5.2.2 F-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> from TS_1 1a. Send a <Start session, list identifier = 08H, nb of sorting fields =0> from TS_1 1b. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 08H> from TS_1 1c. Send a <End session, session id=n> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH, 15H digits together with Phone A number and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 3. Send a {CC-RELEASE} message from TS_1 4. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' from TS_1 5. Send a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, call id b) =<(0, 0, lid0), (1, 0, value b)>, followed by a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 6. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 1a. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=m, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =2> 1b. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (at least for line 0) 1c. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 2. Verify that the IUT sends a {CC-CONNECT} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a)> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 4. Verify that the IUT sends to TS_1 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> 5. Verify that the IUT sends a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> Verify that IUT sends to TS_1 a {CC- INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message <p>Steps 1-3 simulate a call by call line selection using the line settings list. The FP call identifier assignment method is left free to implementation; 'call id a' will be equal to 'call b' if IUT implements the "no re-use method"</p> |

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| TC_FT_NG1.N.12_GC_401 | Backward-compatible line identification for a first external outgoing call using <<MULTI-KEYPAD>> IE (non early CC-CONNECT implementation) |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.5.2.3 TS_1 is a GAP PP1 F-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to ("#lid0" + Phone A number) digits from TS_1 3. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message 2. Verify that IUT sends to TS_1 a {CC-ALERTING} message, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message <p>In stimulus 2, "#lid0" stands for 2 octets: (23H, 30H+ lid0). Where lid0 is the value declared in FT_IXIT_20</p> |

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| TC_FT_NG1.N.12_GC_402 | Backward-compatible line identification for a first external outgoing call using <<MULTI-KEYPAD>> IE (early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.5.2.3 |
| Initial condition: | TS_1 is a GAP PP1 F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' from TS_1 2. Use the piece-wise method to send ("#lid0"+Phone A number) digits in several {CC-INFO} messages with IE <<KEYPAD>> from TS_1 3. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CONNECT} message 2. Verify that Phone A rings 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <ul style="list-style-type: none"> - In stimulus 2, "#lid0" stands for 2 octets: (23H, 30H+ lid0). Where lid0 is the value for line 0 declared in FT_IXIT_20 - In stimulus 2, TS_1 shall send: "#lid0" in a first CC-INFO then each digit of the phone A number in a separate CC-INFO |

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| TC_FT_NG1.N.12_BV_501 | FP managed line selection for a first external outgoing call (non early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.5.2.4 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying at the minimum (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> and possibly (line u, line type information u) =<(0, 0, value u), (0, 5, ltu)> 2. If line id was not received in step 1 then verify that the IUT sends to TS_1 either: <ul style="list-style-type: none"> • a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line u, line type information, call id a) =<(0, 0, line u), (0, 5, ltu), (1, 0, value a) > or <ul style="list-style-type: none"> • a {CC-CALL-PROC} message with IE <<CALL-INFORMATION>> specifying (line u, line type information, call id a, CS call proc) =<(0, 0, line u), (0, 5, ltu), (1, 0, value a), (2, 1, 3)> Verify that IUT sends to TS_1 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | The FP call identifier assignment method is left free to implementation; 'call id a' will be equal to 'call b' if IUT implements the "no re-use method" Any line can be selected by the IUT |

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| TC_FT_NG1.N.12_BV_502 | FP managed line selection for a first external outgoing call (early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.5.2.4 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1: <ul style="list-style-type: none"> • a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying at least (call id a) =<(2, 1, 2)> • followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> • one of the two previous messages {CC-CONNECT} or {CC-INFO} possibly specifying (line <i>u</i>, line type information <i>u</i>) =<(0, 0, value <i>u</i>), (0, 5, <i>ltu</i>)> in the <<CALL-INFORMATION>> IE 2. If line id was not received in step 1, verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (line <i>u</i>, line type information <i>u</i>, call id a) =<(0, 0, value <i>u</i>), (0, 5, <i>ltu</i>), (1, 0, value a)> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | The FP call identifier assignment method is left free to implementation; 'call id a' will be equal to 'call b' if IUT implements the "no re-use method" Any line can be selected by the IUT |

7.13 TC_FT_NG1.N.13 Call identification tests cases

Test subgroup objectives: to check the IUT's behaviours regarding call identification with the following consideration:

- NG1.N.13_1 "Call identification general requirements" and NG1.N.13_4 "Call status indication to the handset (FP to PP)" procedures are tested with NG1.N.13_2 "Call identifier assignment on outgoing call (FP to PP)" and NG1.N.13_3 "Call identifier assignment on incoming call (FP to PP)" procedures.
- No backward compatibility tests in front of a GAP PP are foreseen as these tests will be done when running EN 300 444 [12] tests.
- No backward compatibility tests in front of a NG-DECT Part 1 PP are foreseen as these tests will be done when running NG-DECT Part 1 backward compatibility tests (see TC_FT_NG1.N.1_WC_* TCs).

Declarations (see Annex A):

Following behaviours and corresponding test cases are exclusive:

- FP implements 'non early CC-CONNECT': TC_FT_NG1.N.13_BV_201.
- FP implements 'early CC-CONNECT': TC_FT_NG1.N.13_BV_202.

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| TC_FT_NG1.N.13_BV_201 | Call identifier assignment on outgoing call (FP to PP) - Normal call (non early CC-CONNECT implementation) - Call status indication |
| Reference: Initial condition: Stimulus: | TS 102 527-3 [14], Clauses 7.4.6.1, 7.4.6.2 and 7.4.6.4 F-00 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Call pick up on Phone A 4. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup ack) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 2)> 2. Verify that IUT sends to TS_1 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | FP can send {CC-CALL-PROC} with 'CS call proc' call status before {CC-ALERTING} in step 2 |

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| TC_FT_NG1.N.13_BV_202 | Call identifier assignment on outgoing call (FP to PP) - Normal call (early CC-CONNECT implementation) - Call status indication |
| Reference: Initial condition: Stimulus: | TS 102 527-3 [14], Clauses 7.4.6.1 and 7.4.6.2 F-00 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Call pick up on Phone A 4. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 in the first {CC-INFO} or {CC-CONNECT} message received an IE <<CALL-INFORMATION>> specifying at least (call id a) =<(1, 0, value a)> Verify that all subsequent received messages (i.e. {CC-CONNECT} if not already received, and {CC-INFO} for 'CS call setup ack', 'CS call proc' if any) specify the same value call id a. 2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (CS call alerting) =<(2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | FP can send also 'CS call proc' with the call identifier before 'CS call alerting' in step 2 |

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| TC_FT_NG1.N.13_BV_204 | Call identifier assignment on outgoing call (FP to PP) - LiA service setup - Call status indication for outgoing external call |
| Reference: Initial condition: Stimulus: | TS 102 527-3 [14], Clause 7.4.10.6.2 F-00 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 1a. Send a <Start session, List identifier = 01H, nb of sorting fields =0> from TS_1 2. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with Phone A number and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0) > 3. Call pick up on Phone A 4. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message with possibly an IE <<CODEC-LIST>> selecting one codec 1a. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=t > 2. Verify that the IUT sends to TS_1 a {CC-CONNECT} message with an IE <<CODEC-LIST>> selecting one codec (if the codec was not already selected in step 1), followed by a {CC-INFO} message to TS_1 with IE <<CALL-INFORMATION>> specifying at least (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value a)> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | FP can send {CC-INFO} with 'CS call proc' call status before {CC-INFO} with 'CS call alerting' call status in step 2 |

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| TC_FT_NG1.N.13_BV_205 | Call identifier assignment on outgoing call (FP to PP) - LiA service setup - Call status indication for internal call |
| Reference: Initial condition: Stimulus: | TS 102 527-3 [14], Clause 7.4.10.6.2 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), F-00 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to (17H, terminal Id of PP2) digits 3. Send a {CC-ALERTING} message from TS_2 Send a {CC-CONNECT} message from TS_2 4. Send a {CC-RELEASE} message from TS_2 5. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a {CC-CONNECT} message followed by a {CC-INFO} message to TS_1 with IE <<CALL-INFORMATION>> specifying at least (call id a) =<(1, 0, value a)> Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' and IE <<CALL-INFORMATION>> specifying (call id a, CS call setup) =<(1, 0, value a), (2, 1, 1)> 3. Verify that the IUT sends to TS_2 a {CC-CONNECT-ACK} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)>Verify end-to-end U-plane connection between TS_1 and TS_2 4. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | FP may send "CS call proc" and "CS call alerting" with the call identifier before 'CS call connect' in step 3 |

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| TC_FT_NG1.N.13_BV_301 | Call identifier assignment on incoming call (FP to PP) - Normal call setup |
| Reference: | TS 102 527-3 [14], Clauses 7.4.6.3, 7.4.6.4 and 7.4.5.3 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A 2. Send a {CC-ALERTING} message from TS_1, followed by a {CC-CONNECT} message 1 second later 3. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) = <(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> 2. Verify that the IUT sends to TS_1 a {CC-CONNECT-ACK} message followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) = <(1, 0, value a), (2, 1, 5)> 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.13_BV_302 | Call identifier assignment on incoming call (FP to PP) - LiA service setup - Call status indication for incoming external call |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.6.3 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 1a. Send a <Start session, List identifier = 01H, nb of sorting fields = 0> from TS_1 2. Perform an incoming call on line 0 towards IUT from Phone A 3. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD >> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) = <(1, 0, value a)> 4. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 1a. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=t > 2. Verify that the IUT sends to TS_1 a {CC-CONNECT} message followed by in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on' when declared (see Annex A, Table A.26) • an IE <<CALLING PARTY NUMBER>> with <calling party address= Phone A number> • an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) = <(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) = <(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

7.14 TC_FT_NG1.N.14 Multiple lines tests cases

Test subgroup objectives: to check the IUT's behaviours regarding multiple lines with the following considerations:

- NG1.N.14_1 "Multiple lines general requirements" procedure requires that FP implements NG1.N.7 "Common parallel call procedures (external or internal)" feature. So there is no test case defined for this procedure which is tested implicitly when testing "NG1.N.7 Common parallel call procedures (external or internal)" feature.
- NG1.N.14_2 "Terminal attachment and line settings" procedure is tested when testing NG1.N.16_25 "Line settings list" procedure and NG1.N.16_40 "Attached handsets" procedure.
- NG1.N.14_5 "compatibility with non multiple line PP or FP" procedure is not tested as is this procedure is tested when testing the NG1.N.12 "Line identification" feature and when running EN 300 444 [12] tests.

Declarations (see Annex A):

- NG1.N.14 "Multiple lines" feature is optional on FP side, so the manufacturer shall declare if it is supported.
- When NG1.N.22 "Handling of lines where second calls are signalled in-band" feature is supported on a line, the manufacturer shall declare if the following procedure is supported within this line: call release and call release rejection.

Following behaviours and corresponding test cases are exclusive:

- FP implements 'non early CC-CONNECT': TC_FT_NG1.N.14_BV_305.
- FP implements 'early CC-CONNECT':TC_FT_NG1.N.14_BV_306.

| TC_FT_NG1.N.14_BV_301 | Incoming external calls on a multiple line system - Incoming calls on two lines with no active PPs |
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| Reference: | TS 102 527-3 [14], Clause 7.4.7.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0, PP2 is attached to line 1, F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A 2. Send a {CC-ALERTING} message from TS_1 Perform an incoming call on line 1 towards IUT from Phone B 3. Send a {CC-ALERTING} message from TS_2 Send a {CC-CONNECT} message from TS_1 4. Send a {CC-CONNECT} message from TS_2 5. Send a {CC-RELEASE} message from TS_1 6. Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> Verify that the IUT does not send to TS_2 a {CC-SETUP} message 2. Verify that the IUT does not send to TS_1 a {CC-SETUP} message Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id b, CS call setup) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value b), (2, 1, 1)> 3. Verify that the IUT sends to TS_1 a {CC-CONNECT-ACK} message followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_2 a {CC-CONNECT-ACK} message followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_2 and Phone B 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 6. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.14_BV_302 | Incoming external calls on a multiple line system - Incoming call with one active PP - Accept second call on idle PP and release it |
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.7.3</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0 and line 1, PP2 is attached to line 1, External call in F-10 (TS_1+IUT) initiated by PP1 on line 0 (call id a) with Phone A</p> <p>1. Perform an incoming call on line 1 towards IUT from Phone B</p> <p>2. Send a {CC-ALERTING} message followed by a {CC-CONNECT} from TS_2</p> <p>3. Send a {CC-RELEASE} message from TS_2</p> <p>1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id b, CS call setup) =<(0, 0, lid1), (0, 5, lt0), (1, 0, value b), (2, 1, 1)></p> <p>Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id c, CS call setup) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value c), (2, 1, 1)></p> <p>2. Verify that the IUT sends to TS_2 a {CC-CONNECT-ACK} message followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value c), (2, 1, 5)></p> <p>Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value c), (2, 1, 0)></p> <p>Verify end-to-end U-plane connection between TS_2 and Phone B</p> <p>3. Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message</p> <ul style="list-style-type: none"> - IE <<SIGNAL>> with the value 07H indicating 'call waiting' tone is also received by TS_1 in pass criteria 1 if this procedure is supported (see Annex A, Table A.26) - Call id b and call id c may be equal or different (per-PP call ids on external incoming call) |

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| TC_FT_NG1.N.14_BV_303 | Incoming external calls on a multiple line system - Incoming call with one active PP - Accept second call on active PP and release it - Resume active call |
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.7.3</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0 and line 1, PP2 is attached to line 1, External call in F-10 (TS_1+IUT) initiated by PP1 on line 0 (call id a) with Phone A</p> <p>1. Perform an incoming call on line 1 towards IUT from Phone B</p> <p>2. Send a {CC-ALERTING} message from TS_2 Send a {CC-INFO} message with 1CH 35H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1</p> <p>3. Send a {CC-RELEASE-COM} message from TS_2 Send a {CC-INFO} message with 1CH 33H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)>from TS_1</p> <p>4. Send a {CC-INFO} message with 1CH 42H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)>from TS_1</p> <p>1. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id b, CS call setup) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value b), (2, 1, 1)> Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id c, CS call setup) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value c), (2, 1, 1)></p> <p>2. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify that the IUT optionally sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id c, CS idle) =<(1, 0, value c), (2, 1, 0)> and then mandatorily sends to TS_2 a {CC-RELEASE} message Verify end-to-end U-plane connection between TS_1 and Phone B</p> <p>3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)></p> <p>4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A</p> <ul style="list-style-type: none"> - IE <<SIGNAL>> with the value 07H indicating 'call waiting' tone is also received by TS_1 in pass criteria 1 if this procedure is supported (see Annex A, Table A.26) - Call id b and call id c may be equal or different (per-PP call ids on external incoming call) |

| TC_FT_NG1.N.14_BV_304 | Incoming external calls on a multiple line system - Two simultaneous incoming calls |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.7.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0 and line 1, PP2 is attached to line 1, F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A 2. Send a {CC-ALERTING} message from TS_1 Perform an incoming call on line 1 towards IUT from Phone B 3. Send a {CC-ALERTING} message from TS_2 Hang up on Phone A 4. Send a {CC-RELEASE-COM} message from TS_1 5. Send a {CC-ALERTING} message from TS_1 Hang up on Phone B 6. Send a {CC-RELEASE-COM} message from TS_1 Send a {CC-RELEASE-COM} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> Verify that the IUT does not send to TS_2 a {CC-SETUP} message 2. Verify that the IUT does not send to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (CS call setup) =<(2, 1, 1)> Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id b, CS call setup) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value b), (2, 1, 1)> 3. Verify that the IUT optionally sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> and then mandatorily sends to TS_1 a {CC-RELEASE} message 4. Verify that the IUT send to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id c, CS call setup) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value c), (2, 1, 1)> 5. Verify that the IUT optionally sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id c, CS idle) =<(1, 0, value c), (2, 1, 0)> and then mandatorily sends to TS_1 a {CC-RELEASE} message Verify that the IUT optionally sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> and then mandatorily sends to TS_2 a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - In pass criterion 2, external incoming call on line 1 is not presented to TS_1 because call with call id a is not yet established. Call is presented again in pass criterion 4 - Call id b and call id c may be equal or different (per-PP call ids on external incoming call) |

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| TC_FT_NG1.N.14_BV_305 | Outgoing external calls on a multiple line system - Initiate outgoing calls on two lines (non early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.7.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0, PP2 is attached to line 1, F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 1) =<(0, 0, lid1)> from TS_2 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone B number and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2 3. Call pick up on Phone A Call pick up on Phone B 4. Send a {CC-RELEASE} message from TS_1 Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup ack) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 2)> Verify that the IUT sends to TS_2 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (line 1, line type information, call id b, CS call setup ack) =<(0, 0, lid1), (0, 5, lt1), (1, 0, value b), (2, 1, 2)> 2. Verify that IUT sends to TS_1 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. Verify that IUT sends to TS_2 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone B rings. 3. Verify that the IUT sends to TS_1 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify that the IUT sends to TS_2 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 4. Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_2 and Phone B 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message |
| Comments: | FP can send {CC-CALL-PROC} with 'CS call proc' call status before {CC-ALERTING} in step 2 |

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| TC_FT_NG1.N.14_BV_306 | Outgoing external calls on a multiple line system - Initiate outgoing calls on two lines (early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.7.3 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0, PP2 is attached to line 1, F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 1) =<(0, 0, lid1)> from TS_2 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone B number and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2 3. Call pick up on Phone A Call pick up on Phone B 4. Send a {CC-RELEASE} message from TS_1 Send a {CC-RELEASE} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1: <ul style="list-style-type: none"> • a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying at least (call id a) =<(1, 0, value a)> • followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> • one of the two previous messages {CC-CONNECT} or {CC-INFO} specifying at least (line 0, line type information) =<(0, 0, lid0), (0, 5, lt0)> in the <<CALL-INFORMATION>> IE Verify that the IUT sends to TS_2: <ul style="list-style-type: none"> • a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying at least (call id b) =<(1, 0, value b)> • followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (call id b, CS call setup ack) =<(1, 0, value b), (2, 1, 2)> • one of the two previous messages {CC-CONNECT} or {CC-INFO} specifying at least (line 1, line type information) =<(0, 0, lid1), (0, 5, lt1)> in the <<CALL-INFORMATION>> IE 2. Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. Verify that IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone B rings. 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> 4. Verify end-to-end U-plane connection between TS_1 and Phone A Verify end-to-end U-plane connection between TS_2 and Phone B 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_2 a {CC-RELEASE-COM} message |
| Comments: | FP can send also 'CS call proc' with the call identifier before 'CS call alerting' in step 2 |

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| TC_FT_NG1.N.14_BV_401 | Internal calls in multiple line context |
| Reference: | TS 102 527-3 [14], Clause 7.4.7.4 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), PP1 is attached to line 0, PP2 is attached to line 1, F-00 |
| Stimulus: | 1 Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' 2 Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (IA5 coding of terminal identity number in decimal of TS_2) digit from TS_1 |
| Pass criteria: | 1 Verify that IUT sends to TS_1 a {CC-SETUP-ACK} with IE <<CALL- INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)>, or (for an early {CC-CONNECT} implementation) a {CC-CONNECT} with no call status specifying (call id a) =<(1, 0, value a)> 2 Verify that the IUT sends to TS_2 a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Internal call setup' |
| Comments: | Early {CC-CONNECT} and non-early {CC-CONNECT} cases are handled in the same test case (pass criterion 1). Test equipment shall allow both implementations |

7.15 TC_FT_NG1.N.15 Multiple calls tests cases

Test subgroup objectives: to check the IUT's behaviours regarding multiple calls procedure.

Declarations (see Annex A):

Following behaviours and corresponding test cases are exclusive:

- FP implements 'non early CC-CONNECT': TC_FT_NG1.N.15_BV_205.
- FP implements 'early CC-CONNECT': TC_FT_NG1.N.15_BV_206.

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| TC_FT_NG1.N.15_BV_201 | Incoming external calls on a multiple call line - Accept incoming second call on idle PP |
| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | "Multiple calls mode" set to 31H ("multiple call mode") on line 0, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_2+IUT) initiated by PP2 on line 0 (call id b) with Phone B |
| Stimulus: | 1. Perform an incoming call on line 0 towards IUT from Phone A 2. Send a {CC-ALERTING} message followed by a {CC-CONNECT} from TS_1 3. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL- INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL- INFORMATION>> specifying (line 0, line type information, call id c, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value c), (2, 1, 1)> 2. Verify that the IUT sends to TS_1 a {CC-CONNECT-ACK} message followed by a {CC- INFO} message with IE <<CALL- INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL- INFORMATION>> specifying (call id c, CS idle) =<(1, 0, value c), (2, 1, 0)> Verify end-to-end U-plane connection between TS_1 and Phone A 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | Call id a and call id c may be equal or different (per-PP call ids on external incoming call) |

| TC_FT_NG1.N.15_BV_202 | Incoming external calls on a multiple call line - Accept incoming second call on active PP |
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| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | "Multiple calls mode" set to 31H ("multiple call mode") on line 0, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), |
| Stimulus: | External call in F-10 (TS_2+IUT) initiated by PP2 on line 0 (call id b) with Phone B |
| | 1. Perform an incoming call on line 0 towards IUT from Phone A |
| | 2. Send a {CC-ALERTING} message from TS_1 |
| | Send a {CC-INFO} message with 1CH 35H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id c) =<(1, 0, value c)> from TS_2 |
| | 3. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then |
| | - send a {CC-INFO} message with 1CH 33H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id c) =<(1, 0, value c)>from TS_2 |
| | Else (not supported) |
| | - send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 38H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2 |
| | 4. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED and FT_IXIT_27 (Line 0 resuming parallel call on hold) = SUPPORTED, then send a {CC-INFO} message with 1CH 42H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)>from TS_2 |
| | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> |
| | Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id c, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value c), (2, 1, 1)> |
| | 2. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| | Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call hold) =<(1, 0, value b), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id c, CS call connect) =<(1, 0, value c), (2, 1, 5)> |
| | Verify end-to-end U-plane connection between TS_2 and Phone A |
| | 3. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then |
| | - verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id c, CS idle) =<(1, 0, value c), (2, 1, 0)> |
| | Else (not supported) |
| | - verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id c, CS idle) =<(1, 0, value c), (2, 1, 0)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| | 4. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED and FT_IXIT_27 (Line 0 resuming parallel call on hold) = SUPPORTED, then verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| | In all cases verify end-to-end U-plane connection between TS_2 and Phone B |
| | Call id a and call id c may be equal or different (per-PP call ids on external incoming call) |
| | In steps 3 and 4, in case the IUT does not support parallel call release on line 0, (FT_IXIT_24 = NOT SUPPORTED), then the test equipment uses 1CH 38H instead of 1CH 33H. This sub case may be needed if NG1.N.22 " Handling of lines where second calls are signalled in-band " is supported on this line, i.e. FT_IXIT_31 declared to ' Double calls with in-band', and when running this test individually |
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| TC_FT_NG1.N.15_BV_205 | Outgoing external calls on a multiple call line - Initiate outgoing second call on idle PP (non early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | "Multiple calls mode" set to 31H ("multiple call mode") on line 0, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_2+IUT) initiated by PP2 on line 0 (call id b) with Phone B |
| Stimulus: | 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Call pick up on Phone A 4. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP-ACK} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup ack) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 2)> 2. Verify that IUT sends to TS_1 a {CC-ALERTING} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | FP can send {CC-CALL-PROC} with 'CS call proc' call status before {CC-ALERTING} in step 2 |

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| TC_FT_NG1.N.15_BV_206 | Outgoing external calls on a multiple call line - Initiate outgoing second call on idle PP (early CC-CONNECT implementation) |
| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | "Multiple calls mode" set to 31H ("multiple call mode") on line 0, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_2+IUT) initiated by PP2 on line 0 (call id b) with Phone B |
| Stimulus: | 1. Send a {CC-SETUP} message with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 3. Call pick up on Phone A 4. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1: <ul style="list-style-type: none"> • a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying at least (call id a) =<(1, 0, value a)> • followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> • one of the two previous messages {CC-CONNECT} or {CC-INFO} specifying at least (line 0, line type information) =<(0, 0, lid0), (0, 5, lt0)> in the <<CALL-INFORMATION>> IE 2. Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | FP can send also 'CS call proc' with the call identifier before 'CS call alerting' in step 2 |

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| TC_FT_NG1.N.15_BV_207 | Outgoing external calls on a multiple call line - Initiate outgoing second call on active PP using <<CALL-INFORMATION>> line selection |
| Reference: | TS 102 527-3 [14], Clause 7.4.8.2 |
| Initial condition: | "Multiple calls mode" set to 31H ("multiple call mode") on line 0, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), External call in F-10 (TS_2+IUT) initiated by PP2 on line 0 (call id b) with Phone B |
| Stimulus: | External call in F-10 (TS_2+IUT) initiated by PP2 on line 0 (call id b) with Phone B |
| | 1. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits from TS_2 |
| | 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number and IE <<CALL-INFORMATION>> specifying (line0, call id a) =<(0, 0, lid0), (1, 0, value a)> from TS_2 |
| | 3. Call pick up on Phone A |
| | 4. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then |
| | - send a {CC-INFO} message with 1CH 33H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)>from TS_2 |
| | Else (not supported) |
| | - send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (1CH, 38H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_2 |
| | 5. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED and FT_IXIT_27 (Line 0 resuming parallel call on hold) = SUPPORTED, then send a {CC-INFO} message with 1CH 42H in IE <<MULTI-KEYPAD>> and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)>from TS_2 |
| | 1. Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call hold) =<(1, 0, value b), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)> |
| | 2. Verify that the IUT sends a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a)> |
| | Verify that IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone A rings. |
| | 3. Verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> |
| | Verify end-to-end U-plane connection between TS_2 and Phone A |
| | 4. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then |
| | - verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> |
| | Else (not supported) |
| | - verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| | 5. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED and FT_IXIT_27 (Line 0 resuming parallel call on hold) = SUPPORTED, then verify that the IUT sends to TS_2 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| | In all cases verify end-to-end U-plane connection between TS_2 and Phone B |
| | FP can send also 'CS call proc' with the call identifier before 'CS alerting' in step 2 |
| | In steps 4 and 5, in case the IUT does not support parallel call release on line 0, (FT_IXIT_24 = NOT SUPPORTED), then the test equipment uses 1CH 38H instead of 1CH 33H. This sub case may be needed if NG1.N.22 " Handling of lines where second calls are signalled in-band " is supported on this line, i.e. FT_IXIT_31 declared to ' Double calls with in-band, and when running this test individually. |
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| TC_FT_NG1.N.15_BV_301 | Busy line notification |
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| Reference: | TS 102 527-3 [14], Clause 7.4.8.3 |
| Initial condition: | "Multiple calls mode" set to 30H ("single call mode") and "Intrusion call" set to 30H ("not allowed") on line 0 |
| Stimulus: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), external call in F-10 (TS_2+IUT) initiated by TS_2 on line 0 (call id b) with Phone B |
| Pass criteria: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 2. Send a {CC-RELEASE-COM} from TS_1 |
| Comments: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages <ul style="list-style-type: none"> • an IE <<SIGNAL>> set to the value 04H indicating 'Busy tone on' when declared (see Annex A, Table A.26) • an IE <<CALL-INFORMATION>> specifying (call id a, CS call disconnecting, line in use) =<(1, 0, value a), (2, 1, 6), (2, 2, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>After some time-out, verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 3FH indicating 'Tones off' when declared (see Annex A, Table A.26) • optionally an IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> <p>Verify that the IUT sends to TS_1 a {CC-RELEASE} message</p> |
| Initial condition: | In stimulus 1, TS_1 tries to place an external call on a line where a call is already going on (line 0) |

7.16 TC_FT_NG1.N.16 List access service tests cases

Test subgroup objectives: to check the IUT's behaviours regarding list access service procedures with the following considerations:

- Some test cases shall be run in a given order. In that case, the test case reference to be run before is indicated in the initial condition.
- NG1.N.6_2 "List change notification" procedure is tested with NG1.N.6_22 "Internal names list" procedure and NG1.N.6_25 "Line settings list" procedure.
- As NG1.N.16_26 "Virtual contact list and call list per line" is conditional on support of NG1.N.14 "Multiple lines" feature, and there are no more requirements on FP side that the implementation of line identifier field, there is no test case defined for this procedure.

Test equipment implementation requirements for PIN protected lists (DECT system setting, Line setting, or Internal names)

- When testing the FP, some field of the 'DECT system setting', 'Line setting', or 'Internal names' lists can be 'PIN protected'. When reading a 'PIN protected' field, the 'PIN protected' property bit will be set to 1. As a result, the test equipment shall automatically edit and save the 'Current PIN code' field of 'DECT system settings' list before editing this field (see TS 102 527-3 [14], Clause 7.4.11.1).

NOTE: In order to simplify the implementation, it is also possible to systematically edit and save the 'Current PIN code' field before opening the possible protected lists as the authentication is valid for the whole List access service call.

Test equipment implementation requirements for 'DECT system settings list' and 'list of supported lists'

- For the 'DECT system settings list' and the 'list of supported lists', the test equipment shall use a 'Number of sorting fields' value of '0' in the 'start session' command, and shall check that IUT answers with a 'Number of sorting fields' value of '0' in the 'start session confirm'.
 - This includes test cases where the "DECT system settings list" or the "list of supported lists" is already open at test case starting time. Concerned test cases are the following:
 - "DECT system settings" list test cases: TC_PT_NG1.N.16_BV_2401, 2402, 2701, 2801, 2901, 3001, 3501, 5101.
 - "List of supported lists" list test cases: TC_PT_NG1.N.16_BV_302, 1601.
 - This includes test cases where the "DECT system settings list" is accessed before a PIN protected field is edited on any list. Concerned test cases depend on IUT implementation.

Test equipment implementation requirements for call lists and contact lists

Multiple instances of the 'contact number' field in the contact list (see also TS 102 527-3 [14], Clause 7.4.10.1, 'Field instances management' entry).

- In TC_FT_NG1.N.16_BV_2101 to TC_FT_NG1.N.16_BV_2111, when reading or editing a contact list entry:
 - The test equipment shall systematically include the 'Contact number' field id *twice* in the request. The IUT shall answer with up to two available instances; if there is no available instance, the IUT shall answer with an empty instance.
 - If a further save is done by the test equipment (i.e. the previous request was en 'edit'):
 - The test equipment shall include at least all contact numbers instances that were received during the previous edit.
 - The test equipment may include additional contact numbers, provided that the total number of contact numbers included (received + additional) does not exceed the number of contact numbers requested during the previous edit.
 - The test equipment may replace a received contact number with an empty instance (instance with length = 1) thus indicating to the IUT that the contact number is to be removed. The IUT shall not keep the empty instance, but discard the corresponding contact number instead.
- Handling of the line name and line id fields in list access test cases:

Although not mentioned in all test cases, the line name and line id fields shall be handled correctly:
- IUT behaviour:
 - The IUT shall handle line name and line id fields in the call lists, contact lists and line settings list.
 - For the contact list, if the test equipment does not save the "line id" field when an entry is created, IUT shall set a default value "All lines" or one line for the line id.
- Test equipment requirements:
 - The test equipment shall use or check the following codings of the "line id" field:
 - For calls lists: the line identifier field sub type shall be "line identifier for external calls". Additionally the value "None" is not allowed.
 - For Line settings list, the list identifier sub type shall be "relating to".
 - For Contact list, the list identifier sub type shall be "relating to" or "All lines" values a specified in TS 102 527-3 [14], Clause 7.4.10.5.1.7.

Declarations (see Annex A):

- Following procedures are optional or conditional so the manufacturer shall declare if they are supported:
 - NG1.N.16_18 "Outgoing calls list".
 - NG1.N.16_20 "All calls list".
 - NG1.N.16_23 "All incoming calls list".
 - NG1.N.16_26 "Virtual contact list and call list per line".
 - NG1.N.16_30 "FP IP address/type".
 - NG1.N.16_31 "FP IP address/value".
 - NG1.N.16_32 "FP IP address/subnet mask".
 - NG1.N.16_33 "FP IP address/gateway".
 - NG1.N.16_34 "FP IP address/DNS server".
 - NG1.N.16_37 "FP version/Hardware version".
 - NG1.N.16_41 "Dialling prefix".
 - NG1.N.16_42 "FP melody".
 - NG1.N.16_43 "FP volume".
 - NG1.N.16_44 "Blocked number".
 - NG1.N.16_46 "Intrusion call".
 - NG1.N.16_47 "Permanent CLIR".
 - NG1.N.16_51 "Emission mode".
- Following behaviours and corresponding test cases are exclusive:
 - TC_FT_NG1.N.16_BV_303: FP does not accept simultaneous access to the same list from 2 different PPs.
 - TC_FT_NG1.N.16_BV_304: FP accepts simultaneous accesses to the same list from 2 PPs.
- When implementing multiple lines, the manufacturer shall declare whether PP default attachment to at least one line after registration is supported or not. See Annex A, Table A.15.

| TC_FT_NG1.N.16_BV_301 | Start / end session sequencing and parameters - list of supported lists |
|------------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.4.1 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 00H, nb of sorting fields =0> from TS_1 3. Send a <End session, session id=n> from TS_1 4. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | Verify that the IUT sends back to TS_1: <ol style="list-style-type: none"> 1. a {CC-CALL-PROC} 2. a <Start session confirm, session id=n, total nb=1, discriminator type=0 or 1, nb of sorting fields =0> 3. a <End session confirm, session id=n> 4. a {CC-RELEASE-COM} message |
| Comments: | Session identifier shall be different from "0" value |

| TC_FT_NG1.N.16_BV_302 | CC-RELEASE without end session - list of supported lists |
|------------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.4.1 |
| Initial condition: | List of supported lists open (session id=n). Re-use first 2 steps as TC_FT_NG1.N.16_BV_301 test. |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-RELEASE} from TS_1 2. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 3. Send a <Start session, List identifier = 00H, nb of sorting fields =0> from TS_1 4. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=01H> from TS_1 5. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <p>After start session confirm received, Verify that the IUT sends back to TS_1:</p> <ol style="list-style-type: none"> 1. a {CC-RELEASE-COM} message 2. a {CC-CALL-PROC} message 3. a <Start session confirm, session id=n, total nb=1, discriminator type=0 or 1, nb of sorting fields =0> 4. a <Read entries confirm, session id=n, start index=1, counter=1> followed by one <data packet last> 5. a {CC-RELEASE-COM} message |
| Comments: | <p>Make sure that the second start session is successful (no error returned by the FP) Between step 2 and step 3, no specific delay is required</p> |

| TC_FT_NG1.N.16_BV_303 | No simultaneous access to the same list from 2 different PPs - internal names list |
|------------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.4.1 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, list identifier = 06H, nb of sorting fields =0> from TS_1 3. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 4. Send a <Start session, list identifier = 06H, nb of sorting fields =0> from TS_2 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} from TS_2 7. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <p>Verify that the IUT sends back to TS_1:</p> <ol style="list-style-type: none"> 1. a {CC-CALL-PROC} message 2. a <Start session confirm, session id=n, total nb=2, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =1> <p>Verify that the IUT sends back to TS_2:</p> <ol style="list-style-type: none"> 3. a {CC-CALL-PROC} message 4. a <Start session confirm, session id=0, Start session reject reason= list already in use by another session > 5. Verify that the IUT sends back to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends back to TS_2 a {CC-RELEASE-COM} message 7. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <p>Here we only check that FP rejects with proper error code the start session from the second PP This TC is exclusive with TC_FT_NG1.N.16_BV_304</p> |

| | |
|---|--|
| TC_FT_NG1.N.16_BV_304 | Simultaneous access to the same list from 2 different PPs (check edit locks an entry) - internal names list |
| <p>Reference: Initial condition: Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clause 7.4.10.4.1 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2)</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, list identifier = 06H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H> from TS_1 4. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1..n =01H, 02H, 03H > from TS_1 5. Send a {CC-SETUP} message from TS_2 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 6. Send a <Start session, list identifier = 06H, nb of sorting fields =0> from TS_2 7. Send a <Read entries, session id=m, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H> from TS_2 8. Send a <Edit entry, session id=m, entry identifier=u, list entry field identifier 1..n =01H, 02H, 03H > from TS_2 9. Send a <Save entry, session id=m, entry identifier=u> from TS_2 followed by <data packet/data packet last> modifying "Name" field to "TESTER 2" 10. Send a <Delete entry, session id=m, entry identifier=u> from TS_2. 11. Send a <Delete list, session id=m> from TS_2 12. Send a <End session, session id=m> from TS_2 13. Send a <End session, session id=n> from TS_1 14. Send a {CC-RELEASE} message from TS_2 15. Send a {CC-RELEASE} message from TS_1 <p>Verify that the IUT sends back to TS_1:</p> <ol style="list-style-type: none"> 1. a {CC-CALL-PROC} message 2. a <Start session confirm, session id=n, total nb=2, discriminator type=0 or 1, nb of sorting fields =1,sorting field id1 =1> 3. a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u) 4. a <Edit entry confirm, session id=n, total nb=2, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =1> <p>Verify that the IUT sends back to TS_2:</p> <ol style="list-style-type: none"> 5. a {CC-CALL-PROC} message 6. a <Start session confirm, session id=m, total nb=2, discriminator type=0 or 1, nb of sorting fields =1,sorting field id1 =1> 7. a < Read entries confirm, session id=m> followed by <data packet/data packet last> with 1st entry content (entry identifier = u) 8. a <Negative acknowledgement, session id=m, reject reason= temporarily not possible> 9. a <Negative acknowledgement, session id=m, reject reason= procedure not allowed> 10. a <Negative acknowledgement, session id=m, reject reason= temporarily not possible> 11. a <Negative acknowledgement, session id=m, reject reason= procedure not allowed> 12. a <End session confirm, session id=m> 13. Verify that the IUT sends back to TS_1 a <End session confirm, session id=n> 14. Verify that the IUT sends back to TS_2 a {CC-RELEASE-COM} message 15. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message <p>Aim of the test is to make sure save/edit/delete entry/delete list from a second handset (on the same entry) is not possible if a first handset is editing this entry</p> <p>This TC is exclusive with TC_FT_NG1.N.16_BV_303</p> <p>In pass criteria 8, 9, 10 and 11 IUT shall send the negative acknowledgements only after the whole command was received from TS_2. Especially in pass criterion 9, IUT shall wait until data packet and data packet last are received, before sending a negative acknowledgement</p> |

| TC_FT_NG1.N.16_BV_305 | Edit Current PIN code while Line setting list session is open |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.11.1 |
| Initial condition: | Current PIN code field set to (FFH, FFH, 00H, 00H) |
| Stimulus: | <p>F-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 08H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=01H, 02H, 03H > from TS_1 4. Send a <Start session, List identifier = 07H, nb of sorting fields =0> from TS_1 5. Send a <Read entries, session id=m, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=01H> from TS_1 6. Send a <Edit entry, session id=m, entry identifier=v, list entry field identifier 1=01H> from TS_1 7. Send a <Save entry, session id=m, entry identifier=v> from TS_1 followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 00H, 00H) 8. Send a <End session, session id=m> from TS_1 9. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=01H, 02H, 03H> from TS_1 10. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by one <data packet last> 11. Send a <End session, session id=n> from TS_1 12. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=t, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =1> 3. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 4. Verify that the IUT sends to TS_1 a <Start session confirm, session id=m, total nb=1, discriminator type=0 or 1, nb of sorting fields =0> 5. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=m> followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, FFH, FFH) (entry identifier = v) 6. Verify the IUT sends to TS_1 a <Edit entry confirm, session id=m> followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, FFH, FFH) 7. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=m, entry identifier=v, position index=1, total number of available entries=1> 8. Verify that the IUT sends to TS_1 a <End session confirm, session id=m> 9. Verify the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 10. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 11. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 12. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

| TC_FT_NG1.N.16_BV_1601 | List of supported lists - read entries |
|--|--|
| Reference: Initial condition: Stimulus: Pass criteria: Comments: | TS 102 527-3 [14], Clauses 7.4.10.5.1.1 and 7.4.10.5.2 List of supported lists open (session id=n) 1 Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=01H> from TS_1 2. Send a {CC-RELEASE} message from TS_1 1 Verify that the IUT sends back to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by one <data packet last> In data packet: - Verify that there is one entry in packet - Verify that there is one field 'List identifiers' in this entry - Verify that the list identifiers are ordered in ascending numerical order in 'List identifiers' field - Verify that 'List identifiers' field includes at the minimum and ordered in ascending numerical order: • 00H List of supported lists • 01H Missed calls list • 03H Incoming accepted calls list • 05H Contact list • 06H Internal names list • 07H DECT system settings list • 08H Line settings list - Verify that 'List identifiers' field include optional lists declared (see Annex A, Table A.25) 2. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message Session identifier shall be different from "0" value |

| TC_FT_NG1.N.16_BV_1701 | Missed calls list - Delete list - Read entries when empty |
|--|---|
| Reference: Initial condition: Stimulus: Pass criteria: Comments: | TS 102 527-3 [14], Clause 7.4.10.5.3 Service call in F-03 1. Send a <Start session, List identifier = 01H, nb of sorting fields =0> from TS_1 2. Send a <Delete list, session id=n> from TS_1 3. Send a {CC-RELEASE} from TS_1 4. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 5. Send a <Start session, List identifier = 01H, nb of sorting fields =0> from TS_1 6. Send a <Read entries, session id=m, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 7. Send a <End session, session id=n> from TS_1 8. Send a {CC-RELEASE} from TS_1 1. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=t, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 2. Verify that the IUT sends to TS_1 a <Delete list confirm, session id=n> 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 4. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 5. Verify that the IUT sends to TS_1 a <Start session confirm, session id=m, total nb=0, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 6. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=m, reject reason= invalid start index > 7. Verify that the IUT sends to TS_1 a <End session confirm, session id=m> 8. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message Session identifier shall be different from "0" value |

| TC_FT_NG1.N.16_BV_1702 | Missed calls list - List change notification - Read entries when new entries |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.1.3, 7.4.10.4.1 and 7.4.10.5.3 |
| Initial condition: | Date and time of the system set, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Missed calls list empty (see TC_FT_NG1.N.16_BV_1701), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A (CLIP A / CNIP A) to make the IUT ring <ol style="list-style-type: none"> 1a. Send a {CC-ALERTING} message from TS_1 and from TS_2 Hang up on Phone A 2. Perform an incoming call on line 0 towards IUT from Phone B (CLIP B / CNIP B) to make the IUT ring <ol style="list-style-type: none"> 2a. Send a {CC-ALERTING} message from TS_1 and from TS_2 Hang up on Phone B 3. Perform an incoming call on line 0 towards IUT from Phone A (CLIP A / CNIP A) to make the IUT ring <ol style="list-style-type: none"> 3a. Send a {CC-ALERTING} message from TS_1 and from TS_2 Hang up on Phone A 4. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 5. Send a <Start session, List identifier = 01H, nb of sorting fields =0> from TS_1 6. Send a <Read entries, session id=m, start index=1, direction=0, counter=3, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 7. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> <ol style="list-style-type: none"> 1a. Verify that the IUT sends in any order: <ul style="list-style-type: none"> • to TS_1 a {CC-RELEASE} message • to TS_1 and TS_2, a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, A new external missed voice call just arrived, 1> (= <01H,81H,81H>) < List change indication, Missed calls list, 1> (= <03H,81H,81H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)> <ol style="list-style-type: none"> 2a. Verify that the IUT sends in any order: <ul style="list-style-type: none"> • to TS_1 a {CC-RELEASE} message • to TS_1 and TS_2, a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, A new external missed voice call just arrived, 2> (= <01H,81H,82H>) < List change indication, Missed calls list, 2> (= <03H,81H,82H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 3. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id c, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value c), (2, 1, 1)> <ol style="list-style-type: none"> 3a. Verify that the IUT sends in any order: <ul style="list-style-type: none"> • to TS_1 a {CC-RELEASE} message • to TS_1 and TS_2, a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, A new external missed voice call just arrived, 3> (= <01H,81H,83H>) < List change indication, Missed calls list, 2 or 3> (= <03H,81H,82H or 83H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 4. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 5. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=2 or 3, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 6. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=m> followed by <data packet/data packet last> with <ul style="list-style-type: none"> • 1st entry: "Number" field set to CLIP A, "Name" field set to CNIP A, "Read status" field with 'unread' property bit set to 'unread' (unread =1B), and 'Number of calls' field set to 1 or 2 • 2nd entry: "Number" field set to CLIP B, "Name" field set to CNIP B, "Read status" field with 'unread' property bit set to 'unread' (unread =1B), and 'Number of calls' field set to 1 • "Date and Time" field value of 1st entry shall be more recent than "Date and Time" field value of 2nd entry • "Line id" field of both entries set to 'Line identifier for external call' and line 0 value (0, lid0) |

| | |
|-----------|--|
| Comments: | <ul style="list-style-type: none"> • "Line name" field of both entries set to line name of line 0 (see Clause A.2.2 FT_IXIT_28) <p>7. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message</p> <p>8. Verify that the IUT sends to TS_1 and TS_2, a {FACILITY} message with IE <<EVENTS NOTIFICATION= <Missed call, No new missed call arrived, 0> (= <01H,82H,80H>) < List change indication, Missed calls list, 2 or 3> (= <03H,81H,82H or 83H>) >> and IE<<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)></p> <ul style="list-style-type: none"> • Both TS_1 and TS_2 are attached to line 0. However, in pass criteria 1 and 1a, 2 and 2a, 3 and 3a, call establishment and release are only verified for TS_1 • "Event multiplicity" field is tested and not full octet value (i.e. 03H instead of 83H) • "Total number of available entries" field can be set to 2, or 3, as some FPs may either handle only one entry for the last missed call from a remote party, or one entry per incoming missed call: <ul style="list-style-type: none"> - CLIP and CNIP in step 6 of pass criteria shall be the same than ones previously received during steps 2 and 3 of stimulus - In step 1a, 2a and 3a, TS_1 should send CC-ALERTING and then invite the user to hangup on Phone A/Phone B via a display on the test equipment - In Pass criteria 6, the entries are still marked as 'unread' in the 'Read entries confirm'. However these entries will later be marked as 'read' in any further 'Read entries confirm' of next test cases) due to mark entries request=7FH in step 6 |
|-----------|--|

| | |
|-------------------------------|---|
| TC_FT_NG1.N.16_BV_1703 | Missed calls list - Delete entry - Negative acknowledgement |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.3 |
| Initial condition: | Run TC_FT_NG1.N.16_BV_1702 - Missed calls list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 2. Send a <Delete entry, session id=n+1, entry identifier = u> from TS_1 3. Send a <Delete entry, session id=n, entry identifier = u> from TS_1 4. Send a <Delete entry, session id=n, entry identifier = u+3> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n+1, reject reason= invalid session number > 3. Verify that the IUT sends to TS_1 <Delete entry confirm, session id=n, total nb of available entries = 1 or 2> 4. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n, reject reason= entry not available > 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | In step 4, 'u+3' identifier is invalid on IUT side |

| TC_FT_NG1.N.16_BV_1704 | Missed calls list - Transfer number from missed calls list to contact list |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.3 and 7.4.10.5.7 |
| Initial condition: | Run TC_FT_NG1.N.16_BV_1703 - Missed calls list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 2. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 3. Send to TS_1 a <Save entry, session id=m, entry identifier=00H> followed by <data packet/data packet last> set to (Name= CNIP B, First name="Forename B", Contact number1 = CLIP B, Line id=(3, lid0)) and (Associated melody= 0) when declared (see Annex A, Table A.15) 4. Send a <Read entries, session id=m, start index=p, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H> from TS_1 5. Send a <End session, session id=m> from TS_1 6. Send a <End session, session id=n> from TS_1 7. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u): "Number" field set to CLIP B, "Name" field set to CNIP B, "Read status" field with 'unread' property bit set to 'read' (read=0B), and 'Number of calls' field set to 1 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=m, total nb=t, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 = 1, sorting field id2 = 2 in case of 2 sorting fields > 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=m, entry identifier= v, position index=p, total nb of available entries= t+1> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=m, start index=p, counter=1> followed by <data packet/data packet last> with entries created in step 3 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=m> 6. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 7. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <p>'v' entry identifier in pass criteria 3 shall be a new identifier different from 'u' entry identifier</p> <p>Total number of available entries in pass criteria 3 shall be Total number of available entries in pass criteria 2 + 1</p> <p>'position index=p' received from IUT in pass criteria 3 shall be used in stimulus 4 'Start index=p'</p> <p>In Pass criteria 1, the entries were marked as 'read' during TC_FT_NG1.N.16_BV_1702</p> |

| TC_FT_NG1.N.16_BV_1705 | Missed calls list - Initiate a voice call during a list access session |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.3 and 7.4.10.6.2 |
| Initial condition: | Run TC_FT_NG1.N.16_BV_1704, |
| Stimulus: | <p>F-00</p> <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 01H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 4. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to 1CH, 15H digits together with Phone B number and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 5. Send a <End session, session id=n> from TS_1 6. Call pick up on Phone B 7. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=2, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 3. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u): "Number" field set to CLIP B, "Name" field set to CNIP B, "Read status" field with 'unread' property bit set to 'read' (read=0B), and 'Number of calls' field set to 1 4. Verify that the IUT sends to TS_1 a {CC-CONNECT} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a)> 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call alerting) =<(1, 0, value a), (2, 1, 4)>, or, if it is not the case, that Phone B rings. 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B 7. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.16_BV_1706 | Missed calls list - List access during existing voice call with second call initiation - Switching between LA session and voice call - Returning to LA session after voice call termination |
| Reference: Initial condition: | TS 102 527-3 [14], Clauses 7.4.10.5.3, 7.4.10.6.4 and 7.4.10.6.5 Run TC_FT_NG1.N.16_BV_1704, F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <normal call setup, Wideband speech default setup attributes> >> and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 1a. Send a {CC-INFO} with IE <<MULTI KEYPAD>> set to Phone A number. 2. Pick up the call on Phone A 3. Send a <Start session, List identifier = 01H, nb of sorting fields =0> from TS_1 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 5. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to 1CH, 15H digits together with Phone B number and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 6. Call pick up on Phone B 7. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then <ul style="list-style-type: none"> - send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 Else (not supported) <ul style="list-style-type: none"> - send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 38H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 8. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then <ul style="list-style-type: none"> - send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 Else (not supported) <ul style="list-style-type: none"> - send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 9. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 10. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP-ACK} with IE <<CALL-INFORMATION>> specifying at least (call id a, CS call setup ack) =<(1, 0, value a), (2, 1, 2)>, or (for an early {CC-CONNECT} implementation) a {CC-CONNECT} with no call status specifying (call id a) =<(1, 0, value a)> 1a. Verify that the IUT sends to TS_1 in a {CC-CONNECT} or (for an early CC-CONNECT implementation) in a {CC-INFO} message, an IE <<CALL-INFORMATION>> specifying at least (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> 2. Verify end-to-end U-plane connection between TS_1 and Phone A 3. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=2, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 4. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u): "Number" field set to CLIP B, "Name" field set to CNIP B, "Read status" field with 'unread' property bit set to 'read' (read=0B), and 'Number of calls' field set to 1 Verify end-to-end U-plane connection between TS_1 and Phone A 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> Verify that IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call alerting) =<(1, 0, value b), (2, 1, 4)>, or, if it is not the case, that Phone B rings. 6. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone B 7. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then <ul style="list-style-type: none"> - verify that the IUT sends to TS_1 a {CC-INFO} message with IE |

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| Comments: | <p><<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> Else (not supported)</p> <ul style="list-style-type: none"> - verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> <p>8. If FT_IXIT_24 (Line 0 parallel call release) = SUPPORTED, then</p> <ul style="list-style-type: none"> - verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> Else (not supported) - verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS idle) =<(1, 0, value a), (2, 1, 0)> <p>9. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u): "Number" field set to CLIP B, "Name" field set to CNIP B, "Read status" field with 'unread' property bit set to 'read' (read=0B), and 'Number of calls' field set to 1</p> <p>10. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message</p> <ul style="list-style-type: none"> - The minimum necessary call statuses are tested here - Early {CC-CONNECT} and non-early {CC-CONNECT} cases are handled in the same test case (pass criteria 1 and 1a). Test equipment shall allow both implementations. Test equipment may rely on supplier declaration FT_IXIT_22 to know which implementation is used by the IUT - In stimulus 7 and pass criterion 7, in case the IUT does not support parallel call release on line 0, (FT_IXIT_24 = NOT SUPPORTED), then the test equipment uses 1C38H instead of 1C 33H, and releases the calls in the reverse order |
|-----------|---|

| TC_FT_NG1.N.16_BV_1801 | Outgoing calls list - Delete list - Read entries when empty |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.4 |
| Initial condition: | Service call in F-03 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Start session, List identifier = 02H, nb of sorting fields =0> from TS_1 2. Send a <Delete list, session id=n> from TS_1 3. Send a {CC-RELEASE} from TS_1 4. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 5. Send a <Start session, List identifier = 02H, nb of sorting fields =0> from TS_1 6. Send a <Read entries, session id=m, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H > from TS_1 7. Send a <End session, session id=n> from TS_1 8. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=t, discriminator type=0 or 1, nb of sorting fields =1,sorting field id1 =3> 2. Verify that the IUT sends to TS_1 a <Delete list confirm, session id=n> 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 4. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 5. Verify that the IUT sends to TS_1 a <Start session confirm, session id=m, total nb=0, discriminator type=0 or 1, nb of sorting fields =1,sorting field id1 =3> 6. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=m, reject reason= invalid start index > 7. Verify that the IUT sends to TS_1 a <End session confirm, session id=m> 8. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

| TC_FT_NG1.N.16_BV_1802 | Outgoing calls list - Read entries when new entries |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.4 |
| Initial condition: | Date and time of the system set, Outgoing calls list empty |
| Stimulus: | (see TC_FT_NG1.N.16_BV_1801), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an outgoing call on line 0 to Phone A (Number A) from TS_1 Perform an outgoing call on line 0 to Phone B (Number B) from TS_1 Perform an outgoing call on line 0 to Phone A (Number A) from TS_1 Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 02H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H> from TS_1 4. Send a <End session, session id=n> from TS_1 5. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=2 or 3, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 3. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with <ul style="list-style-type: none"> • 1st entry: "Number" field set to Number A • 2nd entry: "Number" field set to Number B • "Date and Time" field value of 1st entry shall be more recent than "Date and Time" field value of 2nd entry • "Line id" field of both entries set to 'Line identifier for external call' and line 0 value (0, lid0) • "Line name" field of both entries set to line name of line 0 (see Clause A.2.2 FT_IXIT_28) 4. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <p>"Total number of available entries" field can be set to 2 or 3, as some FPs may either handle only one entry for the last call towards a remote party, or one entry per outgoing call</p> <p>Numbers in step 3 of pass criteria shall be the same than ones previously used during step 1 of stimulus</p> |

| TC_FT_NG1.N.16_BV_1803 | Outgoing calls list - Delete entry - Negative acknowledgement |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.4 |
| Initial condition: | Run TC_FT_NG1.N.16_BV_1802 - Outgoing calls list open (session id=n) |
| Stimulus: | 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H > from TS_1 |
| Stimulus: | 2. Send a <Delete entry, session id=n+1, entry identifier = u> from TS_1 |
| Stimulus: | 3. Send a <Delete entry, session id=n, entry identifier = u> from TS_1 |
| Stimulus: | 4. Send a <Delete entry, session id=n, entry identifier = u+3> from TS_1 |
| Stimulus: | 5. Send a <End session, session id=n> from TS_1 |
| Stimulus: | 6. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n+1, reject reason= invalid session number > 3. Verify that the IUT sends to TS_1 <Delete entry confirm, session id=n, total nb of available entries = 1 or 2> 4. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n, reject reason= entry not available > 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | In step 4, 'u+3' identifier is invalid on IUT side |

| TC_FT_NG1.N.16_BV_1902 | Incoming accepted calls list - Read entries when new entries |
|------------------------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.5 |
| Initial condition: | Date and time of the system set, Incoming accepted calls list empty |
| (see TC_FT_NG1.N.16_BV_1901), F-00 | (see TC_FT_NG1.N.16_BV_1901), F-00 |
| Stimulus: | 1. Perform an incoming call on line 0 towards IUT from Phone B (CLIP B / CNIP B) to make the IUT ring |
| | 1a. Send a {CC-ALERTING} message from TS_1 |
| | Hang up on Phone A |
| | 1b. Perform an incoming call on line 0 towards IUT from Phone A (CLIP A / CNIP A) with answering |
| | Perform an incoming call on line 0 towards IUT from Phone B (CLIP B / CNIP B) with answering |
| | Perform an incoming call on line 0 towards IUT from Phone A (CLIP A / CNIP A) with answering |
| | 1c. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> |
| | 2. Send a <Start session, List identifier = 03H, nb of sorting fields =0> from TS_1 |
| | 3. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H > from TS_1 |
| | 4. Send a <End session, session id=n> from TS_1 |
| | 5. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value a), (2, 1, 1)> |
| | 1a. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| | 1b. None |
| | 1c. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message |
| | 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=2 or 3, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> |
| | 3. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with |
| | <ul style="list-style-type: none"> • 1st entry: "Number" field set to CLIP A, "Name" field set to CNIP A • 2nd entry: "Number" field set to CLIP B, "Name" field set to CNIP B • "Date and Time" field value of 1st entry shall be more recent than "Date and Time" field value of 2nd entry • "Line id" field of both entries set to 'Line identifier for external call' and line 0 value (0, lid0) • "Line name" field of both entries set to line name of line 0 (see Clause A.2.2 FT_IXIT_28) |
| | 4. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> |
| | 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | "Total number of available entries" field can be set to 2, or 3, as some FPs may either handle only one entry for the last call from a remote party, or one entry per incoming call. CLIP and CNIP in step 3 of pass criteria shall be the same than ones previously received during step 1 of stimulus |
| | In step 1a, TS_1 should wait for CC-ALERTING and then invite the user to hangup on Phone A via a display on the test equipment |
| | In pass criteria 1, the IUT will send some <<EVENT NOTIFICATIONS>> for the missed call, however this is not the purpose of the test case to check this |
| | In pass criteria 1b, the IUT may send some <<EVENT NOTIFICATIONS>> for the incoming call list, however this is not the purpose of the test case to check this |

| TC_FT_NG1.N.16_BV_2102 | Contact list - Save entry - Read entries in ascending order |
|--|--|
| <p>Reference: Initial condition: Stimulus:</p> | <p>TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry Contact list empty (see TC_FT_NG1.N.16_BV_2101), Service call in F-03</p> <ol style="list-style-type: none"> 1. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 2. Send a <Save entry, session id=n, entry identifier = 00H > from TS_1 followed by <data packet/data packet last> set to (Name= Fenjiro, First name= Carlos, Contact number1= 0490413002) and (Associated melody= 1) when declared (see Annex A, Table A.15) 3. Send a <Save entry, session id=n, entry identifier = 00H > from TS_1 followed by <data packet/data packet last> set to (Name= Alexander, First name= Christina, Contact number1= 00441324778812) and (Associated melody= 1) when declared (see Annex A, Table A.15) 4. Send a <Save entry, session id=n, entry identifier = 00H > from TS_1 followed by <data packet/data packet last> set to (Name= Uwe, First name= Marcus, Contact number1= 008989945270, Contact number2= 00491603794505, Line id=(3, lid0)) and (Associated melody= 2) when declared (see Annex A, Table A.15) 5. Send a <Save entry, session id=n, entry identifier = 00H > from TS_1 followed by <data packet/data packet last> set to (Name= ALOUSSI, First name= Ramin, Contact number1= 0156891247, Contact number2= 0675000209) and (Associated melody= 1) when declared (see Annex A, Table A.15) 6. Send a <Save entry, session id=n, entry identifier = 00H > from TS_1 followed by <data packet/data packet last> set to (Name= Alexander, First name= Christian, Contact number1= 00441324778824) and (Associated melody= 1) when declared (see Annex A, Table A.15) 7. Send a <Save entry, session id=n, entry identifier = 00H > from TS_1 followed by <data packet/data packet last> set to (Name= Lagadec, First name= Jérôme, Contact number1= 02298951214, Line id=(4) "All lines") and (Associated melody= 3) when declared (see Annex A, Table A.15) 8. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 9. Send a <Read entries, session id=n, start index=3, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 10. Send a <Read entries, session id=n, start index=5, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 11. Send a <End session, session id=n> from TS_1 12. Send a {CC-RELEASE} from TS_1 |
| <p>Pass criteria:</p> | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=0, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 =1, sorting field id2 =2 in case of 2 sorting fields > 2. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier= u, position index=1, total nb of available entries= 1> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier= v, position index=1, total nb of available entries= 2> 4. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier= w, position index=3, total nb of available entries= 3> 5. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier= x, position index=2, total nb of available entries= 4> 6. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier= y, position index=1, total nb of available entries= 5> 7. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier= z, position index=5, total nb of available entries= 6> 8. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=2> followed by <data packet/data packet last> with entries created in steps 6 and 3 (Alexander Christian / Alexander Christina) with Line id field set by default by IUT to "Relating to" one line =(3, i) or "All lines" =(4) 9. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=3, counter=2> followed by <data packet/data packet last> with entries created in steps 5 and 2 (ALOUSSI Ramin / Fenjiro Carlos) 10. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=5, counter=2> followed by <data packet/data packet last> with entries created in steps 7 and 4 (Lagadec Jérôme with Line id field set to "All lines" =(4), and Uwe Marcus-with Line id field set "Relating to" line 0 =(3, lid0)) 11. Verify that the IUT sends to TS_1 a <End session confirm, session id=m> 12. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

| TC_FT_NG1.N.16_BV_2106 | Contact list - Search entries using matching options |
|---|--|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clauses 7.4.10.5.7, 7.4.10.4.8 and 7.4.10.1, 'Field instances management' entry</p> <p>Contact list filled for test (see TC_FT_NG1.N.16_BV_2102), Service call in F-03</p> <ol style="list-style-type: none"> 1. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 2. None 3. Send a <Search entries, session id=n, matching option=00H, searched value='FENJIRO', direction=0, counter=01H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 4. None 5. Send a <Search entries, session id=n, matching option=01H, searched value='AL', direction=0, counter=01H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 6. None 7. Send a <Search entries, session id=n, matching option=02H, searched value='AL', direction=0, counter=01H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 8. Send a <End session, session id=n> from TS_1 9. Send a {CC-RELEASE} from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=6, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 =1, sorting field id2 =2 in case of 2 sorting fields > 2. None 3. Verify that the IUT sends to TS_1 a < Search entries confirm, session id=n, start index=4, direction=0, counter=1> followed by <data packet/data packet last> with entry created in TC_FT_NG1.N.16_BV_2102 step 2 (Fenjiro Carlos) 4. None 5. Verify that the IUT sends to TS_1 a < Search entries confirm, session id=n, start index=1, direction=0, counter=1> followed by <data packet/data packet last> with entry created in TC_FT_NG1.N.16_BV_2102 step 6 (Alexander Christian) 6. None 7. Verify that the IUT sends to TS_1 a < Search entries confirm, session id=n, start index=0, direction=0, counter=0> without <data packet/data packet last> 8. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 9. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message <p>In stimuli 2 to 7, presence of field id '03'H twice is explained at the beginning of Clause 7.16, 'Multiple instances of the 'contact number' field in the contact list' clause</p> |

| TC_FT_NG1.N.16_BV_2107 | Contact list - Search entries in ascending order and descending order |
|---|---|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.4.8 and 7.4.10.1, 'Field instances management' entry</p> <p>Contact list filled for test (see TC_FT_NG1.N.16_BV_2102), Service call in F-03</p> <ol style="list-style-type: none"> 1. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 2. Send a <Search entries, session id=n, matching option=01H, searched value='L', direction=0, counter=02H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 3. Send a <Search entries, session id=n, matching option=01H, searched value='L', direction=1, counter=02H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 4. Send a <End session, session id=n> from TS_1 5. Send a {CC-RELEASE} from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=6, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 =1, sorting field id2 =2 in case of 2 sorting fields > 2. Verify that the IUT sends to TS_1 a < Search entries confirm, session id=n, start index=5, direction=0, counter=2> followed by <data packet/data packet last> with entries created in TC_FT_NG1.N.16_BV_2102 steps 7 and 4 (Lagadec Jérôme / Uwe Marcus) 3. Verify that the IUT sends to TS_1 a < Search entries confirm, session id=n, start index=4, direction=0, counter=2> followed by <data packet/data packet last> with entries created in TC_FT_NG1.N.16_BV_2102 steps 2 and 7 (Fenjiro Carlos / Lagadec Jérôme), entry with index 4 transmitted first in the data packets 4. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message <p>In stimuli 2 and 3, presence of field id '03'H twice is explained at the beginning of Clause 7.16, 'Multiple instances of the 'contact number' field in the contact list' clause</p> |

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| TC_FT_NG1.N.16_BV_2108 | Contact list - Initiate a voice call during a list access session |
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.5.4 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | Contact list filled for test (see TC_FT_NG1.N.16_BV_2102), |
| Stimulus: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=n, start index=6, direction=0, counter=01H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 4. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH, 15H digits together with "008989945270" digits and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=6, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 =1, sorting field id2 =2 in case of 2 sorting fields > 3. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=6, counter=1> followed by <data packet/data packet last> set to (Name= Uwe, First name= Marcus, Contact number1= 008989945270, Line id=(3, lid0)) and (Associated melody= 2) when declared (see Annex A, Table A.15) 4. Verify that the IUT sends to TS_1 a {CC-CONNECT} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a)> 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | In stimulus 3, presence of field id '03'H twice is explained at the beginning of Clause 7.16, 'Multiple instances of the 'contact number' field in the contact list' clause |

| TC_FT_NG1.N.16_BV_2109 | Contact list - Entry used to update Outgoing call list |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.5.4 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | Run TC_FT_NG1.N.16_BV_2108 (outgoing call during contact list session using 'Marcus Uwe' entry), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 1a. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 1b. Send a <Read entries, session id=n, start index=1, direction=0, counter=03H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with "00445678901234567890" digits and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> from TS_1 3. Send a {CC-RELEASE} from TS_1 4. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 5. Send a <Start session, List identifier = 02H, nb of sorting fields =0> from TS_1 6. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H> from TS_1 7. Send a <End session, session id=n> from TS_1 8. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 1a. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=6, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 =1, sorting field id2 =2 in case of 2 sorting fields > 1b. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=0, counter=3> followed by <data packet/data packet last> 2. Verify that the IUT sends to TS_1 a {CC-CONNECT} message, followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying at least (line 0, line type information, call id a) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a)> 3. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 4. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 5. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=x, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 6. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with <ul style="list-style-type: none"> • 1st entry: "Number" field set to "00445678901234567890" and empty "Name" field • 2nd entry: "Number" field set to "008989945270" and "Name" field containing "Uwe" • "Date and Time" field value of 1st entry shall be more recent than "Date and Time" field value of 2nd entry • "Line id" field of both entries set to 'Line identifier for external call' and line 0 value (0, lid0) • "Line name" field of both entries set to line name of line 0 (see Clause A.2.2 FT_IXIT_28) 7. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 8. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <ul style="list-style-type: none"> - The purpose of the test case is to make sure that when placing an outgoing call, if the dialled number matches one of the contact list entry, the corresponding contact list entry name shall be used in the outgoing call log - In stimulus 2, a phone number which does not exist in contact list is dialed on purpose (to see empty name) - In stimulus 1b, presence of field id '03'H twice is explained at the beginning of Clause 7.16, 'Multiple instances of the 'contact number' field in the contact list' clause - In Pass criteria 6, the name field of the outgoing call list shall contain at least the name of "Uwe" contained in the contact list (but it may also additionally contain the first name of the contact list before or after the name) |

| TC_FT_NG1.N.16_BV_2110 | Contact list - Delete entry - Negative acknowledgement |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.5.7 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | Contact list filled for test (see TC_FT_NG1.N.16_BV_2102), contact list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 2. Send a <Delete entry, session id=n+1, entry identifier = u> from TS_1 3. Send a <Delete entry, session id=n, entry identifier = u> from TS_1 4. Send a <Delete entry, session id=n, entry identifier = u+3> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n+1, reject reason= invalid session number > 3. Verify that the IUT sends to TS_1 <Delete entry confirm, session id=n, total nb of available entries = 5> 4. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n, reject reason= entry not available > 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <ul style="list-style-type: none"> - In stimulus 1, presence of field id '03'H twice is explained at the beginning of Clause 7.16, 'Multiple instances of the 'contact number' field in the contact list' clause - In step 4, 'u+3' identifier is invalid on IUT side |

| TC_FT_NG1.N.16_BV_2111 | Contact list - Incoming first voice call during existing list access session |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.6.3 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | Contact list filled for test with 5 entries (initialized with 6 entries in TC_FT_NG1.N.16_BV_2102 but one entry removed in TC_FT_NG1.N.16_BV_2110), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 05H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=n, start index=5, direction=0, counter=01H, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H, 03H, 04H, 05H> from TS_1 4. Perform an incoming call on line 0 towards IUT from Phone A 5. Send a {CC-INFO} message from TS_1 with IE << MULTI-KEYPAD >> set to (1CH, 35H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> 6. Send a <End session, session id=n> from TS_1 7. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=5, discriminator type = 0 or 1, nb of sorting fields = 1 or 2, sorting field id1 =1, sorting field id2 =2 in case of 2 sorting fields > 3. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=5, counter=1> followed by <data packet/data packet last> set to (Name= Uwe, First name= Marcus, Contact number1= 008989945270) and (Associated melody= 2) when declared (see Annex A, Table A.15) 4. Verify that the IUT sends to TS_1 a {CC-CONNECT} message, followed, in the same or different {CC-INFO} messages, by: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on' when declared (see Annex A, Table A.26) • an IE <<CALLING PARTY NUMBER>> with <calling party address= Phone A number> • an IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lid0), (1, 0, value a), (2, 1, 1)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages 5. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> Verify end-to-end U-plane connection between TS_1 and Phone A 6. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 7. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | In stimulus 3, presence of field id '03'H twice is explained at the beginning of Clause 7.16, 'Multiple instances of the 'contact number' field in the contact list' clause |

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| TC_FT_NG1.N.16_BV_2203 | Internal names list - Initiate and check internal call from internal names list |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.6.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Internal names list session open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H> from TS_1 2. Perform an internal call from TS_1 towards TS_2 by sending a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (17H,terminal Id of PP2) digits 3. Pick up call on TS_2 by sending a {CC-CONNECT} message from TS_2 4. Send a {CC-RELEASE} message from TS_1 5. Send a {CC-RELEASE-COM} from TS_2. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 2 entries 2. Verify that IUT sends to TS_1 a {CC-CONNECT} message immediately; Verify that the IUT performs an internal call setup towards TS_2 with <Call class = internal call> 3. Verify end-to-end U-plane connection between TS_1 and TS_2 (WB call) 4. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message Verify that the IUT sends to TS_2 a {CC-RELEASE} message |

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| TC_FT_NG1.N.16_BV_2210 | Internal names list - Delete entry |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.2 |
| Initial condition: | EN 300 444 [12], Clause 8.31 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), internal names list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=2, mark entries request= 00H, list entry field identifier 1..n =01H, 02H, 03H> from TS_1 2. Delete the PP2 entry in the "Internal names" list by sending a < Delete entry, session id=n, entry identifier=v> from TS_1 3. Close the list access session and re-start a new internal names list session from TS_1 Wait for receiving a {ACCESS-RIGHTS-TERMINATE-REQUEST} message, before sending a {ACCESS-RIGHTS-TERMINATE-ACCEPT} message from TS_2 4. Send a <Read entries, session id=m, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=01H> from TS_1 5. Send a <End session, session id=m> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with PP1 entry content (entry identifier = u) and PP2 entry content (Entry identifier = v) 2. Verify that the IUT sends to TS_1 <Delete entry confirm, session id=n, total nb of available entries = 1> 3. Verify that the IUT sends to TS_1 a <Start session confirm> with "Total number of available entries" field set to 1 Verify that the IUT sends to TS_2 an {ACCESS-RIGHTS-TERMINATE-REQUEST} 4. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=m> followed by <data packet/data packet last> with one entry whose "Number" field is set to (internal=1B, own=1B, digit=terminal Id of PP1) 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=m> 6. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |
| Comments: | {ACCESS-RIGHTS-TERMINATE-REQUEST} message can be sent just after <Delete entry confirm> or later after <End session> If the Internal names list contains PIN protected field(s), TS_1 will have—in pass criterion 2 at the latest—to access the DECT system settings list for PIN checking before the entry can be actually deleted |

| TC_FT_NG1.N.16_BV_2302 | All incoming calls list - Read entries when new entries |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.4.1 and 7.4.10.5.11 |
| Initial condition: | Date and time of the system set, All incoming calls list empty (see TC_FT_NG1.N.16_BV_2301), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call on line 0 towards IUT from Phone A (CLIP A / CNIP A) to make the IUT ring <ol style="list-style-type: none"> 1a. Send a {CC-ALERTING} message from TS_1 Hang up on Phone Perform an incoming call on line 0 towards IUT from Phone B (CLIP B / CNIP B) with answering Perform an incoming call on line 0 towards IUT from Phone A (CLIP A / CNIP A) with answering 1b. Perform an incoming call on line 0 towards IUT from Phone B (CLIP B / CNIP B) to make the IUT ring 1c. Send a {CC-ALERTING} message from TS_1 Hang up on Phone B 1d. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 2. Send a <Start session, List identifier = 09H, nb of sorting fields =0> from TS_1 3. Send a <Read entries, session id=m, start index=1, direction=0, counter=2, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 4. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> <ol style="list-style-type: none"> 1a. Verify that the IUT sends to TS_1 a {CC-RELEASE} message 1b. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)> 1c. Verify that the IUT sends to TS_1 a {CC-RELEASE} message 1d. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 2. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=2 or 4, discriminator type=0 or 1, nb of sorting fields =1, sorting field id1 =3> 3. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=m> followed by <data packet/data packet last> with: <ul style="list-style-type: none"> • 1st entry: "Number" field set to CLIP B, "Name" field set to CNIP B, "Read status" field with 'unread' property bit set to 'unread' (unread=1B), and 'Number of calls' field set to 1 • 2nd entry: "Number" field set to CLIP A, "Name" field set to CNIP A, "Read status" field with 'unread' property bit set to 'read' (unread=0B), and 'Number of calls' field set to 1 • "Date and Time" field value of 1st entry shall be more recent than "Date and Time" field value of 2nd entry 4. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message: <ul style="list-style-type: none"> - "Total number of available entries" field can be set to 2, or 4, as some FPs may either handle only one entry for the last call from a remote party, or one entry per incoming call - CLIP and CNIP in step 3 of pass criteria shall be the same than ones previously received during step 1 of stimulus - In step 1a and 1c, TS_1 should wait for CC-ALERTING and then invite the user to hangup on Phone A/Phone B via a display on the test equipment |
| Comments: | |

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| TC_FT_NG1.N.16_BV_2303 | All incoming calls list - Delete entry - Negative acknowledgement |
| Reference: | TS 102 527-3 [14], Clause 7.4.10.5.11 |
| Initial condition: | Run TC_FT_NG1.N.16_BV_2302 - All incoming calls list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 7FH, list entry field identifier 1..n =01H, 02H, 03H, 04H, 05H, 06H, 07H> from TS_1 2. Send a <Delete entry, session id=n+1, entry identifier = u> from TS_1 3. Send a <Delete entry, session id=n, entry identifier = u> from TS_1 4. Send a <Delete entry, session id=n, entry identifier = u+3> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with 1st entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n+1, reject reason= invalid session number > 3. Verify that the IUT sends to TS_1 <Delete entry confirm, session id=n, total nb of available entries = 1 or 3> 4. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n, reject reason= entry not available > 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | In step 4, 'u+3' identifier is invalid on IUT side |

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| TC_FT_NG1.N.16_BV_2401 | DECT system settings list - Query supported entry fields |
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.4.2 and 7.4.11.3 |
| Initial condition: | DECT system settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Query supported entry fields> from TS_1 2. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Query supported entry fields confirm, session id=n> Verify that editable entry field includes at the minimum <ul style="list-style-type: none"> • 01H Current PIN code • 02H Clock master • 03H Base reset • 0DH New PIN code Verify that non editable entry fields includes at the minimum <ul style="list-style-type: none"> • 09H FP version / Firmware version • 0AH FP version / EEPROM version Verify that entry fields include optional entry fields declared in editable and non-editable fields (see Annex A, Table A.25) 2. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |
| Comments: | Test equipment shall rely on Annex A, Table A.25 to know the optional List access service procedures supported, and therefore the optional setting fields implemented |

| TC_FT_NG1.N.16_BV_2402 | DECT system settings list - Read entries |
|---|--|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clauses 7.4.10.4.3 and 7.4.11.3 and 7.4.10.1, 'Field instances management' entry</p> <p>DECT system settings list open (see TC_FT_NG1.N.16_BV_2401)</p> <p>1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list of supported entry field identifiers known from query > from TS_1</p> <p>2. Send a {CC-RELEASE} message from TS_1</p> <p>1. Verify on TS_1 that the DECT link is ciphered</p> <p>Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last></p> <p>Verify that mandatory entry fields (Current PIN code, Clock master, Base reset, FP version / Firmware version, FP version / EEprom version, New PIN code) and optional entry fields declared in Annex A, Table A.25 are included in data packet</p> <p>Verify that each field complies with its description in the standard (field identifier, length, property, coded value):</p> <p>Mandatory fields:</p> <ul style="list-style-type: none"> • Current PIN code composed of 4 octets set to (FFH, FFH, FFH, FFH) • Clock master = 31 or 30H • Base reset = 31H (Yes) if all other settings are set to their default value, 30H (No) otherwise • FP version / Firmware version: limited to 20 IA-5 bytes • FP version / Eeprom version: limited to 20 IA-5 bytes • New PIN code composed of 4 octets set to (FFH, FFH, FFH, FFH) with property bit 'PIN protected' set to 1 <p>Optional fields (if declared):</p> <ul style="list-style-type: none"> • FP IP address / type: only one property bit 'DHCP' or 'static' shall be set at a time • For the 3 following settings check that if IPv4/6 bit is set to 0, the format is IPv4 (4 bytes long), if set to 1, the format is IPv6 (16 bytes long) <ul style="list-style-type: none"> - FP IP address / value - FP IP address / subnet mask - FP IP address / gateway - FP IP address / DNS server • FP version / Hardware version: limited to 20 IA-5 bytes • Emission mode: at least 2 bytes <p>2. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message</p> <ul style="list-style-type: none"> - Test equipment shall rely on Annex A, Table A.25 to know the optional List access service procedures supported, and therefore the optional setting fields implemented - In stimulus 1, there may be several instances of the 'FP IP address / DNS server' field id in the query confirm received from IUT. TS_1 shall include as many field id occurrences in the 'Read entries' command - In pass criterion 1, there may be several instances of the 'FP IP address / DNS server' field |

| TC_FT_NG1.N.16_BV_2501 | Line settings list - Query supported entry fields |
|---|--|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> <p>Comments:</p> | <p>TS 102 527-3 [14], Clauses 7.4.10.4.2 and 7.4.11.4</p> <p>Line settings list open (session id=n)</p> <p>1. Send a <Query supported entry fields> from TS_1</p> <p>2. Send a {CC-RELEASE} message from TS_1</p> <p>1. Verify that the IUT sends to TS_1 a < Query supported entry fields confirm, session id=n></p> <p>Verify that editable entry fields include at the minimum</p> <ul style="list-style-type: none"> • 01H Line name • 02H Line id • 03H Attached handsets • 08H Multiple calls mode • 0BH Call Forwarding Unconditional • 0CH Call Forwarding on No answer • 0DH Call Forwarding on Busy subscriber <p>Verify that entry fields include optional entry fields declared as supported, either as editable or as non-editable fields (see Annex A, Table A.25)</p> <p>2. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message</p> <p>Test equipment shall rely on Annex A, Table A.25 to know the optional List access service procedures supported, and therefore the optional setting fields implemented</p> |

| TC_FT_NG1.N.16_BV_2502 | Line settings list - Read entries |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.4.3 and 7.4.11.4 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list of supported entry field identifiers known from query > from TS_1 |
| | 2. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> Verify that mandatory entry fields (Line name, Line id, Attached handsets, Multiple calls mode, Call Forwarding Unconditional, Call Forwarding on No answer, Call Forwarding on Busy subscriber) and optional entry fields declared (see Annex A, Table A.25) are included in data packet Verify that each field complies with its description in the standard (field identifier, length, property, coded value): Mandatory fields: |
| | <ul style="list-style-type: none"> • Line name = list of UTF-8 characters • Line id = Identifier subtype set Relating to (03H) followed by value • Attached handsets = number set to 2 and handset bitmap set to PP1 and PP2, with no trailing null octets in the bitmap. • Multiple calls mode = 30H or 31H • Call Forwarding Unconditional with length ≥ 5 and subfield Value set to 30H or 31H, subfield CFU activation code set to FT_IXIT_29.1, subfield CFU deactivation code set to FT_IXIT_29.2, and call forwarding number (possibly empty) set to a list of digits in 30H..39H. • Call Forwarding on No answer with length ≥ 6 and subfield Value set to 30H or 31H, subfield nb of seconds in 00H..40H, subfield CFNA activation code set to FT_IXIT_29.3, subfield CFNA deactivation code set to FT_IXIT_29.4, and call forwarding number set to a list of digits in 30H..39H • Call Forwarding on Busy subscriber with length ≥ 5 and subfield Value set to 30H or 31H, subfield CFB activation code set to FT_IXIT_29.5, subfield CFNA deactivation code set to FT_IXIT_29.6, and call forwarding number set to a list of digits in 30H..39H |
| | Optional fields (if declared): |
| | <ul style="list-style-type: none"> • Dialling prefix = either empty (length =1), or list of digits, among 05H, 15H, 23H, 2AH or 30H...39H • FP melody = one octet value from 01H to 07H • FP volume = one octet value among 30H...39H • Blocked number = either one empty instance (length =1), or one or several non-empty instance(s) (list of digits among 30H..39H, and 2AH) • Intrusion call mode = 30H or 31H • Permanent CLIR with length ≥ 4 and subfield Value set to 30H or 31H, subfield Permanent CLIR activation code set to FT_IXIT_29.7, subfield Permanent CLIR deactivation code set to FT_IXIT_29.8 |
| | 2. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |
| Comments: | - Test equipment shall rely on Annex A, Table A.25 to know the optional List access service procedures supported, and therefore the optional setting fields implemented |
| | - In stimulus 1, there may be several instances of the 'Block number' field id in the query confirm received from IUT. TS_1 shall include as many field id occurrences in the 'Read entries' command |
| | - PP1 and PP2 bit positions in the 'Attached handset' bitmap depend on the configuration items HANDSET_TS_1_NUMBER and HANDSET_TS_2_NUMBER declared (see Clause C.2) |
| | - For the definition of FT_IXIT_29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7 and 29.8, see Annex A, Table A.16 |

| TC_FT_NG1.N.16_BV_2701 | DECT system settings list - Current PIN code - New PIN code - Edit entry - Save entry |
|------------------------|--|
| Reference: | TS 102 527-3 [14], Clauses 7.4.10.4.9, 7.4.11.1, 7.4.11.3.1 and 7.4.11.3.13 |
| Initial condition: | Current PIN code field set to (FFH, FFH, 00H, 00H) |
| Stimulus: | <p>DECT system settings list open (session id=n)</p> <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0DH> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=0DH> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, 12H, 34H) 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =01H> from TS_1 5. Send a <Edit entry, session id=n, entry identifier=v, list entry field identifier 1=01H> from TS_1 6. Send a <Save entry, session id=n, entry identifier=v> from TS_1 followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 12H, 34H) 6a. Send a <Edit entry, session id=n, entry identifier=v, list entry field identifier 1=01H> from TS_1 7. Send a <Save entry, session id=n, entry identifier=v> from TS_1 followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, 00H, 00H) 8. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0DH> from TS_1 9. Send a <Edit entry, session id=n, entry identifier=w, list entry field identifier 1=0DH> from TS_1 10. Send a <Save entry, session id=n, entry identifier=w> from TS_1 followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, 12H, 34H) with 'PIN protected' property bit unset 11. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0DH> from TS_1 12. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the DECT link is ciphered and that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, FFH, FFH) (entry identifier = u) 2. Verify the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, FFH, FFH) 3. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n, reject reason= PIN code required> 4. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, FFH, FFH) (entry identifier = v) 5. Verify the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, FFH, FFH) 6. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=n, reject reason= incorrect PIN> 6a. Verify the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with Current PIN code field set to (FFH, FFH, FFH, FFH) 7. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=v, position index=1, total number of available entries=1> 8. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, FFH, FFH) (entry identifier = w) 9. Verify the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, FFH, FFH) 10. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=w, position index=1, total number of available entries=1> 11. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with New PIN code field set to (FFH, FFH, FFH, FFH) with 'PIN protected' property bit set 12. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |

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| Comments: | <p>The main objectives of this test case are the following:</p> <ul style="list-style-type: none"> - Step 2 and 3: check that it is not possible to modify new PIN code without prior successful current PIN code saving - Steps 4, 5 and 6: check that it is not possible to save current PIN code with a wrong value - Step 7: check that it is possible to save current PIN code with a right value - Steps 8, 9 and 10: check that it is possible to modify new PIN code even if 'PIN protected' property bit is unset (i.e. the 'PIN protected' property bit is ignored by the FP but the PIN code value taken into account) - Step 11: check that 'PIN protected' property bit is still set when reading new PIN code field |
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| TC_FT_NG1.N.16_BV_2801 | DECT system settings list - Clock master- Edit entry - Save entry - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.3.2 |
| Initial condition: | DECT system settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =02H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=02H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with clock master field modified (i.e. modify to 30H if 31H or 31H if 30H) 4. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=02H> from TS_1 5. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 IUT a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with clock master field set to previously modified value 5. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.16_BV_2901 | DECT system settings list - Base reset - Edit entry - Save entry - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.3.3 |
| Initial condition: | DECT system settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =03H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=03H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with base reset field set to 31H 4. Send a <End session, session id=n> from TS_1 5. If {CC-RELEASE} message was received in step 4 then send a {CC-RELEASE-COM} message from TS_1 else send a {CC-RELEASE} message |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with Base reset field set to 30H. 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 4. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> or a {CC-RELEASE} message 5. If a {CC-RELEASE} message was sent in step 5 then verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | <p>This test shall be run after any DECT system or line settings test modifying a default value to get the Base reset field set to 30H in step1</p> <p>As all DECT system and line settings should be reset to their default value, it is recommended to run it at the end of the test suite</p> <p>IUT can reboot after step 4</p> |

| TC_FT_NG1.N.16_BV_2902 | DECT system settings list - Base reset - Read entries - Default settings values |
|------------------------|--|
| Comments: | <ul style="list-style-type: none"> • Dialling prefix = either empty (length =1), or list of digits among 05H, 15H, 23H, 2AH or 30H...39H • FP melody = either empty (length=1) or one octet value from 01H to 07H • FP volume = one octet value among 30H...39H • Blocked number = one empty instance (length =1), or one or several non-empty instance(s) (list of digits among 30H..39H, and 2AH) • Intrusion call mode = 30H or 31H • Permanent CLIR with length ≥ 4, and Value set to 30H, CLIR activation and deactivation codes empty (length =4), or set to a list of digits among 05H, 15H, 23H, 2AH or 30H..39H <p>For each implemented field (mandatory or optional), except 'Blocked number', verify that <i>one and only one</i> instance is present.</p> <p>7. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message</p> <ul style="list-style-type: none"> - Test equipment shall rely on Annex A, Table A.25 to know the optional List access service procedures supported, and therefore the optional setting fields implemented - In stimuli 3 and 6, there may be several instances of the 'FP IP address / DNS server' and 'Blocked number' field ids in the query confirm received from IUT. TS_1 shall include as many field id occurrences in the 'Read entries' command - In pass criteria 3 and 6, there may be several instances of the 'FP IP address / DNS server' and 'Blocked number' fields - PP1 and PP2 bit positions in the 'Attached handset' bitmap depend on the configuration items HANDSET_TS_1_NUMBER and HANDSET_TS_2_NUMBER declared (see Clause C.2) |

| TC_FT_NG1.N.16_BV_3001 | DECT system settings list - FP IP address - Edit entry - Save entry - Read entries |
|------------------------|---|
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.3.4, 7.4.11.3.5, 7.4.11.3.6, 7.4.11.3.7 and 7.4.11.3.8 and 7.4.10.1, 'Field instances management' entry |
| Initial condition: | DECT system settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =04H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1..n =04H, 05H, 06H, 07H, 08H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with following values FP IP address/type = 'static' property bit set FP IP address/value = 192.168.212.12 FP IP address/subnet mask = 255.255.255.0 FP IP address/gateway = 192.168.212.1 FP IP address/DNS server = 192.168.212.1 4. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry identifier1=04H, 05H, 06H, 07H, 08H> from TS_1 5. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1 =04H> from TS_1 6. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with FP IP address/type property bit set to 'DHCP' 7. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =04H, 05H, 06H, 07H, 08H> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 8. Send a {CC-RELEASE} message from TS_1 1. Verify that the IUT sends to TS_1 IUT a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with FP IP address fields set to previously modified values 5. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 6. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 7. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with FP IP address/type field set to previously modified value |
| Comments: | <ol style="list-style-type: none"> 8. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message <ul style="list-style-type: none"> - In step 1, store data packet content to restore previous FP IP address at the end of TC - In stimuli 1, 4, and 7, there may be several instances of the 'FP IP address / DNS server' field id in the query confirm received from IUT. TS_1 shall include as many field id occurrences in the 'Read entries' command - In stimulus 2, field id '08'H shall be present only once, in order to request edition of the first 'DNS server' field instance only - In pass criteria 1, 4, and 7, there may be several instances of the 'FP IP address / DNS server' field - In pass criteria 3 to 7 some of the IP address sub fields may not be supported by the IUT depending on the declarations NG1.N.16_30/31/32/33/34 (see Table A.25 in Clause A.2.3) |

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| TC_FT_NG1.N.16_BV_3501 | DECT system settings list - FP version - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.3.3 |
| Initial condition: | DECT system settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1..n =09H, 0AH, 0BH when declared> from TS_1 2. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> including: <ul style="list-style-type: none"> • 09H FP version / Firmware version • 0AH FP version / Eeprom version • 0BH FP version / Hardware version when declared (see Annex A, Table A.25) 2. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |
| Comments: | Test equipment shall rely on Annex A, Table A.25 to know the optional List access service procedures supported, and therefore the optional setting fields implemented |

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| TC_FT_NG1.N.16_BV_3801 | Line settings list - Line name- Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.1 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =01H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=01H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Line name field set to "My First Line" 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=01H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 IUT a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Line name field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (=03H,88H,81H)> >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

| TC_FT_NG1.N.16_BV_3901 | Line settings list - Line id - Edit entry - Save entry - Read entries |
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| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.11.4.2 EN 300 175-5 [5], Clause 7.7.56</p> <p>Line settings list open (session id=n)</p> <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =02H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=02H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Line id field set to ("Relating-to", 01H) 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=02H> from TS_1 5. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with 'editable' property bit of Line id field set to 0B 3. Verify that the IUT sends to TS_1 a <Negative acknowledgement, session id=m, reject reason= procedure not allowed> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Line id field set to previously edited value 5. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.16_BV_4001 | Line settings list - Attached handsets - Edit entry - Save entry - List change notification - Read entries after registration |
| Reference: | TS 102 527-3 [14], Clauses 7.4.11.2 and 7.4.11.4.3 |
| Initial condition: | Only one first PP registered (TS_1 is NG PP1) attached to each line, Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=03H> from TS_1 and close the list session 2. Start the access rights procedure on IUT Register TS_2 as a new PP 3. Open Line settings list and send a <Read entries, session id=m, start index=1, direction=0, counter= t (total number of lines), mark entries request= 00H, list entry field identifier 1..n = 02H, 03H> from TS_1 4. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=03H> from TS_1 5. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with "Number" field set to (Number of registered handsets attached to the line=01H, Handset bitmap=01H) 6. Send a <End session, session id=n> from TS_1 7. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with "Attached handsets" field set to (Number of registered handsets attached to the line=01H, Handset bitmap = PP1 bit set, with no trailing null octets in the bitmap) 2. Verify that the IUT accepts registration 3. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=m, start index=1, counter=t > followed by <data packet/data packet last> If (total number of lines =1) then verify that the first entry includes an "Attached handsets" field set to (Number of registered handsets attached to the line=02H, Handset bitmap= PP1 and PP2 bits set, with no trailing null octets in the bitmap) Else if (total number of lines \geq 2 and FT_IXIT_12 value is 'supported') then verify that at least one of the entries includes an "Attached handsets" field set to (Number of registered handsets attached to the line=02H, Handset bitmap= PP1 and PP2 bits set, with no trailing null octets in the bitmap) Store the line id value 'v' of the first line found with the new registered PP attached to 4. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with set to (Number of registered handsets attached to the line=02H, Handset bitmap= PP1 and PP2 bits set, with no trailing null octets in the bitmap) 5. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=p, total number of available entries=t> 6. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 7. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 8. Verify that the IUT sends to TS_1 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line v) = <(0, 3, value v)> |
| Comments: | <ul style="list-style-type: none"> - 'u' entry identifier is the identifier of the first line found with the new registered PP attached to - 'v' is the line identifier within this entry 'u' - Reception of {FACILITY} message is tested as pass criteria 8. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 5 or 6 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations - PP1 and PP2 bit positions in the 'Attached handset' bitmap depend on the configuration items HANDSET_TS_1_NUMBER and HANDSET_TS_2_NUMBER declared (see Clause C.2) - FT_IXIT_12 value 'supported' indicates that registered PPs are attached by default to at least one line (see Annex A, Table A.15) |

| TC_FT_NG1.N.16_BV_4101 | Line settings list - Dialling Prefix - Edit entry - Save entry - Read entries - Outgoing call |
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| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.11.4.4</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n)</p> <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =04H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=04H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with "Number" field set to (Digit=30H, 39H) 4. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=04H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 7. Perform an outgoing call to "0123456789" from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> with "Number" field length = 01H 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Dialling Prefix field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message <p>Verify at network interface that the IUT added the dialling prefix to the called party number by dialling "090123456789"</p> |

| TC_FT_NG1.N.16_BV_4201 | Line settings list - FP melody - Edit entry - Save entry - Read entries |
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| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.11.4.5</p> <p>2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n)</p> <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =05H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=05H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with FP melody field set to 03H 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=05H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with FP melody field set to 03H 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.16_BV_4301 | Line settings list - FP volume - Edit entry - Save entry - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.6 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =06H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=06H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with FP volume field set to 30H 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=06H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with FP volume field set to 30H 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |

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| TC_FT_NG1.N.16_BV_4401 | Line settings list - Blocked number - Edit entry - Save entry - Read entries- Outgoing call blocked |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.7 |
| Initial condition: | Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =07H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=07H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with "Number" field set to (Digit=30H, 30H, 2AH) 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=07H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 7. Perform an outgoing call to "000123456789" from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Blocked number field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT blocks the call and sends back to TS_1 a {CC-RELEASE} message |
| Comments: | This field may be contained several times in line settings entry |

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| TC_FT_NG1.N.16_BV_4501 | Line settings list - Multiple calls mode - Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.8 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Multiple calls IUT, Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =08H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=08H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Multiple calls mode field modified (i.e. modify to 30H if 31H or 31H if 30H) 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=08H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Multiple calls mode field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (=03H,88H,81H)> >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

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| TC_FT_NG1.N.16_BV_4601 | Line settings list - Intrusion call - Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.9 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =09H> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=09H> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Intrusion call field modified (i.e. modify to 30H if 31H or 31H if 30H) 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=09H> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Intrusion call mode field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

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| TC_FT_NG1.N.16_BV_4701 | Line settings list - Permanent CLIR - Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.10 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0AH> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=0AH> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Permanent CLIR field set to: "Value" subfield set to 31H "CLIR activation code" subfield set to (05H, 2AH, 05H, 30H, 39H, 2AH) "CLIR deactivation code" subfield set to (05H, 23H, 05H, 31H, 38H, 23H) 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=0AH> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Permanent CLIR field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

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| TC_FT_NG1.N.16_BV_4801 | Line settings list - Call Forwarding Unconditional - Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.11 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0BH> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=1, list entry field identifier 1=0BH> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Call Forwarding Unconditional field set to: "Value" subfield set to 31H "CFU activation code" subfield set to (04H, 2AH, 05H, 30H, 39H) "CFU deactivation code" subfield set to (04H, 23H, 05H, 31H, 38H) "Call forwarding number" subfield set to "0612345789" 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=0BH> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Call Forwarding unconditional field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

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| TC_FT_NG1.N.16_BV_4901 | Line settings list - Call Forwarding on No Answer - Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.12 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0CH> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=0CH> from TS_1 3. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Call Forwarding on No Answer field set to: "Value" subfield set to 31H "Nb of seconds before call is forwarded" subfield set to 40H "CFNA activation code" subfield set to (03H, 23H, 38H, 38H) "CFNA deactivation code" subfield set to (03H, 2AH, 39H, 39H) "Call forwarding number" subfield set to "0912345678" 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=0CH> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Call Forwarding on no answer field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

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| TC_FT_NG1.N.16_BV_5001 | Line settings list - Call Forwarding on Busy subscriber - Edit entry - Save entry - List change notification - Read entries |
| Reference: | TS 102 527-3 [14], Clause 7.4.11.4.13 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), Line settings list open (session id=n) |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0DH> from TS_1 2. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=0DH> from TS_1 3. Send a <Save entry, session id=n, entry identifier=1> from TS_1 followed by <data packet/data packet last> with Call Forwarding on Busy subscriber field set to: "Value" subfield set to 31H "CFB activation code" subfield set to (05H, 23H, 05H, 38H, 31H, 23H) "CFB deactivation code" subfield set to (05H, 2AH, 05H, 39H, 30H, 2AH) "Call forwarding number" subfield set to "0897654321" 4. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=0DH> from TS_1 5. Send a <End session, session id=n> from TS_1 6. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 2. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 3. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=t> 4. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Call Forwarding on Busy subscriber field set to previously modified value 5. Verify that the IUT sends to TS_1 a <End session confirm, session id=n> 6. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT sends to TS_1 and TS_2 a {FACILITY} message with IE <<EVENTS NOTIFICATION= < List change indication, Line settings list, 1 entry > (= <03H,88H,81H>) >> and IE<<CALL-INFORMATION>> specifying (Relating to line 0) =<(0, 3, lid0 set to value declared in FT_IXIT_20)> |
| Comments: | Reception of {FACILITY} message is tested as pass criteria 7. However, {FACILITY} message can also be sent by the IUT at any time after pass criteria 3, 4 or 5 (any time after the save <Save entry confirm> command). Test equipment shall allow these implementations |

| TC_FT_NG1.N.16_BV_5101 | DECT system settings list - Emission mode - Edit entry - Save entry - Read entries |
|---|---|
| Reference: Initial condition: Stimulus: Pass criteria: | TS 102 527-3 [14], Clause 7.4.11.3.12 F-00 1. Evaluate the IUT higher layer capabilities from TS_1 1a. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE = <LiA service setup, Wideband speech default setup attributes> >> 1b. Send a <Start session, List identifier = 07H, nb of sorting fields =0> from TS_1 2. Send a <Read entries, session id=n, start index=1, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1 =0CH> from TS_1 3. Send a <Edit entry, session id=n, entry identifier=u, list entry field identifier 1=0CH> from TS_1 4. Send a <Save entry, session id=n, entry identifier=u> from TS_1 followed by <data packet/data packet last> with Emission mode modified (i.e. modify to 'NEM' bit to 0B if 1B or to 1B if 0B) 5. Send a <Read entries, session id=n, start index=0, direction=0, counter=1, mark entries request= 00H, list entry field identifier 1=0CH> from TS_1 6. Send a {CC-RELEASE} message from TS_1 7. Evaluate the IUT higher layer capabilities from TS_1 1. Verify that the IUT has set the "No Emission mode support" FP higher layer capability bit equal to 1 (= Extended higher layer capabilities (part 2) a35 bit) 1a. Verify that the IUT sends to TS_1 a {CC-CALL-PROC} message 1b. Verify that the IUT sends to TS_1 a <Start session confirm, session id=n, total nb=1, discriminator type=0 or 1, nb of sorting fields =0> 2. Verify that the IUT sends to TS_1 IUT a < Read entries confirm, session id=n> followed by <data packet/data packet last> with entry content (entry identifier = u) 3. Verify that the IUT sends to TS_1 a <Edit entry confirm, session id=n> followed by <data packet/data packet last> 4. Verify that the IUT sends to TS_1 a <Save entry confirm, session id=n, entry identifier=u, position index=1, total number of available entries=1> 5. Verify that the IUT sends to TS_1 a <Read entries confirm, session id=n, start index=1, counter=1> followed by <data packet/data packet last> with Emission mode set to previously modified value 6. Verify that the IUT sends back to TS_1 a {CC-RELEASE-COM} message 7. Verify that the IUT has still set the "No Emission mode support" FP higher layer capability bit equal to 1 (= Extended higher layer capabilities (part 2) a35 bit). |

7.17 TC_FT_NG1.N.17 Calling line identity restriction tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Calling line identity restriction with the following considerations:

- As NG1.N.17_2 "Permanent CLIR" procedure is also tested when testing NG1.N.16_25 "Line settings list" procedure for the corresponding setting.
- As NG1.N.17_3 "Temporary CLIR mode (call by call)" procedure includes only PP requirements, there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.N.17 "Calling line identity restriction" feature is optional on FP side, so the manufacturer shall declare if it is supported.

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| TC_FT_NG1.N.17_BV_201 | Permanent CLIR mode (all calls) |
| Reference: | TS 102 527-3 [14], Clause 7.4.12.2 |
| Initial condition: | "Permanent CLIR" field on line 0 set to the following values "Value" subfield set to 31H (activated) "CLIR activation code" subfield set to FT_IXIT_29.7 (possibly empty) "CLIR deactivation code" subfield set to FT_IXIT_29.8 (possibly empty) |
| Stimulus: | F-00 1. Perform an outgoing call from TS_1 to Phone A 2. Modify "Value" subfield of "Permanent CLIR" field in line 0 settings list to 30H (deactivated) from TS_1 Perform an outgoing call from TS_1 to Phone A |
| Pass criteria: | 1. Verify that Phone A presents when ringing the IUT identification, either IUT phone number or IUT name 2. Verify that Phone A does not present when ringing the IUT identification, neither IUT phone number nor IUT name (i.e. presentation restricted) |
| Comments: | - For the definition of FT_IXIT_29.7 and FT_IXIT_29.8, see Annex A, Table A.16 |

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| TC_FT_NG1.N.17_BV_202 | Permanent CLIR – Extended higher layer capabilities (Part 2) |
| Test purpose | Verify that the FP IUT sets the "Permanent CLIR" attribute in the Extended higher layer capabilities (Part 2) |
| Reference: | TS 102 527-3 [14], Clause 7.4.9.2.3 |
| Initial condition: | F-00 |
| Time sequence: | s1 [TS_1 >> IUT] Perform an access rights request a1 [IUT >> TS_1] "Permanent CLIR " attribute (bit a30) of Extended higher layer capabilities (Part 2) is set to 1 |
| Pass criteria: | Verify the answer |
| Comments | |

7.18 TC_FT_NG1.N.18 Call forwarding (external calls) tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Call forwarding (external calls) with the following considerations:

- As NG1.N.18_1 "Call forwarding common requirements" procedure is tested when testing NG1.N.16_25 "Line settings list" procedure for the corresponding settings, there is no test case defined for this procedure.

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| TC_FT_NG1.N.18_BV_201 | External Call Forwarding Unconditional (CFU) to external number |
| Reference: | TS 102 527-3 [14], Clause 7.4.13.2 |
| Initial condition: | "Call Forwarding unconditional" field on line 0 set to the following values "Value" subfield set to 31H (activated) "CFU activation code" subfield set to FT_IXIT_29.1 (possibly empty) "CFU deactivation code" subfield set to FT_IXIT_29.2 (possibly empty) "Call forwarding number" subfield set to Phone B number |
| Stimulus: | F-00 1. Perform an incoming call on line 0 towards IUT from Phone A 2. Modify "Value" subfield of "Call Forwarding Unconditional" field in line 0 settings list to 30H (deactivated) from TS_1 Perform an incoming call on line 0 towards IUT from Phone A |
| Pass criteria: | 1. Verify that Phone B rings Verify that IUT does not send to TS_1 any {CC-SETUP} message 2. Verify that the IUT sends to TS_1 a {CC-SETUP} message |
| Comments: | - For the definition of FT_IXIT_29.1 and FT_IXIT_29.2, see Annex A, Table A.16 |

| TC_FT_NG1.N.18_BV_301 | External Call Forwarding on No Answer (CFNA) to external number |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.13.3 |
| Initial condition: | "Call Forwarding on No Answer" field on line 0 set to the following values |
| | "Value" subfield set to 31H (activated) |
| | "Nb of seconds before call is forwarded" set to 0FH |
| | "CFNA activation code" subfield set to FT_IXIT_29.3 (possibly empty) |
| | "CFNA deactivation code" subfield set to FT_IXIT_29.4 (possibly empty) |
| | "Call forwarding number" subfield set to Phone B number |
| Stimulus: | F-00 |
| | 1. Perform an incoming call on line 0 towards IUT from Phone A |
| | 2. Wait for 10seconds |
| | 2a. Wait for 10 additional seconds |
| | 3. Modify "Nb of seconds before call is forwarded" subfield of "Call Forwarding on No Answer" field in line 0 settings list to 00H (default FP value) from TS_1 |
| | Perform an incoming call on line 0 towards IUT from Phone A |
| | 4. none |
| | 5. Modify "Value" subfield of "Call Forwarding on No Answer" field in line 0 settings list to 30H (deactivated) from TS_1 |
| | Perform an incoming call on line 0 towards IUT from Phone A |
| | 6. Wait for 20seconds |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 a {CC-SETUP} message |
| | 2. Verify that the IUT has not sent to TS_1 a {CC-RELEASE} message |
| | 2a. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| | Verify that Phone B rings |
| | 3. Verify that the IUT sends to TS_1 a {CC-SETUP} message |
| | Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| | 4. Verify that Phone B rings |
| | 5. Verify that the IUT sends to TS_1 a {CC-SETUP} message |
| | 6. Verify that the IUT does not send any {CC-RELEASE} message before the 20 seconds |
| Comments: | - For the definition of FT_IXIT_29.3 and FT_IXIT_29.4, see Annex A, Table A.16 |
| | - In pass criteria 2 and 2a, the test equipment checks that the IUT sends a CC-RELEASE message between 10 and 20 seconds after the CC-SETUP (because the CFNA is configured with 15 seconds in initial condition) |
| | - In Pass criteria 6 test equipment checks that the call forward was actually deactivated |

| TC_FT_NG1.N.18_BV_401 | External Call Forwarding on Busy subscriber (CFB) to external number |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.13.4 |
| Initial condition: | "Call Forwarding on Busy subscriber" field on line 0 set to the following values |
| | "Value" subfield set to 31H (activated) |
| | "CFB activation code" subfield set to FT_IXIT_29.5 (possibly empty) |
| | "CFB deactivation code" subfield set to FT_IXIT_29.6 (possibly empty) |
| | "Call forwarding number" subfield set to Phone B number |
| Stimulus: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 with Phone C |
| | 1. Perform an incoming call on line 0 towards IUT from Phone A |
| | 2. Send a {CC-RELEASE} from TS_1 |
| | 3. Modify "Value" subfield of "Call Forwarding on Busy subscriber" field in line 0 settings list to 30H (deactivated) from TS_1 |
| | Perform an incoming call on line 0 towards IUT from Phone A |
| | 4. Send a CC-CONNECT from TS_1 |
| | Perform an incoming call on line 0 towards IUT from Phone A |
| Pass criteria: | 1. Verify that Phone B rings |
| | Verify that IUT does not send to TS_1 any {CC-SETUP} message |
| | 2. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| | 3. Verify that the IUT sends to TS_1 a {CC-SETUP} message with IE |
| | <<CALL-INFORMATION>> specifying (line 0, line type information, call id a, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value a), (2, 1, 1)>>> |
| | 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE |
| | <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 1)>>> |
| Comments: | - This test case is only used if FT_IXIT_16 is supported (in other words if FP triggers the CFB when second incoming call occurs) |
| | - For the definition of FT_IXIT_29.5 and FT_IXIT_29.6, see Annex A, Table A.16 |
| | - In Pass criteria 4 test equipment checks that the call forward was actually deactivated |

7.19 TC_FT_NG1.N.19 DTMF handling tests cases

Test subgroup objectives: to check the IUT's behaviours regarding DTMF handling with the following considerations:

- There is no test case defined for NG1.N.19_1 "Uplink DTMF transmission at call setup when FP connected to classic switching network" procedure and for NG1.N.19_2 "Uplink DTMF transmission when connected" as these procedures are inevitably implemented in a FP.
- There is no test case defined for NG1.N.19_3 "Downlink DTMF reception" procedure as the DTMF are received transparently as in-band audio.

| TC_FT_NG1.N.19_BV_401 | Local DTMF feedback of dialled digits |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.14.3 |
| Initial condition: | F-10 (TS_1+IUT) |
| Stimulus: | Send piecewise dialling using the {CC-INFO} message with IE <<KEYPAD>> for each digit (0-9, *,#) from TS_1 |
| Pass criteria: | Verify that the IUT does not generate to TS_1 any audio in band feedback. |

7.20 TC_FT_NG1.N.20 Tones provision tests cases

Test subgroup objectives: to check the IUT's behaviours regarding tones provision procedures.

Declarations (see Annex A):

- NG1.N.20_2 "Tones provision by the system" procedure and NG1.N.20_3 "Transparency to tones provision by the network or PABX" procedure are exclusive for external call, so the manufacturer shall declare which method is supported for each implemented tone.
- Though, NG1.N.20_2 "Tones provision by the system" procedure is mandatory for internal call.
- Ring-back tone on internal call, included in NG1.N.20_2 "Tones provision by the system" procedure, is tested when running NG1.N.8 "Call transfer" test cases, so there is no test case defined for this requirement.

- When NG1.N.20_2 "Tones provision by the system" procedure is supported, following tones are optional so the manufacturer shall declare if they are supported:
 - NG1.N.20_2 "Dial tone".
 - NG1.N.20_2 "Off-hook warning tone".
 - NG1.N.20_2 "Network congestion tone (external calls only)".

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| TC_FT_NG1.N.20_BV_201 | Tones provision by the system - Ring-back tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | F-00 |
| Stimulus: | 1. Perform an outgoing call to Phone A from TS_1 2. Call pick up on Phone A |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 an IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on': <ul style="list-style-type: none"> • for non-early CC-CONNECT implementation, within either a {CC-ALERTING} or a {CC-INFO} message before {CC-CONNECT} message • for early CC-CONNECT implementation, within a {CC-INFO} message after {CC-CONNECT} message 2. Verify that the IUT sends to TS_1 an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' within either a {CC-INFO} or a {CC-CONNECT} message |
| Comments: | For early CC-CONNECT implementation, ring-back tone is not expected in {CC-CONNECT} message |

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| TC_FT_NG1.N.20_BV_202 | Tones provision by the system - Busy tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | "Single call" mode line, 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), external call in F-10 (TS_2+IUT) initiated by PP2 with Phone B |
| Stimulus: | Initiate outgoing call from TS_1 on the same line as the first call with TS_2 |
| Pass criteria: | Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<SIGNAL>> with the value 04H indicating 'Busy tone on' |

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|------------------------------|---|
| TC_FT_NG1.N.20_BV_203 | Tones provision by the system - Call waiting tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | G.722 external call in F-10 (TS_1+IUT) with Phone A |
| Stimulus: | Perform an incoming external call towards IUT from Phone B |
| Pass criteria: | Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<SIGNAL>> with the value 07H indicating 'call waiting tone on' |

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|------------------------------|---|
| TC_FT_NG1.N.20_BV_204 | Tones provision by the system - Negative acknowledgement tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | External call in F-10 (TS_1+IUT) with Phone A (call id a), one parallel external call established with Phone B (call id b), both calls are on line 0 |
| Stimulus: | Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id c) =<(1, 0, value c)> |
| Pass criteria: | Verify that the IUT send to TS_1 a {CC-INFO} message with IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' |
| Comments: | Call id is assigned by the IUT, as a result call id c shall be different from allocated ones |

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| TC_FT_NG1.N.20_BV_206 | Tones provision by the system - Dial tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-SETUP} message from TS_1 Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (34H, 33H, 32H, 31H) digits from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT sends to TS_1 an IE <<SIGNAL>> with the value 00H indicating 'Dial tone on': <ul style="list-style-type: none"> for non-early CC-CONNECT implementation, within either a {CC-SETUP-ACK} or a {CC-INFO} message before {CC-CONNECT} message for early CC-CONNECT implementation, within either a {CC-CONNECT} or a further {CC-INFO} message Verify that the IUT sends to TS_1 an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' within either a {CC-CALL-PROC}, a {CC-CONNECT}, or a {CC-INFO} message |
| TC_FT_NG1.N.20_BV_207 | Tones provision by the system - Off-hook warning tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.1 |
| Initial condition: | F-10 (TS_1+IUT) with Phone A |
| Stimulus: | Hang up on Phone A |
| Pass criteria: | Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<SIGNAL>> with the value 08H indicating 'Off-hook warning tone on' |
| TC_FT_NG1.N.20_BV_210 | Tones provision by the system - Ring-back tone on parallel call |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2. |
| Initial condition: | External call in F-10 (TS_1+IUT) with Phone A (call id a) on line 0 |
| Stimulus: | <ol style="list-style-type: none"> Send 1CH 15H digits together with Phone B number in IE <<MULTI-KEYPAD>> in a {CC-INFO} message from TS_1 and IE <<CALL-INFORMATION>> specifying (line None) =(0, 0, 127)> Call pick up on Phone B |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> for new call reference call id b Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<SIGNAL>> with the value 01H indicating 'Ring back tone on' Verify that the IUT sends to TS_1 an IE <<SIGNAL>> with the value 3FH indicating 'Tones Off' within a {CC-INFO} message |
| Comments: | The two {CC-INFO} messages may be combined in one in step 1 |
| TC_FT_NG1.N.20_BV_220 | Tones provision by the system - Backward compatibility with legacy PPs |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.2.2 |
| Initial condition: | TS_1 is a GAP PP, F-00 |
| Stimulus: | Perform an outgoing call from TS_1 |
| Pass criteria: | Verify that the IUT indicates availability of in-band tones to TS_1 by connecting the U-plane either by sending: <ul style="list-style-type: none"> IE <<PROGRESS INDICATOR>> before {CC-CONNECT} message; or a {CC-CONNECT} message |
| TC_FT_NG1.N.20_BV_301 | Transparency to tones provision by the network or PABX - Dial tone and ring back tone for a first call |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.3 |
| Initial condition: | F-00 |
| Stimulus: | Perform an outgoing call on line 0 to Phone A from TS_1 |
| Pass criteria: | Verify that the IUT indicates availability of in-band tones to TS_1 by connecting the U-plane either by sending: <ul style="list-style-type: none"> IE <<PROGRESS INDICATOR>> before {CC-CONNECT} message; or a {CC-CONNECT} message Verify on TS_1 that the tones generated by the network or PABX can be heard: <ul style="list-style-type: none"> The Dial tone on if declared (see Annex A, Table A.26) The Ring Back Tone if declared (see Annex A, Table A.26) |
| Comments: | - The TC is tested if at least one of the two indicated tones is handled transparently as declared in Table A.26. Only declared tone(s) is(are) tested in the pass criteria |

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| TC_FT_NG1.N.20_BV_302 | Transparency to tones provision by the network or PABX - Busy tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.3 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform a call from phone B to phone A (done by user) 2. Perform an outgoing call on line 0 to Phone A from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. None 2. Verify that the IUT indicates availability of in-band tones to TS_1 by connecting the U-plane either by sending: <ul style="list-style-type: none"> • IE <<PROGRESS INDICATOR>> before {CC-CONNECT} message; or • a {CC-CONNECT} message Verify that the Busy tone or busy in-band announcement indication generated by the network or PABX can be heard |
| Comments: | <p>For first stimulus, a display on test equipment to request user to place a call from phone B to phone A is necessary</p> <p>Purpose of stimulus 1 is to set-up a busy situation in the network regarding phone A. However this may be linked to the network capabilities (for example, double call features disabled with phone A). So other variants of stimulus 1 are allowed in order to set up this busy situation with phone A.</p> |

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| TC_FT_NG1.N.20_BV_303 | Transparency to tones provision by the network or PABX - Call waiting tone |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.3 |
| Initial condition: | G.722 external call in F-10 (TS_1+IUT) with Phone A |
| Stimulus: | Perform an incoming external call towards IUT from Phone B |
| Pass criteria: | Verify that the IUT plays transparently the call waiting tone |

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| TC_FT_NG1.N.20_BV_304 | Transparency to tones provision by the network or PABX - Dial tone and ring back tone for outgoing parallel call |
| Reference: | TS 102 527-3 [14], Clause 7.4.15.3 |
| Initial condition: | G.722 external call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to 1CH 15H digits and IE <<CALL-INFORMATION>> specifying (line None) =<(0, 0, 127)> 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone B number and IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> |
| Pass criteria: | <ol style="list-style-type: none"> 1. If declared (see Annex A, Table A.26), verify on TS_1 that the Dial tone on generated by the network or PABX can be heard 2. If declared (see Annex A, Table A.26), verify on TS_1 that the Ring Back Tone generated by the network or PABX can be heard |
| Comments: | <ul style="list-style-type: none"> - The objective of this test case is to test the tones when provided transparently by the network, as a consequence it is not necessary to test the call statuses nor call ids - The TC is tested if at least one of the two indicated tones is handled transparently as declared in Table A.26. Only declared tone(s) is(are) tested in the pass criteria |

7.21 TC_FT_NG1.N.21 Headset management tests cases

Test subgroup objectives: to check the IUT's behaviours regarding headset management with the following consideration:

- As NG1.N.21_1 "Headset considerations" is tested implicitly when running NG1.A.1 "Easy PIN-code registration" test cases, there is no test case defined for this procedure.
- As NG1.N.21_3 "Headset incoming call" is tested implicitly when running NG1.N.1 "Codec negotiation" incoming call test cases, there is no test case defined for this procedure.
- As NG1.N.21_4 "Re-dial of last outgoing call" and NG1.N.21_5 "Re-dial of last incoming call" procedures use normal call setup instead of 'interception' setup, there is no test case defined for these procedures.
- As NG1.N.21_6 "Switching headset to handset (headset initiated)" procedures use NG1.N.8 "Call transfer" procedure, there is no test case defined for these procedures.

- All other telephony features are supported on FP side towards a HPP, so there is no test case defined for NG1.N.21_8 "Compatibility with other telephony features and profiles".

| TC_FT_NG1.N.21_BV_201 | Headset call interception - G.722 call |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.16.2.2 |
| Initial condition: | 2 PPs registered (TS_1 is HPP PP1, TS_2 is NG PP2), "Call interception" set to 31H ("allowed") for PP2's internal names list entry, G.722 external call in F-10 (TS_2+IUT) established by Phone B on line 0 (call id b) with TS_2, TS_2 selected G.722 when negotiating codec |
| Stimulus: | <ol style="list-style-type: none"> Send a {CC-SETUP} message in long slot mode with IE << MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits from TS_1 Start F<CC.NG.01> timer control when receiving IE <<SIGNAL>> in step 1 Time out of F< CC.NG.01> timer control Send a {CC-RELEASE-COM } message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT sends to TS_1 <ul style="list-style-type: none"> (for a non-early {CC-CONNECT} implementation), a {CC-CALL-PROC} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call proc) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 3)> OR (for an early {CC-CONNECT} implementation) a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> <p>Verify that the IUT sends to TS_2 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> an IE <<SIGNAL>> with the value 02H indicating 'intercept tone on' an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP1> >>, an IE <<CALL-INFORMATION>> specifying (call id b, CS_call intercepted) =<(1, 0, value b), (2, 1, 8)>, when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify that the IUT sends to TS_1</p> <ul style="list-style-type: none"> (for a non-early {CC-CONNECT} implementation) a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> OR (for an early {CC-CONNECT} implementation) a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> <p>Verify end-to-end U-plane connection between TS_1 and Phone B</p> |
| Comments: | <ol style="list-style-type: none"> Verify that the IUT sends to TS_2 a {CC-RELEASE} message <ul style="list-style-type: none"> 'Call interception' parameter in Internal names list shall be configured by the test system In pass criterion 1, test equipment relies on declaration FT_IXIT_22 to know if the IUT implements early or non-early CC-CONNECT on line 0 In pass criterion 1, the line confirmation (line 0, line type information) may also be sent: <ul style="list-style-type: none"> (for a non-early {CC-CONNECT} implementation) in a {CC-INFO} (without any call status) following the {CC-CALL-PROC} and sent before {CC-CONNECT} (for an early {CC-CONNECT} implementation), in a {CC-INFO} following the {CC-CONNECT} (together with 'CS call proc', or in subsequent one without any call status sent before 'CS call connect') |

| TC_FT_NG1.N.21_BV_202 | Headset call interception - G.726 call |
|-----------------------|---|
| Reference: | TS 102 527-3 [14], Clause 7.4.16.2.2 |
| Initial condition: | 2 PPs registered (TS_1 is HPP PP1, TS_2 is NG PP2), "Call interception" set to 31H ("allowed") for PP2's internal names list entry, G.726 external call in F-10 (TS_2+IUT) established by Phone C on line 0 (call id b), TS_2 selected G.726 when negotiating codec |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message in long slot mode with IE << MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits from TS_1 2. Start F<CC.NG.01> timer control when receiving IE <<SIGNAL>> in step 1 Time out of F< CC.NG.01> timer control 3. Send a {CC-RELEASE-COM} message from TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 <ul style="list-style-type: none"> - (for a non-early {CC-CONNECT} implementation), a {CC-CALL-PROC} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call proc) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 3)> OR - (for an early {CC-CONNECT} implementation) a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> <p>Verify that the IUT sends to TS_2 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 02H indicating 'intercept tone on' • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP1> >>>, • an IE <<CALL-INFORMATION>> specifying (call id b, CS_call intercepted) =<(1, 0, value b), (2, 1, 10)>, • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify that the IUT sends to TS_1</p> <ul style="list-style-type: none"> - (for a non-early {CC-CONNECT} implementation), a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> OR - (for an early {CC-CONNECT} implementation) a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> <p>Verify end-to-end U-plane connection between TS_1 and Phone C</p> <ol style="list-style-type: none"> 2. Verify that the IUT sends to TS_2 a {CC-RELEASE} message |
| Comments: | <ul style="list-style-type: none"> - 'Call interception' parameter in Internal names list shall be configured by the test system - In pass criterion 1, test equipment relies on declaration FT_IXIT_22 to know if the IUT implements early or non-early CC-CONNECT on line 0 - In pass criterion 1, the line confirmation (line 0, line type information) may also be sent: <ul style="list-style-type: none"> - (for a non-early {CC-CONNECT} implementation) in a {CC-INFO} (without any call status) following the {CC-CALL-PROC} and sent before {CC-CONNECT} - (for an early {CC-CONNECT} implementation), in a {CC-INFO} following the {CC-CONNECT} (together with 'CS call proc', or in subsequent one without any call status sent before 'CS call connect') |

| TC_FT_NG1.N.21_BV_204 | Headset call interception - Control code failed |
|--|---|
| <p>Reference:</p> <p>Initial condition:</p> <p>Stimulus:</p> <p>Pass criteria:</p> | <p>TS 102 527-3 [14], Clause 7.4.16.2.2</p> <p>2 PPs registered (TS_1 is HPP PP1, TS_2 is NG PP2), "Call interception" set to 30H ("not allowed") for PP2's internal names list entry, External call in F-10 (TS_2+IUT) established by TS_2 on line 0 (call id b) with Phone B</p> <p>1. Send a {CC-SETUP} message in long slot mode with IE << MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits from TS_1</p> <p>1. Verify that the IUT sends to TS_1:</p> <ul style="list-style-type: none"> - (for a non-early {CC-CONNECT} implementation), a {CC-CALL-PROC} message with IE <<CALL-INFORMATION>> specifying at least (call id b, CS call proc) =< (1, 0, value b), (2, 1, 3)> <p>OR</p> <ul style="list-style-type: none"> - (for an early {CC-CONNECT} implementation), a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying at least (call id b) =<(1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> <p>Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages:</p> <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' • an IE <<CALL-INFORMATION>> specifying (call id b, CS call disconnecting, control code failed) =< (1, 0, value b), (2, 1, 6), (2, 2, 3)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages <p>Verify that the IUT sends to TS_1 a {CC-INFO} message an IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =< (1, 0, value b), (2, 1, 0) ></p> <p>Verify end-to-end U-plane connection between TS_2 and Phone B</p> |
| <p>Comments:</p> | <ul style="list-style-type: none"> - 'Call interception' parameter in Internal names list shall be configured by the test system - In pass criterion 1, test equipment relies on declaration FT_IXIT_22 to know if the IUT implements early or non-early CC-CONNECT on line 0 - In pass criterion 1, presence of a line confirmation (line 0, line type information) is optional (error case) and is therefore not tested. Note that the IUT is still allowed to send a line confirmation as follows: <ul style="list-style-type: none"> - (for a non-early {CC-CONNECT} implementation) in the {CC-CALL-PROC}, or in a {CC-INFO} (without any call status) following the {CC-CALL-PROC} and sent before 'CS call disconnecting' call status - (for an early {CC-CONNECT} implementation), in the {CC-CONNECT}, or in a {CC-INFO} following the {CC-CONNECT} (together with 'CS call proc', or in subsequent one without any call status sent before 'CS call disconnecting' call status) |

| TC_FT_NG1.N.21_BV_701 | Switching from headset to handset (handset initiated) - G.722 call |
|-----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.4.16.7 |
| Initial condition: | 2 PPs registered (TS_1 is HPP PP1, TS_2 is NG PP2), |
| | "Call interception" set to 31H ("allowed") for PP1's internal names list entry, |
| | G.722 outgoing call in F-10 intercepted by TS_1 (Run TC_FT_NG1.N.21_BV_201) |
| Stimulus: | 1. Send a {CC-SETUP} message in long slot mode with IE << MULTI-KEYPAD >> set to (1CH, 50H, 2AH) digits from TS_2 |
| | 2. Start F<CC.NG.01> timer control when receiving IE <<SIGNAL>> in step 1 |
| | Time out of F< CC.NG.01> timer control |
| | 3. Send a {CC-RELEASE-COM} message from TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_2: |
| | - (for a non-early {CC-CONNECT} implementation), a {CC-CALL-PROC} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b, CS call proc) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b), (2, 1, 3)> |
| | OR |
| | - (for an early {CC-CONNECT} implementation) a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information, call id b) =<(0, 0, lid0), (0, 5, lt0), (1, 0, value b)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call proc) =<(1, 0, value b), (2, 1, 3)> |
| | Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: |
| | • an IE <<SIGNAL>> with the value 02H indicating 'intercept tone on' |
| | • an IE <<CALLING PARTY NUMBER = <Number type= Network specific number, Numbering plan id = Private plan, Presentation indicator=do not care value, Screening indicator= do not care value, calling party address= IA5 coding of terminal identity number in decimal of PP2> >> , |
| | • an IE <<CALL-INFORMATION>> specifying (call id b, CS_call intercepted) =<(1, 0, value b), (2, 1, 10)> , |
| | • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages |
| | Verify that the IUT sends to TS_2: |
| | - (for a non-early {CC-CONNECT} implementation), a {CC-CONNECT} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| | OR |
| | - (for an early {CC-CONNECT} implementation) a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> |
| | Verify end-to-end U-plane connection between TS_2 and Phone B |
| | 2. Verify that the IUT sends to TS_1 a {CC-RELEASE} message |
| | - 'Call interception' parameter in Internal names list shall be configured by the test system |
| | - In pass criterion 1, test equipment relies on declaration FT_IXIT_22 to know if the IUT implements early or non-early CC-CONNECT on line 0 |
| | - In pass criterion 1, the line confirmation (line 0, line type information) may also be sent: |
| | - (for a non-early {CC-CONNECT} implementation) in a {CC-INFO} (without any call status) following the {CC-CALL-PROC} and sent before {CC-CONNECT} |
| | - (for an early {CC-CONNECT} implementation), in a {CC-INFO} following the {CC-CONNECT} (together with 'CS call proc', or in subsequent one without any call status sent before 'CS call connect') |
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7.22 TC_FT_NG1.N.22 Handling of lines where second calls are signalled in-band tests cases

Test subgroup objectives: to check the IUT's behaviours regarding handling of lines where second calls are signalled in-band with the following consideration:

- NG1.N.22 "Handling of lines where second calls are signalled in-band" feature is optional on FP side, so the manufacturer shall declare if it is supported.

- NG1.N.22_2 "Basic 'double call with in-band signalling' lines" procedure is not tested as this type of line is not considered as DCIBS line from the NG1.N.22 "Handling of lines where second calls are signalled in-band" feature perspective.
- NG1.N.22_3 "Use of transparent commands on DCIBS lines (Basic or Off-hook CLIP enabled) or any other line" procedure is not tested as the transparent commands are network dependant.

NOTE: Off-hook CLIP is also called "CLIP phase II". See definition Clause 3.1.

Declarations (see Annex A):

- NG1.N.22 "Handling of lines where second calls are signalled in-band" feature is optional on FP side, so the manufacturer shall declare if it is supported.

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| TC_FT_NG1.N.22_BV_101 | Off-hook CLIP enabled 'double call with in-band signalling' lines - double call with in-band signalling type for outgoing call (first and second call) |
| Reference: | TS 102 527-3 [14], Clauses 7.4.3.10.2 and 7.4.8.3 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Send a {CC-SETUP} message from TS_1 with IE <<BASIC-SERVICE>> 'Normal call setup' and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 2. Send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to Phone A number. Pick up the call on Phone A 3. Send a {CC-INFO} message from TS_1 with IE <<MULTI-KEYPAD>> set to 1CH 15H digits together with Phone B number and IE <<CALL-INFORMATION>> specifying (line 0) =<(0, 0, lid0)> 4. Pick up the call on Phone B 5. Send a {CC-RELEASE} message from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1: <ul style="list-style-type: none"> - (for 'non-early {CC-CONNECT}' implementation (1.1)) a {CC-SETUP-ACK} message, - (for 'early {CC-CONNECT}' implementation (1.2)) a {CC-CONNECT} message, with (in both cases) IE <<CALL-INFORMATION>> specifying: <ul style="list-style-type: none"> - (if 1.1) mandatorily (call id a) =<(1, 0, value a)> - (if 1.2) optionally (line 0, line type information with second call type set to 1) =<(0, 0, lid0), (0, 5, lt0=1xB)> 2. If the line id was sent in (1.2), verify that the IUT sends to TS_1: <ul style="list-style-type: none"> - (for 'non-early {CC-CONNECT}' implementation) a {CC-CALL-PROC} or {CC-INFO} message - (for 'early {CC-CONNECT}' implementation) a {CC-INFO} message, with (in both cases), IE <<CALL-INFORMATION>> specifying: (line 0, line type information with second call type set to 1, call id a) =<(0, 0, lid0), (0, 5, lt0=1xB), (1, 0, value a)> <p>Verify that the IUT then sends to TS_1:</p> <ul style="list-style-type: none"> - (for 'non-early {CC-CONNECT}' implementation) a {CC-CONNECT} message - (for 'early {CC-CONNECT}' implementation), a {CC-INFO} message, with (in both cases) (call id a, CS call connect) =<(1, 0, value a), (2, 1, 5)> <p>Verify end-to-end U-plane connection between TS_1 and Phone A</p> 3. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id a, CS call hold) =<(1, 0, value a), (2, 1, 9)> followed by a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (line 0, line type information with second call type set to 1, call id b) =<(0, 0, lid0), (0, 5, lt0=1xB), (1, 0, value b)> 4. Verify that the IUT sends to TS_1 a {CC-INFO} message with IE <<CALL-INFORMATION>> specifying (call id b, CS call connect) =<(1, 0, value b), (2, 1, 5)> <p>Verify end-to-end U-plane connection between TS_1 and Phone B</p> 5. Verify that the IUT sends to TS_1 a {CC-RELEASE-COM} message |
| Comments: | Early CC-CONNECT and non-early CC-CONNECT cases are handled in the same test case (pass criteria 1 and 2). Test equipment shall allow both implementations. Test equipment may rely on supplier declaration FT_IXIT_22 to know which implementation is used by the IUT |

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| TC_FT_NG1.N.22_BV_301 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Call release |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.10.3.2 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A, one parallel external call on hold on line 0 (call id b) with Phone B |
| Stimulus: | Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 33H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' • an IE <<CALL-INFORMATION>> specifying (call id a, CS call connect, control code failed) =<(1, 0, value a), (2, 1, 5), (2, 2, 3)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages |
| Comments: | <ul style="list-style-type: none"> - This test case is applicable only when FT_IXIT_24 (call release) is declared as "not supported" on this line by the supplier. In such a case the test checks that the FP actually sends a negative acknowledgement - In pass criteria, after sending the negative acknowledgement, the IUT shall not send the 'CS idle' call status to the PP |

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| TC_FT_NG1.N.22_BV_302 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Call waiting rejection (from PP to FP) (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.10.3.2 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming external call towards IUT from Phone B on line 0 2. Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 36H) digits and with IE <<CALL-INFORMATION>> specifying (call id b) =<(1, 0, value b)> from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends to TS_1 a {CC-INFO} message with an IE <<CALL-INFORMATION>> specifying (line 0, line type information with second call type set to 1, call id b, CS call setup) =<(0, 0, lid0), (0, 5, lid=1xB), (1, 0, value b), (2, 1, 1)> 2. Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' • an IE <<CALL-INFORMATION>> specifying (call id b, CS call setup, control code failed) =<(1, 0, value b), (2, 1, 5), (2, 2, 3)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages Verify that the IUT sends to TS_1 in a subsequent {CC-INFO} message: an IE <<CALL-INFORMATION>> specifying (call id b, CS idle) =<(1, 0, value b), (2, 1, 0)> Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | This test case is applicable only when FT_IXIT_25 (call waiting rejection) is declared as "not supported" on this line by the supplier |

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| TC_FT_NG1.N.22_BV_303 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Putting a call on hold (external) |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.10.3.2 |
| Initial condition: | External call in F-10 (TS_1+IUT) initiated by TS_1 on line 0 (call id a) with Phone A |
| Stimulus: | Send a {CC-INFO} message with IE << MULTI-KEYPAD >> set to (1CH, 41H) digits and with IE <<CALL-INFORMATION>> specifying (call id a) =<(1, 0, value a)> from TS_1 |
| Pass criteria: | Verify that the IUT sends to TS_1 in the same or different {CC-INFO} messages: <ul style="list-style-type: none"> • an IE <<SIGNAL>> with the value 09H indicating 'Negative acknowledgement tone' • an IE <<CALL-INFORMATION>> specifying (call id a, CS call connect, control code failed) =<(1, 0, value a), (2, 1, 5), (2, 2, 3)> • when sent in different messages, call status indication shall always be sent in the first used {CC-INFO} message, and call identifier shall be sent within all messages |
| Comments: | Verify end-to-end U-plane connection between TS_1 and Phone A This test case is applicable only when FT_IXIT_26 (put a call on hold) is declared as "not supported" on this line by the supplier. In such a case the test checks that the FP actually sends a negative acknowledgement |

7.23 TC_FT_GAP.N.30 Calling Line Identification Presentation tests cases

Test subgroup objectives: to check the IUT's ability to transmit CLIP.

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| TC_FT_GAP.N.30_BV_01 | Incoming call with calling party number |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.41 |
| Initial condition: | F-00 |
| Stimulus: | Perform an incoming call towards IUT from Phone A |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify by checking <<CALLING PARTY NUMBER>> reception on TS_1 that the IUT is able to transmit CLIP either in the {CC-SETUP} message or in a {CC-INFO} message. 2. Verify that <<CALLING PARTY NUMBER>> includes <Calling party address> field with the calling party number of external party. |

7.24 TC_FT_GAP.N.31 Internal call tests cases

Test subgroup objectives: to check the IUT's behaviours when handling internal call with the following consideration:

- As GAP.N.31_2 "Internal call keypad" is tested implicitly when testing NG1.N.7 "Common parallel call procedures (external or internal)", there is no test case defined for this procedure.

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| TC_FT_GAP.N.31_BV_101 | Internal call setup - internal call class |
| Reference: | TS 102 527-1 [13], Clause 7.3.6 Table 14 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), F-00 |
| Stimulus: | Perform an internal call towards TS_1 from TS_2 |
| Pass criteria: | Verify that the IUT performs an internal call setup towards TS_1 with <Call class = internal call> |

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| TC_FT_GAP.N.31_BV_102 | Internal call setup - internal general call |
| Reference: | TS 102 527-1 [13], Clause 7.3.6 EN 300 444 [12], Clause 14.4.3 |
| Initial condition: | 3 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2, Golden Device A is NG PP3), F-00 |
| Stimulus: | Perform an internal general call from TS_1: send a {CC-INFO} message with IE <<MULTI-KEYPAD>> set to (IA5 coding of internal general call = 2AH) digits |
| Pass criteria: | Verify that the IUT performs an internal call setup towards TS_2 with <Call class = internal call> and that Golden Device A rings |

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| TC_FT_GAP.N.31_BV_301 | Internal call CLIP |
| Reference: | EN 300 444 [12], Clause 8.43 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), no internal name configured for PP2, F-00 |
| Stimulus: | Perform an internal call towards TS_1 from TS_2 |
| Pass criteria: | Verify that the IUT sends to TS_1 an IE <<CALLING PARTY NUMBER>>, as described in EN 300 444 [12], Clause 8.43, Table 78d with <Calling party address> = IA5 coding of terminal identity number in decimal of PP2 |

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| TC_FT_GAP.N.31_BV_401 | Internal call CNIP |
| Reference: | EN 300 444 [12], Clause 8.44 TS 102 527-3 [14], Clauses 7.4.10.1 (Alphabet compatibility) and 7.4.17.1 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), F-00 |
| Stimulus: | Perform an internal call towards TS_1 from TS_2 |
| Pass criteria: | Verify that the IUT sends to TS_1 an IE <<CALLING PARTY NAME>>, as described in EN 300 444 [12], Clause 8.44, Table 78e with <Calling party name = internal names list entry of PP2> |
| Comments: | CNIP can be internal names list entry of PP2 or default string (e.g. "DECT n" where n stands for the IA5 coding of the terminal identity number of PP2 in decimal representation) UTF-8 characters are not required as it will be too complex to setup an internal names list entry through TS in the initial condition |

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| TC_FT_GAP.N.31_BV_601 | Internal call codec priority |
| Reference: | TS 102 527-3 [14], Clause 7.4.3.9 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), F-00 |
| Stimulus: | 1. Perform an internal call G.722 (long slot, G.722 prioritized) towards TS_1 from TS_2 2. Call pick up on TS_1 |
| Pass criteria: | 1. Verify that the IUT sends to TS_1 an IE <<CODEC LIST>> with highest priority for G.722 at call setup or previously at location registration. 2. Verify end-to-end U-plane connection between TS_1 and TS_2 |

7.25 TC_FT_GAP.N.34 Calling Name Identification Presentation tests cases

Test subgroup objectives: to check the IUT's ability to handle CNIP.

Declarations (see Annex A):

- GAP.N.34_2 "UTF-8 CNIP" procedure shall be only tested if the FP is connected to an UTF-8 CNIP enabled line.

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| TC_FT_GAP.N.34_BV_101 | Incoming call with calling party name |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.42 |
| Initial condition: | F-00 |
| Stimulus: | Perform an incoming call on line 0 towards IUT from Phone A (CNIP A with DECT standard characters) |
| Pass criteria: | Verify that the IUT sends to TS_1 in the {CC-SETUP} or {CC-INFO} message an IE <<CALLING PARTY NAME =< Presentation indicator=do not care value, Used alphabet=DECT standard or UTF-8, Screening indicator= do not care value, calling party name = name of Phone A>> |

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| TC_FT_GAP.N.34_BV_201 | Incoming call with UTF-8 calling party name |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.42 TS 102 527-3 [14], Clause 7.4.17.1 |
| Initial condition: | F-00 |
| Stimulus: | Perform an incoming call on line 0 towards IUT from Phone B (CNIP B with UTF-8 characters, e.g. 'Phone B éàü') |
| Pass criteria: | Verify that the IUT sends to TS_1 in the {CC-SETUP} or {CC-INFO} message an IE <<CALLING PARTY NAME =< Presentation indicator=do not care value, Used alphabet=UTF-8, Screening indicator= do not care value, calling party name = name of Phone B>> |
| Comments: | UTF-8 suggested characters encoding: <ul style="list-style-type: none"> "é": LATIN SMALL LETTER E WITH ACUTE 'c3a9'H "à": LATIN SMALL LETTER A WITH GRAVE 'c3a0'H "ü": LATIN SMALL LETTER U WITH DIAERESIS 'c3bc'H |

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| TC_FT_GAP.N.34_GC_201 | Incoming call with calling party name - UTF-8 to IA5 characters translation |
| Reference: | EN 300 444 [12], Clauses 8.12, 8.13 and 8.42 TS 102 527-3 [14], Clause 7.4.17.1 |
| Initial condition: | TS_1 is a GAP PP1, F-00 |
| Stimulus: | Perform an incoming call on line 0 towards IUT from Phone B (CNIP B with UTF-8 characters, e.g. 'Phone B éàü') |
| Pass criteria: | Verify that the IUT sends to TS_1 in the {CC-SETUP} or {CC-INFO} message an IE <<CALLING PARTY NAME =< Presentation indicator=do not care value, Used alphabet=DECT standard, Screening indicator= do not care value, calling party name = name of Phone B including only IA5 characters>> |
| Comments: | For each UTF-8 character received from the network, the FP should translate it into equivalent IA5 characters (replacement character is left free to the manufacturer) UTF-8 suggested characters encoding: <ul style="list-style-type: none"> "é": LATIN SMALL LETTER E WITH ACUTE 'c3a9'H "à": LATIN SMALL LETTER A WITH GRAVE 'c3a0'H "ü": LATIN SMALL LETTER U WITH DIAERESIS 'c3bc'H |

7.26 TC_FT_GAP.N.35 Enhanced security tests cases

Test subgroup objectives: to check the IUT's behaviours regarding Enhanced security features with the following consideration:

- As GAP.N.35_5 "Enhanced security regarding legacy devices" procedure is tested when testing GAP.N.35_1 "Encryption of all calls" procedure, there is no test case defined for this procedure.
- As GAP.N.35_4 "subscriptions requirements" procedure specifies only FP requirements, there is no test case defined for this procedure.

Declarations (see Annex A):

- GAP.N.35_2 "Re-keying during a call" procedure is optional on FP side, so the manufacturer shall declare if it is supported.
- GAP.N.35_3 "Early encryption" procedure is optional on FP side, so the manufacturer shall declare if it is supported.

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| TC_FT_GAP.N.35_BV_101 | Verify that FT enables encryption for incoming call within timer < MM_encryption_check.1 > |
| Reference: | EN 300 444 [12], Clause 8.45.1 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Perform an incoming call from Phone A 2. TS_1 sends a {CC-ALERTING} message to IUT and start timer T001 (MM_encryption_check.1 + 10 %) 3. TS_1 sends a {AUTHENTICATION-REPLY} message 4. TS_1 activates encryption on MAC layer and TS_1 sends a {CC-CONNECT} message to IUT |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message before timer T001 expires 3. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message before timer T001 expires 4. Verify that IUT sends to TS_1 a {CC-CONNECT-ACK} message Verify that encryption is activated before timer T001 expires Verify end-to-end U-plane connection between TS_1 and Phone A |

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| TC_FT_GAP.N.35_BV_102 | Verify that FT enables encryption for outgoing call within timer < MM_encryption_check.1 > |
| Reference: | EN 300 444 [12], Clause 8.45.1 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. TS_1 sends a {CC-SETUP} to IUT and start timer T001 (MM_encryption_check.1 + 10 %) 2. TS_1 sends a {AUTHENTICATION-REPLY} message 3. TS_1 activates encryption on MAC layer |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) and verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message before timer T001 expires 2. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message before timer T001 expires 3. Verify that encryption is activated before timer T001 expires and verify end-to-end U-plane connection |
| Comments: | The IUT may sent the MM messages of pass criteria 1 and 2 before or after sending the CC message of pass criterion 1. |

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| TC_FT_GAP.N.35_BV_105 | Release of unencrypted call in case of wrong answer to authentication request |
| Reference: | EN 300 444 [12], Clause 8.45.1 |
| Initial condition: | F-00 |
| Stimulus: | 1. TS_1 sends {CC-SETUP} to IUT and start timer T001 (MM_encryption_check.1 + 10 %). 2. TS_1 sends {AUTHENTICATION-REPLY} with random (wrong) credentials |
| Pass criteria: | 1. Verify that IUT sends to TS_1 a CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) and verify that IUT sends to TS_1 a {AUTHENTICATION_REQUEST} message before timer T001 expires (the MM message may be sent before or after the CC message). 2. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} with the information element <<RELEASE REASON = either <encryption activation failed> or <authentication failed>>> |
| TC_FT_GAP.N.35_BV_106 | Release of unencrypted call in case of missing answer to authentication request |
| Reference: | EN 300 444 [12], Clause 8.45.1 |
| Initial condition: | F-00 |
| Stimulus: | 1. TS_1 sends {CC-SETUP} to IUT and start timer T001 (MM_encryption_check.1 + 10 %). 2. TS_1 does neither send {AUTHENTICATION-REPLY} nor {AUTHENTICATION-REJECT} |
| Pass criteria: | 1. Verify that IUT sends to TS_1 a CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) and verify that IUT sends to TS_1 a {AUTHENTICATION_REQUEST} message before timer T001 expires (the MM message may be sent before or after the CC message). 2. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} with the information element <<RELEASE REASON = either <encryption activation failed> or <authentication failed>>> |
| TC_FT_GAP.N.35_BV_107 | Release of unencrypted call in case of PP sending {AUTHENTICATION-REJECT} message |
| Reference: | EN 300 444 [12], Clause 8.45.1 |
| Initial condition: | F-00 |
| Stimulus: | 1. TS_1 sends {CC-SETUP} to IUT and start timer T001 (MM_encryption_check.1 + 10 %) 2. TS_1 sends a {AUTHENTICATION-REJECT} message to IUT |
| Pass criteria: | 1. Verify that IUT sends to TS_1 a CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) and verify that IUT sends to TS_1 a {AUTHENTICATION_REQUEST} message before timer T001 expires (the MM message may be sent before or after the CC message). 2. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message containing IE <<RELEASE REASON = either <encryption activation failed> or <authentication failed> >> before expiry of T001 |
| TC_FT_GAP.N.35_BV_108 | Release of unencrypted call in case of cipher reject. |
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | F-00 |
| Stimulus: | 1. TS_1 sends {CC-SETUP} to IUT and start timer T001 (MM_encryption_check.1 + 10 %) 2. TS_1 sends a {AUTHENTICATION-REPLY} message 3. TS_1 sends a {CIPHER-REJECT} to IUT. |
| Pass criteria: | 1. Verify that IUT sends to TS_1 a CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) and verify that IUT sends to TS_1 a {AUTHENTICATION_REQUEST} message before timer T001 expires 2. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message before timer T001 expires 3. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message with the information element <<RELEASE REASON = <encryption activation failed> >> |
| Comments: | The IUT may sent the MM messages of pass criteria 1 and 2 before or after sending the CC message of pass criterion 1. |

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| TC_FT_GAP.N.35_BV_109 | Release of unencrypted call in case of missing encryption activation on MAC layer. |
| Reference: | EN 300 444 [12], Clause 8.45.5 |
| Initial condition: | F-00 |
| Stimulus: | 1. TS_1 sends {CC-SETUP} to IUT and start timer T001 (MM_encryption_check.1 + 10 %) 2. TS_1 sends a {AUTHENTICATION_REPLY} message. |
| Pass criteria: | 1. Verify that IUT sends to TS_1 a CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) and verify that IUT sends to TS_1 a {AUTHENTICATION_REQUEST} message before timer T001 expires. 2. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message before timer T001 expires. Verify that IUT sends to TS_1 a {CC-RELEASE-COM} message with the information element <<RELEASE REASON = <encryption activation failed> >>. |
| Comments: | The IUT may sent the MM messages of pass criteria 1 and 2 before or after sending the CC message of pass criterion 1. |

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| TC_FT_GAP.N.35_BV_201 | Verify indication of Support of 'Re-keying' and 'early encryption' in extended higher layer capabilities part 2 |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | F-00 |
| Stimulus: | TS_1 evaluates the higher layer capabilities |
| Pass criteria: | Verify that IUT indicates the support of 'Re-keying' and 'early encryption' in Extended higher layer capabilities part 2 (a42 bit=1) |

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| TC_FT_GAP.N.35_BV_202 | Usage and frequency of re-keying procedure |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | F-00. 1 PP registered (TS_1), PP has indicated the support of 'Re-keying' and 'early encryption' in the terminal capability. |
| Stimulus: | 1. Invoke external call from Phone A towards TS_1. 2. TS_1 sends a {CC-CONNECT} message. Start timer T001 (<MM_encryption_check.1> +10 %). 3. TS_1 sends a {AUTHENTICATION-REPLY} message and stores DCK as DCK_01. Start timer T001 (<MM_re-keying.1> +10%). 4. TS_1 activates encryption on MAC layer 5. TS_1 sends a {AUTHENTICATION-REPLY} message and stores DCK as DCK_02. 6. TS_1 activates encryption on MAC layer |
| Pass criteria: | 1. Verify that IUT sends to TS_1 a {CC-SETUP} message 2. Verify that IUT sends to TS_1 {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 3. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 4. Verify that encryption is activated with DCK_1 Verify end-to-end U-plane connection between TS_1 and Phone A Verify that IUT sends to TS_1 {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 5. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 6. Verify that encryption is activated with DCK_2 and verify end-to-end U-plane connection. |
| Comments: | The IUT may send the MM messages of pass criteria 2 and 3 before or after sending the CC message of pass criterion 1. |

| TC_FT_GAP.N.35_BV_203 | Abnormal release if encryption for re-keying is not activated in MAC layer |
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| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | F-00. 1 PP registered (TS_1), PP has indicated the support of 'Re-keying' and 'early encryption' in the terminal capability. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke external call from Phone A towards TS_1. 2. TS_1 sends a {CC-CONNECT} message. Start timer T001 (<MM_encryption_check.1> +10 %). 3. TS_1 sends a {AUTHENTICATION-REPLY} message. Start timer T001 (<MM_re-keying.1> +10 %). 4. TS_1 activates encryption on MAC layer 5. TS_1 sends a {AUTHENTICATION-REPLY} message. 6. TS_1 does not activate encryption on MAC layer |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 3. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 4. Verify that encryption is activated Verify end-to-end U-plane connection between TS_1 and Phone A 5. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 6. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 6. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<Release Reason = either <Re-Keying failed> or <encryption activation failed>>> and then verify that the IUT releases the MAC layer connection. |
| Comments: | The IUT may send the MM messages of pass criteria 2 and 3 before or after sending the CC message of pass criterion 1. |

| TC_FT_GAP.N.35_BV_204 | Abnormal release if PP does not answer to {AUTHENTICATION-REQUEST} message for re-keying procedure |
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| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | F-00. 1 PP registered (TS_1), PP has indicated the support of 'Re-keying' and 'early encryption' in the terminal capability. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke external call from Phone A towards TS_1. 2. TS_1 sends a {CC-CONNECT} message. Start timer T001 (MM_encryption_check.1 + 10 %). 3. TS_1 sends a {AUTHENTICATION-REPLY} message. Start timer T001 (<MM_re-keying.1> +10 %). 4. TS_1 activates encryption on MAC layer 5. TS_1 does neither send {AUTHENTICATION-REPLY} nor {AUTHENTICATION-REJECT} message |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 3. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 4. Verify that encryption is activated Verify end-to-end U-plane connection between TS_1 and Phone A 5. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 5. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<Release Reason = <Re-Keying failed> or <authentication failed> or <encryption activation failed> >> and then verify that the IUT releases the MAC layer connection. |
| Comments: | The IUT may send the MM messages of pass criteria 2 and 3 before or after sending the CC message of pass criterion 1. |

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| TC_FT_GAP.N.35_BV_205 | Abnormal release if PP answers to {AUTHENTICATION-REQUEST} message for re-keying procedure with { AUTHENTICATION-REJECT} |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | F-00. 1 PP registered (TS_1), PP has indicated the support of 'Re-keying' and 'early encryption' in the terminal capability. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke external call from Phone A towards TS_1. 2. TS_1 sends a {CC-CONNECT} message. Start timer T001 (MM_encryption_check.1 + 10 %) 3. TS_1 sends a {AUTHENTICATION-REPLY} message. Start timer T001 (<MM_re-keying.1> +10%). 4. TS_1 activates encryption on MAC layer 5. TS_1 sends a {AUTHENTICATION-REJECT} |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 3. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 4. Verify that encryption is activated and verify end-to-end U-plane connection. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 5. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<Release Reason = <Re-Keying failed> or <authentication failed> or <encryption activation failed> >> and then verify that the IUT releases the MAC layer connection. |
| Comments: | The IUT may send the MM messages of pass criteria 2 and 3 before or after sending the CC message of pass criterion 1. |

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| TC_FT_GAP.N.35_BV_206 | Abnormal release if PP answers to {CIPHER_REQUEST} message for re-keying procedure with { CIPHER_REJECT} |
| Reference: | EN 300 444 [12], Clause 8.45.2 |
| Initial condition: | F-00. 1 PP registered (TS_1), PP has indicated the support of 'Re-keying' and 'early encryption' in the terminal capability. |
| Stimulus: | <ol style="list-style-type: none"> 1. Invoke external call from Phone A towards TS_1. 2. TS_1 sends a {CC-CONNECT} message. Start timer T001 (MM_encryption_check.1 + 10 %). 3. TS_1 sends a {AUTHENTICATION-REPLY} message. Start timer T001 (<MM_re-keying.1> +10 %). 4. TS_1 activates encryption on MAC layer 5. TS_1 sends a {AUTHENTICATION-REPLY} 6. TS_1 sends a {CIPHER_REJECT} message |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 a {CC-SETUP} message 2. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 3. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 4. Verify that encryption is activated Verify end-to-end U-plane connection between TS_1 and Phone A. Verify that IUT sends to TS_1 a {AUTHENTICATION-REQUEST} message to TS_1 before expiry of timer T001. 5. Verify that IUT sends to TS_1 a {CIPHER_REQUEST} message 6. Verify that IUT sends to TS_1 a {CC-RELEASE_COM} message containing IE <<Release Reason = either <Re-Keying failed> or <encryption activation failed> >> and then verify that the IUT releases the MAC layer connection. |
| Comments: | The IUT may send the MM messages of pass criteria 2 and 3 before or after sending the CC message of pass criterion 1. |

| TC_FT_GAP.N.35_BV_301 | Assignment of default cipher key and usage of early encryption during incoming call. |
|-----------------------|---|
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | Registration mode in IUT enabled (bit a44 is set). |
| Stimulus: | <ol style="list-style-type: none"> 1. TS_1 performs subscription registration to IUT, indicating the support of 'Re-keying' and 'early encryption' in the terminal capability. 2. Start timer T001 (<MM_early_encryption.1>+10 %). TS_1 sends a {LOCATE-REQUEST} message, indicating the support of 'Re-keying' and 'early encryption' in the terminal capability. 3. None 4. If IUT has sent an {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 in pass criterion 3, TS_1 sends an {AUTHENTICATION-REPLY} and saves DCK as Def_DCK_1. 5. Invoke external call from Phone A towards TS_1. Re-start timer T001 (<MM_early_encryption.1>+10%) 6. If IUT has sent an {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 in pass criterion 5, TS_1 sends a {AUTHENTICATION-REPLY} and saves DCK as Def_DCK_1. End call on both TS_1 and Phone A. 7. Invoke external call from Phone A towards TS_1. 8. Perform MAC connection establishment with immediate encryption activation using Def_DCK_1 and send an encrypted {LCE-PAGE-RESPONSE} message. 9. TS_1 sends a {CC-CONNECT} message. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify successful subscription registration. 2. Verify that the IUT sends to TS_1 a {LOCATE-ACCEPT} message. 3. If IUT sends an {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 to TS_1 verify that this message is sent before timer T001 expires. 4. Verify that connection is released on MAC layer. 5. Verify that the IUT sends to TS_1 a {CC-SETUP} message. If IUT sends an {AUTHENTICATION-REQUEST} message indicating DEF-bit=1 to TS_1 verify that this message is sent before timer T001 expires. 6. Verify that the connection is released on MAC layer. 7. Verify that the IUT broadcasts to TS_1 a {LCE-REQUEST-PAGE} message. 8. Verify that the IUT sends to TS_1 a {CC-SETUP} message on the already encrypted link. 9. Verify that encryption is activated with Def_DCK_1 and Verify end-to-end U-plane connection between TS_1 and Phone A |
| Comments: | <p>The {AUTHENTICATION-REQUEST} message might also arrive in TS_1 before the {LOCATE-ACCEPT} message is received by TS_1. This would also be valid behaviour. Authentication of PP and Default Cipher Key assignment shall be performed at least once, i.e. either in pass criteria 3 or in pass criteria 5.</p> <p>Verification of U-plane connection shall be done while Def_DCK_1 is used.</p> <p>Therefore the TS shall not switch to another DCK (by re-keying) before the U-Plane connection is verified even if the IUT requests to do so</p> |

| TC_FT_GAP.N.35_BV_302 | Usage of early encryption during outgoing call |
|-----------------------|---|
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | F-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 (i.e. TC_FT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | <ol style="list-style-type: none"> 1. TS_1 performs MAC connection establishment with immediate encryption activation using Def_DCK_1 and sends a {CC-SETUP} message. 2. Invoke acceptance of outgoing call at Phone A. |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that IUT sends to TS_1 an encrypted CC-message (either {CC-SETUP-ACK}, {CC-ALERTING}, {CC-CALL-PROC}, or {CC-CONNECT}) 2. Verify end-to-end U-plane connection between TS_1 and Phone A. |

| TC_FT_GAP.N.35_BV_303 | Usage of early encryption for MM procedure |
|-----------------------|--|
| Reference: | EN 300 444 [12], Clause 8.45.3 |
| Initial condition: | F-00. Default cipher key Def_DCK_1 is available both in IUT and TS_1 (i.e. TC_FT_GAP.N.35_BV_301 was executed before and the Def_DCK_1 has not been deleted). |
| Stimulus: | Switch IUT off and on. TS_1 synchronizes to IUT. TS_1 performs MAC connection establishment with immediate encryption activation using Def_DCK_1 and sends a {LOCATE-REQUEST} message. |
| Pass criteria: | <p>Verify that encryption is activated with Def_DCK_1</p> <p>Verify that IUT sends to TS_1 a {LOCATE-ACCEPT} message over the encrypted link.</p> |

| | |
|------------------------------|---|
| TC_FT_GAP.N.35_BV_401 | Duration of registration window |
| Reference: | EN 300 444 [12], Clause 8.45.4 |
| Initial condition: | F-00 |
| Stimulus: | Put IUT in registration mode. Start timer T001 (120 seconds + 5 %) |
| Pass criteria: | Verify that IUT sets bit a44 in the FP Capabilities to 0 before expiry of timer T001. |

| | |
|------------------------------|---|
| TC_FT_GAP.N.35_BV_402 | Closing of registration window after successful registration. |
| Reference: | EN 300 444 [12], Clause 8.45.4 |
| Initial condition: | |
| Stimulus: | <ol style="list-style-type: none"> Put IUT in registration mode. TS_1 performs subscription registration to IUT. |
| Pass criteria: | <ol style="list-style-type: none"> Verify that IUT sets bit a44 in the FP Capabilities to 1. Verify successful subscription registration. Verify that IUT sets bit a44 in the FP Capabilities to 0. |

7.27 TC_FT_NG1.A.1 Easy PIN code registration tests cases

Test subgroup objectives: to check the IUT's behaviours regarding easy PIN-code registration taking into account the following considerations:

- As NG1.A.1_3 "Base station name selection" is tested when testing NG1.A.2_5 "Base station name selection", there is no test case defined for this procedure in following clause.

Declarations (see Annex A):

- NG1.A.1 "Easy PIN code registration" feature is optional on FP side, so the manufacturer shall declare if it is supported.
- NG1.A.1_3 "Base station name selection" is optional. So the manufacturer shall declare if it is supported.
- NG1.A.1_4 "Registration user feedback" is optional. So the manufacturer shall declare if it is supported.

| | |
|-----------------------------|--|
| TC_FT_NG1.A.1_BV_401 | Registration user feedback |
| Reference: | TS 102 527-3 [14], Clause 7.10.1.3.3 |
| Initial condition: | PIN code set to '1234', F-00 |
| Stimulus: | <ol style="list-style-type: none"> Start the access rights procedure on the IUT Stop the access rights procedure on the IUT when possible or wait for the end of the procedure (3 minutes maximum) Start the access rights procedure on the IUT Perform an Easy PIN code registration procedure using '1234' as PIN value from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> Verify that the IUT gives a feedback to the user of the registration process: "Registration in progress state" Verify that the IUT gives a feedback to the user that the registration process is closed (IUT has gone to idle mode) Verify that the IUT gives a feedback to the user of the registration process: "Registration in progress state" Verify that the IUT gives a feedback to the user of the registration process: "Registration success state" |

7.28 TC_FT_NG1.A.2 Easy pairing registration tests cases

Test subgroup objectives: to check the IUT's behaviours regarding easy pairing registration taking into account the following considerations:

- As NG1.A.2_6 "Registration user feedback" is tested when testing NG1.A.1_4 "Registration user feedback", there is no test case defined for this procedure.

Declarations (see Annex A):

- NG1.A.1_3 "Base station name selection" is optional. So the manufacturer shall declare if it is supported.

- NG1.A.1_6 "Registration user feedback" is optional. So the manufacturer shall declare if it is supported.

| TC_FT_NG1.A.2_BV_301 | Base station limited registration mode |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.10.1.2.2 |
| Initial condition: | PIN code set to '0000', F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Confirm that the IUT is not in registration mode 2. Start the access rights procedure on the IUT and start F<AP.01> timer control 3. Time out of F<AP.01> timer control 4. Start the access rights procedure on the IUT 5. Perform an Easy pairing code registration procedure from TS_1 and TS_2 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 0 2. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 1 3. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 0 4. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 1 5. Verify that the registration procedure is successful on one RF front end (for example TS_1) and not successful on the other RF front end (for example TS_2) Verify that the IUT broadcasts the following capability after successful registration: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 0 |

| TC_FT_NG1.A.2_BV_501 | Base station name selection |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.10.1.3.2 |
| Initial condition: | F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. None 2. Start the access rights procedure on the FP 3. Start timer T001 (F<AP.01>) and T002 (20 seconds) 4. Time out of T002 and Start timer T003 (2 seconds) 5. Time out of T003 6. Time out of T001 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 0 2. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 1 3. None 4. None 5. Verify that all segments of {CLMS-FIXED} message arrived and that the transmitted name is equal to FT_IXIT_14 6. Verify that the IUT broadcasts the following capability: <ul style="list-style-type: none"> • 'Access Rights supported' capability bit set to 0 |
| Comments: | <p>The FP shall send its name continuously during the registration window, as a result 20 seconds after detecting the registration window, it is expected to receive the name in a time interval of 2 seconds</p> <p>TS_1 shall not collect {CLMS} segments during T002 interval, but only during T003 interval</p> |

7.29 TC_FT_NG1.A.3 Handset locator tests cases

Test subgroup objectives: to check the IUT's behaviours regarding handset locator.

Declarations (see Annex A):

- NG1.A.3 "Handset locator" feature is optional on FP side, so the manufacturer shall declare if it is supported.

| TC_FT_NG1.A.3_BV_101 | Handset locator |
|----------------------|--|
| Reference: | TS 102 527-3 [14], Clause 7.10.2 |
| Initial condition: | 2 PPs registered (TS_1 is NG PP1, TS_2 is NG PP2), F-00 |
| Stimulus: | <ol style="list-style-type: none"> 1. Trigger the handset locator procedure on IUT 2. Send a {CC-CONNECT} from TS_1 |
| Pass criteria: | <ol style="list-style-type: none"> 1. Verify that the IUT sends a {CC-SETUP} message to TS_1 and TS_2 with <Call class = Normal call setup> and with IE <<CALL-INFORMATION>> specifying (call id a, CS call setup) = <(1, 0, value a), (2, 1, 1)> but without any line identifier Verify that the IUT sends to TS_1 and TS_2 an IE << CNIP >>, either in the {CC-SETUP} message or in a {CC-INFO} message, whose <Presentation indicator> field is set to 'Handset locator' 2. Verify that the IUT sends a {CC-RELEASE} message to TS_1 and TS_2 |

Annex A (normative): Declarations on features and procedures supported

The information contained within the following tables is required for parameterization of the test cases referred to in the present document. They shall be taken into account to run an appropriate test suite against the IUT.

For each procedure noted in the following tables, the manufacturer shall declare if it is supported or not. When supported, the corresponding tests case(s) listed in "TC reference" column shall be tested.

Optional procedures are identified by a status "O".

Conditional procedures are identified by a status "C[.status number]". A procedure can be conditional to a feature support and/or a procedure support and/or a requirement support.

A.1 Declarations for portable part

A.1.1 Optional PT features

This clause contains the optional features which can be declared by the manufacturer on the PT side and lists all optional, mandatory or conditional tests associated to these features.

Table A.1: Optional PT features supported

| Feature no | Feature name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--|--|--------------------------------|--------|--|
| NG1.N.9 | 3-party conference with established external and/or internal calls | 7.4.3.7 | O | TC_PT_NG1.N.9_BV_101 TC_PT_NG1.N.9_BV_102 TC_PT_NG1.N.9_BV_103 |
| NG1.N.10 | Intrusion call | 7.4.3.8 | O | TC_PT_NG1.N.10_BV_101 TC_PT_NG1.N.10_BV_102 TC_PT_NG1.N.10_BV_103 TC_PT_NG1.N.10_BV_201 TC_PT_NG1.N.10_BV_202 TC_PT_NG1.N.10_BV_203 TC_PT_NG1.N.10_BV_204 TC_PT_NG1.N.10_BV_301 |
| NG1.N.11 | Call deflection (internal or external) | 7.4.4.2 | O | TC_PT_NG1.N.11_BV_101 TC_PT_NG1.N.11_BV_201 TC_PT_NG1.N.11_BV_202 TC_PT_NG1.N.11_BV_203 |
| NG1.N.17 | Calling line identity restriction | 7.4.12 | O | TC_PT_NG1.N.17_BV_301 |
| NG1.N.21 | Headset management | 7.4.16 | C10001 | TC_PT_NG1.N.21_BV_101 TC_PT_NG1.N.21_BV_102 TC_PT_NG1.N.21_BV_201 TC_PT_NG1.N.21_BV_301 TC_PT_NG1.N.21_BV_401 TC_PT_NG1.N.21_BV_501 TC_PT_NG1.N.21_BV_601 TC_PT_NG1.N.21_BV_701 |
| | | | C10002 | TC_PT_NG1.N.21_BV_705 |
| C10001: IF the PT is a headset PP THEN "M" ELSE "I". | | | | |
| C10002: This test case applies to a handset and not to a headset. IF the PT is not a headset PP THEN "O" ELSE "I". | | | | |

A.1.2 Extra information for PT testing

In addition to the optional features supported, the supplier shall declare additional information related to the PT implementation.

Table A.2: Implementation extra information for PT testing

| Item no | Implementation extra information | Reference to TS 102 527-3 [14] | Possible values to be declared |
|---|---|--------------------------------|--------------------------------|
| PT_IXIT_1 | Several contact numbers in contact list | 7.4.10.5.7 (see note) | Not supported Supported |
| PT_IXIT_2 | CLIR code subfields | 7.4.11.4.10 | Non editable Editable |
| PT_IXIT_3 | CFU code subfields | 7.4.11.4.11 | Non editable Editable |
| PT_IXIT_4 | CFNA code subfields | 7.4.11.4.12 | Non editable Editable |
| PT_IXIT_5 | CFB code subfields | 7.4.11.4.13 | Non editable Editable |
| PT_IXIT_6 | Internal call codec priority | 7.4.3.9.2 | Not supported Supported |
| NOTE: This additional information also indicates that the PP is not able to display (and therefore to allow the user to edit) contacts other than the first one in any existing entry; furthermore, the user cannot create a contact with more than one (non-empty) contact number. | | | |

A.1.3 Optional or conditional PT procedures

This clause contains the optional or conditional procedures which can be declared by the manufacturer on the PT side.

Table A.3: Date and Time synchronization procedure supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|--|--------------------------------|--------|----------------------|
| NG1.N.5_1 | PT initiated Date and Time synchronization | 7.4.2.2 | O | TC_PT_NG1.N.5_BV_102 |

Table A.4: Common parallel call procedures (external or internal) supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|---|--------------------------------|--------|----------------------|
| NG1.N.7_7 | Active call release with replacement (from PP to FP) - call waiting | 7.4.3.5.12 | O | TC_PT_NG1.N.7_BV_701 |
| NG1.N.7_7 | Active call release with replacement (from PP to FP) - call on-hold | 7.4.3.5.12 | O | TC_PT_NG1.N.7_BV_702 |
| NG1.N.7_9 | Putting a call on-hold | 7.4.3.5.8 | O | TC_PT_NG1.N.7_BV_901 |
| NG1.N.7_10 | Resuming a call put on-hold | 7.4.3.5.9 | O | TC_PT_NG1.N.7_BV_901 |

Table A.5: Intrusion call procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|---|--------------------------------|--------|---|
| NG1.N.10_1 | Implicit call intrusion into a line in "single call" mode | 7.4.3.8.1 | C11001 | TC_PT_NG1.N.10_BV_101 TC_PT_NG1.N.10_BV_102 TC_PT_NG1.N.10_BV_103 |
| NG1.N.10_2 | Explicit call intrusion (from PP to FP) | 7.4.3.8.2 | C11001 | TC_PT_NG1.N.10_BV_201 TC_PT_NG1.N.10_BV_202 |
| NG1.N.10_3 | Explicit handset intrusion | 7.4.3.8.2 (note) | C11002 | TC_PT_NG1.N.10_BV_203 |
| NG1.N.10_4 | Explicit line intrusion | 7.4.3.8.2 (note) | C11002 | TC_PT_NG1.N.10_BV_204 |
| C11001: At least one of the two procedures NG1.N.10_1 and NG1.N.10_2 shall be implemented. | | | | |
| C11002: IF NG1.N.10_2, THEN at least NG1.N.10_3 or NG1.N.10_4 shall be implemented | | | | |
| NOTE: These procedures are not covered in a dedicated clause but are described in clause 7.4.3.8.2. | | | | |

Table A.6: Void

Table A.7: List access service procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--|---|--------------------------------|------------------|--|
| NG1.N.16_2 | List change notification | 7.4.10.2 | O | Not tested |
| NG1.N.16_4 | Query supported entry fields | 7.4.10.4.2 | O | Not tested |
| NG1.N.16_16 | List of supported lists | 7.4.10.5.2 | O | Not tested |
| NG1.N.16_18 | Outgoing calls list | 7.4.10.5.4 | O | TC_PT_NG1.N.16_BV_1801 TC_PT_NG1.N.16_BV_1802 TC_PT_NG1.N.16_BV_1803 |
| NG1.N.16_21 | Contact list | 7.4.10.5.7 | C11601 | TC_PT_NG1.N.16_BV_2110 |
| NG1.N.16_23 | All incoming calls list | 7.4.10.5.11 | O | TC_PT_NG1.N.16_BV_2301 TC_PT_NG1.N.16_BV_2302 TC_PT_NG1.N.16_BV_2303 |
| NG1.N.16_26 | Virtual contact list and call list per line | 7.4.11.5 | O | TC_PT_NG1.N.16_BV_2601 TC_PT_NG1.N.16_BV_2602 TC_PT_NG1.N.16_BV_2603 TC_PT_NG1.N.16_BV_2604 TC_PT_NG1.N.16_BV_2605 TC_PT_NG1.N.16_BV_2606 |
| NG1.N.16_30 | FP IP address / type | 7.4.11.3.4 | O | TC_PT_NG1.N.16_BV_3001 |
| NG1.N.16_31 | FP IP address / value | 7.4.11.3.5 | O | TC_PT_NG1.N.16_BV_3001 |
| NG1.N.16_32 | FP IP address / subnet mask | 7.4.11.3.6 | O | TC_PT_NG1.N.16_BV_3001 |
| NG1.N.16_33 | FP IP address / gateway | 7.4.11.3.7 | O | TC_PT_NG1.N.16_BV_3001 |
| NG1.N.16_34 | FP IP address / DNS server | 7.4.11.3.8 | O | TC_PT_NG1.N.16_BV_3001 |
| NG1.N.16_37 | FP version / Hardware version | 7.4.11.3.11 | O | TC_PT_NG1.N.16_BV_3501 |
| NG1.N.16_41 | Dialling prefix | 7.4.11.4.4 | O | TC_PT_NG1.N.16_BV_4101 |
| NG1.N.16_42 | FP melody | 7.4.11.4.5 | O | TC_PT_NG1.N.16_BV_4201 |
| NG1.N.16_43 | FP volume | 7.4.11.4.6 | O | TC_PT_NG1.N.16_BV_4301 |
| NG1.N.16_44 | Blocked number | 7.4.11.4.7 | O | TC_PT_NG1.N.16_BV_4401 |
| NG1.N.16_46 | Intrusion call | 7.4.11.4.9 | C11602 | TC_PT_NG1.N.16_BV_4601 |
| NG1.N.16_47 | Permanent CLIR | 7.4.11.4.10 | C11603 C11604 | TC_PT_NG1.N.16_BV_4701 TC_PT_NG1.N.16_BV_4702 |
| NG1.N.16_48 | Call forwarding Unconditional | 7.4.11.4.11 | C11605 | TC_PT_NG1.N.16_BV_4802 |
| NG1.N.16_49 | Call forwarding on No Answer | 7.4.11.4.12 | C11606 | TC_PT_NG1.N.16_BV_4902 |
| NG1.N.16_50 | Call forwarding on Busy Subscriber | 7.4.11.4.13 | C11607 | TC_PT_NG1.N.16_BV_5002 |
| NG1.N.16_51 | Emission mode | 7.4.11.3.12 | C11608 | TC_PT_NG1.N.16_BV_5101 |
| C11601: IF several contact numbers in contact list is supported THEN "M" ELSE "N/A" (see Table A.2 PT_IXIT_1). | | | | |
| C11602: IF NG1.N.10 "Intrusion call" is supported THEN "M" ELSE "I". | | | | |
| C11603: IF NG1.N.17 "Calling line restriction" is supported THEN "M" ELSE "I". | | | | |
| C11604: IF NG1.N.17 "Calling line restriction" is supported AND CLIR code subfields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IXIT_2). | | | | |
| C11605: IF CFU code subfields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IXIT_3). | | | | |
| C11606: IF CFNA code subfields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IXIT_4). | | | | |
| C11607: IF CFB code subfields can be edited THEN "M" ELSE "N/A" (see Table A.2 PT_IXIT_5). | | | | |
| C11608: IF NG1.M.5 "no-emission mode" is supported THEN "M" ELSE "I". | | | | |

Table A.8: Tones provision procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|---|--------------------------------|--------|-----------------------|
| NG1.N.20_2 | Tones provision by the system - Dial-tone | 7.4.15.2 | O | TC_PT_NG1.N.20_BV_206 |
| NG1.N.20_2 | Tones provision by the system - Off-hook warning tone | 7.4.15.2 | O | TC_PT_NG1.N.20_BV_207 |
| NG1.N.20_2 | Tones provision by the system - Network congestion tone (external calls only) | 7.4.15.2 | O | TC_PT_NG1.N.20_BV_208 |

Table A.9: Headset management procedure supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|---|--------------------------------|--------|-----------------------|
| NG1.N.21_4 | Re-dial of last outgoing call | 7.4.16.4 | O | TC_PT_NG1.N.21_BV_401 |
| NG1.N.21_5 | Re-dial of last incoming call | 7.4.16.5 | O | TC_PT_NG1.N.21_BV_501 |
| NG1.N.21_6 | Headset incoming call - G.726 call - Switching from headset to handset (headset initiated) | 7.4.16.6 | O | TC_PT_NG1.N.21_BV_601 |
| NG1.N.21_7 | Handset side - Headset call interception - G.722 call - Switching from headset to handset (handset initiated) | 7.4.16.7 | C12101 | TC_PT_NG1.N.21_BV_705 |

C12101: This procedure applies to a handset and not a headset. IF the PT is a headset PP THEN "I" ELSE "O".

Table A.10: Internal call codec priority procedure supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|------------------------------|--------------------------------|--------|--|
| GAP.N.31_6 | Internal call codec priority | 7.4.3.9 | C33101 | TC_PT_GAP.N.31_BV_601 TC_PT_GAP.N.31_BV_602 |

C33101: IF PP complies one of the exception cases to this procedure listed in Clause 7.4.3.9.2 THEN "N/A" ELSE "M" (see Table A.2 PT_IXIT_6).

Table A.11: Enhanced security procedures supported

| Procedure no | Procedure name | Reference to EN 300 444 [12] | Status | TC reference |
|--------------|--------------------------------------|------------------------------|--------|--|
| GAP.N.35_2 | Re-keying during a call | 8.45.2 | O | TC_PT_GAP.N.35_BV_201 TC_PT_GAP.N.35_BV_202 TC_PT_GAP.N.35_BV_203 |
| GAP.N.35_3 | Storing the Derived Cipher Key (DCK) | 8.45.3 | O | TC_PT_GAP.N.35_BV_301 TC_PT_GAP.N.35_BV_302 TC_PT_GAP.N.35_BV_303 TC_PT_GAP.N.35_BV_304 TC_PT_GAP.N.35_BV_305 TC_PT_GAP.N.35_BV_306 |

Table A.12: Easy PIN code registration procedure supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|-----------------------------|--------------------------------|--------|----------------------|
| NG1.A.1_3 | Base station name selection | 7.10.1.3.2 | O | TC_PT_NG1.A.1_BV_301 |

Table A.13: Easy pairing registration procedure supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|-----------------------------|--------------------------------|--------|----------------------|
| NG1.A.2_5 | Base station name selection | 7.10.1.3.2 | O | TC_PT_NG1.A.1_BV_301 |

A.1.4 PT relevant test cases list

According to the support of NG1.N.21 "Headset management" feature, the following configurations are possible:

- PT is a normal PT (not a headset portable part).
- PT is a headset portable part (i.e. "Support of the Headset management feature" capability bit in <<TERMINAL-CAPABILITY>> is set).

A.1.4.1 PT is a normal PT (not a headset portable part)

No restrictions or modifications are required. All mandatory test cases and those related to supported declarations are applicable.

NOTE: NG1.N.21_7 "Switching from headset to handset (handset initiated)" procedure within NG1.N.21 "Headset management" feature may be applicable for a normal PT (see Table A.9).

A.1.4.2 PT is a headset portable part

Only the test cases subgroup NG1.N.21 "Headset management" feature is relevant (see Clause 6.21 TC_PT_NG1.N.21_xx). All mandatory test cases and those related to supported declarations within this subgroup are applicable.

A.2 Declarations for fixed part

A.2.1 Optional FT features

This clause contains the optional features which can be declared by the manufacturer on the FT side.

Table A.14: Optional FT features supported

| Feature no | Feature name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|--|--------------------------------|--------|--|
| NG1.N.9 | 3-party conference with established external and/or internal calls | 7.4.3.7 | O | TC_FT_NG1.N.9_BV_101 TC_FT_NG1.N.9_BV_102 TC_FT_NG1.N.9_BV_103 TC_FT_NG1.N.9_BV_104 |
| NG1.N.10 | Intrusion call | 7.4.3.8 | O | TC_FT_NG1.N.10_BV_101 TC_FT_NG1.N.10_BV_102 TC_FT_NG1.N.10_BV_103 TC_FT_NG1.N.10_BV_104 TC_FT_NG1.N.10_BV_105 TC_FT_NG1.N.10_BV_106 TC_FT_NG1.N.10_BV_201 TC_FT_NG1.N.10_BV_202 TC_FT_NG1.N.10_BV_203 TC_FT_NG1.N.10_BV_204 |
| NG1.N.11 | Call deflection (internal or external) | 7.4.4.2 | O | TC_FT_NG1.N.11_BV_101 TC_FT_NG1.N.11_BV_201 TC_FT_NG1.N.11_BV_202 |
| NG1.N.14 | Multiple Lines | 7.4.7 | O | TC_FT_NG1.N.14_BV_301 TC_FT_NG1.N.14_BV_302 TC_FT_NG1.N.14_BV_303 TC_FT_NG1.N.14_BV_304 TC_FT_NG1.N.14_BV_305 TC_FT_NG1.N.14_BV_306 TC_FT_NG1.N.14_BV_401 |
| NG1.N.15 | Multiple calls | 7.4.8 | C20001 | TC_FT_NG1.N.15_BV_201 TC_FT_NG1.N.15_BV_202 TC_FT_NG1.N.15_BV_205 TC_FT_NG1.N.15_BV_206 TC_FT_NG1.N.15_BV_207 TC_FT_NG1.N.15_BV_301 |
| NG1.N.17 | Calling line identity restriction | 7.4.12 | O | TC_FT_NG1.N.17_BV_201 |
| NG1.N.22 | Handling of lines where second calls are signalled in-band | 7.4.3.10 | O | TC_FT_NG1.N.22_BV_101 TC_FT_NG1.N.22_BV_301 TC_FT_NG1.N.22_BV_302 TC_FT_NG1.N.22_BV_303 |
| NG1.A.1 | Easy PIN code registration | 7.10.1.1 | O | TC_FT_NG1.A.1_BV_401 TC_FT_NG1.A.2_BV_501 |
| NG1.A.3 | Handset locator | 7.10.2 | O | TC_FT_NG1.A.3_BV_101 |
| C20001: IF NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on line 0 and line 1 THEN "N/A" ELSE "M" (see Table A.16 FT_IXIT_21 and Table A.17 FT_IXIT_31). | | | | |

A.2.2 Extra information for FT testing

In addition to the optional features supported, the supplier shall declare additional information related to the FT implementation and to the network line environment.

Table A.15: Implementation extra information for FT testing

| Item no | Implementation extra information | Reference to TS 102 527-3 [14] | Possible values to be declared |
|--|---|--------------------------------|--------------------------------|
| FT_IXIT_11 | Simultaneous accesses to the same list from 2 PPs | 7.4.10.1 | Not supported Supported |
| FT_IXIT_12 | Default attachment after registration to at least one line (see note) | 7.4.11.2 | Not supported Supported |
| FT_IXIT_13 | Associated melody field in contact list entry | 7.4.10.5.7 | Not supported Supported |
| FT_IXIT_14 | Base station name | 7.10.1.3.2 | String (up to 17 characters) |
| FT_IXIT_15 | Support of three parallel call contexts (or more) on 1 PP-FP pair (busy system requirement). | | Not supported Supported |
| FT_IXIT_16 | Support call forwarding busy triggered upon 2 nd incoming call (not upon 3 rd incoming call). | | Not supported Supported |
| NOTE: This declaration is only used for a multiple line FT connected to at least two lines at the time of registration. If the FT is connected to a single line (and whether it supports multiple lines or not), default attachment to that line is mandatory. See TS 102 527-3 [14], Clause 7.4.11.2. | | | |

The "line 0" is the default line used when running the single line test cases. The following extra information related to the behaviour of this line shall be given by the manufacturer.

Table A.16: Line 0 extra information for FT testing

| Item no | Line extra information | Reference to TS 102 527-3 [14] | Possible values to be declared |
|---|---|--------------------------------|---|
| FT_IXIT_20 | Line 0 identifier value (lid0) | 7.4.5 | 00H to 09H (note 1) |
| FT_IXIT_21 | Line 0 second call handling type | 7.4.3.10 | Common parallel calls Double calls with in-band signalling |
| FT_IXIT_22 | Line 0 CC-state machine behaviour | 7.4.6.1 | Non early {CC-CONNECT} Early {CC-CONNECT} |
| FT_IXIT_23 | Line 0 UTF-8 CNIP | 7.4.17 | Non UTF-8 enabled line UTF-8 enabled line |
| FT_IXIT_24 | Line 0 parallel call release command (note 2) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_25 | Line 0 call waiting rejection command (note 2) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_26 | Line 0 putting a call on-hold command (note 2) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_27 | Line 0 resuming a call put on-hold command (note 2) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_28 | Line name of Line 0 | 7.4.10.5.1.6 | String |
| FT_IXIT_29.1 | CFU activation code (note 3) | 7.4.11.4.11 | String (possibly empty) |
| FT_IXIT_29.2 | CFU de-activation code (note 3) | 7.4.11.4.11 | String (possibly empty) |
| FT_IXIT_29.3 | CFNA activation code (note 3) | 7.4.11.4.12 | String (possibly empty) |
| FT_IXIT_29.4 | CFNA de-activation code (note 3) | 7.4.11.4.12 | String (possibly empty) |
| FT_IXIT_29.5 | CFB activation code (note 3) | 7.4.11.4.13 | String (possibly empty) |
| FT_IXIT_29.6 | CFB de-activation code (note 3) | 7.4.11.4.13 | String (possibly empty) |
| FT_IXIT_29.7 | Permanent CLIR activation code (note 3) | 7.4.11.4.10 | String (possibly empty) |
| FT_IXIT_29.8 | Permanent CLIR de-activation code (note 3) | 7.4.11.4.10 | String (possibly empty) |
| NOTE 1: Line identifier in the interval 0AH..7EH are not allowed within NG1.N.12_4 "Backward-compatible line identification for a first external outgoing call using <<MULTI-KEYPAD>> IE" procedure. | | | |
| NOTE 2: This extra information is only required when NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on this line, i.e. FT_IXIT_31 declared to 'Double calls with in-band signalling' value. | | | |
| NOTE 3: An empty string indicates that no code is necessary to activate or deactivate the feature on network side for line 0; the corresponding code length shall be set to zero. | | | |

IF NG1.N.14 "Multiple lines" is supported, the "line 1" is the second line used when running the multiple lines test cases. The following extra information related to the behaviour of this line shall be given by the manufacturer.

Table A.17: Line 1 extra information for FT testing

| Item no | Line extra information | Reference to TS 102 527-3 [14] | Possible values to be declared |
|---|---|--------------------------------|---|
| FT_IXIT_30 | Line 1 identifier value (lid1) | 7.4.5 | 00H to 09H (note 1) |
| FT_IXIT_31 | Line 1 second call handling type (note 2) | 7.4.3.10 | Common parallel calls Double calls with in-band signalling |
| FT_IXIT_32 | Line 1 CC-state machine behaviour | 7.4.6.1 | Non early {CC-CONNECT} Early {CC-CONNECT} |
| FT_IXIT_33 | Line 1 UTF-8 CNIP | 7.4.17 | Non UTF-8 enabled line UTF-8 enabled line |
| FT_IXIT_34 | Line 1 parallel call release command (note 3) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_35 | Line 1 call waiting rejection command (note 3) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_36 | Line 1 putting a call on-hold command (note 3) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_37 | Line 1 resuming a call put on-hold command (note 3) | 7.4.3.10.3.2 | Not supported Supported |
| FT_IXIT_38 | Line name of Line 1 | 7.4.10.5.1.6 | String |
| NOTE 1: Line identifier in the interval 0AH..7EH are not allowed within NG1.N.12_4 "Backward-compatible line identification for a first external outgoing call using <<MULTI-KEYPAD>> IE" procedure. | | | |
| NOTE 2: IF NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported THEN at least one line shall be 'Double calls with in-band signalling' second call handling type. | | | |
| NOTE 3: This extra information is only required when NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on this line, i.e. FT_IXIT_31 declared to 'Double calls with in-band signalling' value. | | | |

A.2.3 Optional or conditional FT procedures

This clause contains the optional or conditional procedures which can be declared by the manufacturer on the FT side.

Table A.17a: Parallel call procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|----------------------------------|--------------------------------|--------|----------------------|
| NG1.N.6_6 | Busy system or line notification | 7.4.8.3 [14] | C20601 | TC_FT_NG1.N.6_BV_601 |
| C20601: IF FP supports three parallel call contexts (or more) on one PP-FP pair THEN "I" else "M" (see FT_IXIT_15 in Table A.15). | | | | |

Table A.18: Common parallel call procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|---|--------------------------------|--------|----------------------|
| NG1.N.7_4 | Call release and call release rejection | 7.4.3.5.4 | C20701 | TC_FT_NG1.N.7_BV_401 |
| NG1.N.7_8 | Call waiting rejection (from PP to FP) | 7.4.3.5.7 | C20702 | TC_FT_NG1.N.7_BV_801 |
| NG1.N.7_9 | Putting a call on-hold | 7.4.3.5.8 | C20703 | TC_FT_NG1.N.7_BV_901 |
| C20701: IF NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on line 0 AND the call release command is not supported by the line 0 THEN N/A ELSE m (see Table A.16 FT_IXIT_21 and FT_IXIT_24). | | | | |
| C20702: IF NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on line 0 AND the call waiting rejection command is not supported by the line 0 THEN N/A ELSE m (see Table A.16 FT_IXIT_21 and FT_IXIT_25). | | | | |
| C20703: IF NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on line 0 AND the putting a call on-hold command is not supported by the line 0 THEN N/A ELSE m (see Table A.16 FT_IXIT_21 and FT_IXIT_26). | | | | |

Table A.19: 3-party conference procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|---|--------------------------------|--------|----------------------|
| NG1.N.9_1 | 3-party conference with two established external calls | 7.4.3.7 | O | TC_FT_NG1.N.9_BV_103 |
| NG1.N.9_1 | 3-party conference with two established external calls on two different lines | 7.4.3.7 | C20901 | TC_FT_NG1.N.9_BV_104 |

C20901: IF NG1.N.14 "Multiple lines" is supported THEN "O" ELSE "I".

Table A.20: Call deflection procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|----------------------------|--------------------------------|--------|-----------------------|
| NG1.N.11_1 | Call deflection (internal) | 7.4.4.2 | C21101 | TC_FT_NG1.N.11_BV_101 |

C21101: IF NG1.N.14 "Multiple lines" is supported THEN "O" ELSE "I".

Table A.21: Line identification procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|--|--------------------------------|--------|-----------------------|
| NG1.N.12_3 | Line identification for a first external outgoing call using <<CALL-INFORMATION>> IE | 7.4.5.2.2 | C21201 | TC_FT_NG1.N.12_BV_301 |
| | | | C21201 | TC_FT_NG1.N.12_BV_302 |
| NG1.N.12_4 | Backward-compatible line identification for a first external outgoing call using <<MULTI-KEYPAD>> IE | 7.4.5.2.3 | O note | TC_FT_NG1.N.12_GC_401 |
| | | | O note | TC_FT_NG1.N.12_GC_402 |
| NG1.N.12_5 | FP managed line selection for a first external outgoing call | 7.4.5.2.4 | C21203 | TC_FT_NG1.N.12_BV_501 |
| | | | C21203 | TC_FT_NG1.N.12_BV_502 |

C21201: Tests cases are exclusive: IF FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.12_BV_301 ELSE run TC_FT_NG1.N.12_BV_302 (see Table A.16 FT_IXIT_22).

C21203: Tests cases are exclusive: IF FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.12_BV_501 ELSE run TC_FT_NG1.N.12_BV_502 (see Table A.16 FT_IXIT_22).

NOTE: The procedure NG1.N.12_4 is optional. When procedure is supported, test cases are exclusive: If FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.12_GC_401 ELSE run TC_FT_NG1.N.12_GC_402 (see Table A.16, FT_IXIT_22).

Table A.22: Call identification procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|--|--------------------------------|--------|-----------------------|
| NG1.N.13_2 | Call identifier assignment on outgoing call (FP to PP) | 7.4.6.2 | C21301 | TC_FT_NG1.N.13_BV_201 |
| | | | C21301 | TC_FT_NG1.N.13_BV_202 |

C21301: Tests cases are exclusive: IF FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.13_BV_201 ELSE run TC_FT_NG1.N.13_BV_202 (see Table A.16 FT_IXIT_22).

Table A.23: Multiple lines procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|--|--------------------------------|--------|-----------------------|
| NG1.N.14_2 | Incoming and outgoing external calls on a multiple line system | 7.4.7.3 | C21401 | TC_FT_NG1.N.14_BV_303 |
| NG1.N.14_2 | Incoming and outgoing external calls on a multiple line system | 7.4.7.3 | C21402 | TC_FT_NG1.N.14_BV_305 |
| NG1.N.14_2 | Incoming and outgoing external calls on a multiple line system | 7.4.7.3 | C21403 | TC_FT_NG1.N.14_BV_306 |
| <p>C21401: IF (NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on line 1 AND the call release command is not supported by the line 1) OR (NG1.N.22 "Handling of lines where second calls are signalled in-band" is supported on line 0 AND the resuming a call put on-hold command is not supported by the line 0) THEN N/A ELSE m (see Table A.17 FT_IXIT_31 and FT_IXIT_34 or Table A.16 FT_IXIT_21 and FT_IXIT_27).</p> <p>C21402: TC_FT_NG1.N.15_BV_305 and TC_FT_NG1.N.15_BV_306 are exclusive: IF FP implements 'non early CC-CONNECT' on line 0 and line 1 THEN m ELSE N/A (see Table A.16 FT_IXIT_22 and Table A.17 FT_IXIT_32).</p> <p>C21403: TC_FT_NG1.N.15_BV_305 and TC_FT_NG1.N.15_BV_306 are exclusive: IF FP implements 'early CC-CONNECT' on line 0 and line 1 THEN m ELSE N/A (see Table A.16 FT_IXIT_22 and Table A.17 FT_IXIT_32).</p> | | | | |

Table A.24: Multiple calls procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--|--|--------------------------------|--------|-----------------------|
| NG1.N.15_2 | Incoming and outgoing external calls on a multiple call line | 7.4.8.2 | C21501 | TC_FT_NG1.N.15_BV_205 |
| | | | C21501 | TC_FT_NG1.N.15_BV_206 |
| <p>C21501: Tests cases are exclusive: IF FP implements 'non early CC-CONNECT' on line 0 THEN run TC_FT_NG1.N.15_BV_205 ELSE run TC_FT_NG1.N.15_BV_206 (see Table A.16 FT_IXIT_22).</p> | | | | |

Table A.25: List access service procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--|---|--------------------------------|--------|--|
| NG1.N.16_1 | General considerations | 7.4.10.1 | C21601 | TC_FT_NG1.N.16_BV_303 |
| | | | C21601 | TC_FT_NG1.N.16_BV_304 |
| NG1.N.16_18 | Outgoing calls list | 7.4.10.5.4 | O | TC_FT_NG1.N.16_BV_1801 TC_FT_NG1.N.16_BV_1802 TC_FT_NG1.N.16_BV_1803 |
| NG1.N.16_21 | Contact list | 7.4.10.5.7 | C21602 | TC_FT_NG1.N.16_BV_2109 |
| NG1.N.16_23 | All incoming calls list | 7.4.10.5.11 | O | TC_FT_NG1.N.16_BV_2301 TC_FT_NG1.N.16_BV_2302 TC_FT_NG1.N.16_BV_2303 |
| NG1.N.16_26 | Virtual contact list and call list per line | 7.4.11.5 | C21603 | See TC_FT_NG1.N.14_* |
| NG1.N.16_30 | FP IP address / type | 7.4.11.3.4 | O | TC_FT_NG1.N.16_BV_3001 |
| NG1.N.16_31 | FP IP address / value | 7.4.11.3.5 | O | TC_FT_NG1.N.16_BV_3001 |
| NG1.N.16_32 | FP IP address / subnet mask | 7.4.11.3.6 | O | TC_FT_NG1.N.16_BV_3001 |
| NG1.N.16_33 | FP IP address / gateway | 7.4.11.3.7 | O | TC_FT_NG1.N.16_BV_3001 |
| NG1.N.16_34 | FP IP address / DNS server | 7.4.11.3.8 | O | TC_FT_NG1.N.16_BV_3001 |
| NG1.N.16_37 | FP version / Hardware version | 7.4.11.3.11 | M | TC_FT_NG1.N.16_BV_3501 |
| NG1.N.16_41 | Dialling prefix | 7.4.11.4.4 | O | TC_FT_NG1.N.16_BV_4101 |
| NG1.N.16_42 | FP melody | 7.4.11.4.5 | O | TC_FT_NG1.N.16_BV_4201 |
| NG1.N.16_43 | FP volume | 7.4.11.4.6 | O | TC_FT_NG1.N.16_BV_4301 |
| NG1.N.16_44 | Blocked number | 7.4.11.4.7 | O | TC_FT_NG1.N.16_BV_4401 |
| NG1.N.16_46 | Intrusion call | 7.4.11.4.9 | C21606 | TC_FT_NG1.N.16_BV_4601 |
| NG1.N.16_47 | Permanent CLIR | 7.4.11.4.10 | C21604 | TC_FT_NG1.N.16_BV_4701 |
| NG1.N.16_51 | Emission mode | 7.4.11.3.12 | C21605 | TC_FT_NG1.N.16_BV_5101 |
| C21601: Tests cases are exclusive: IF FP supports simultaneous accesses to the same list from 2 PPs THEN run TC_FT_NG1.N.16_BV_304 ELSE run TC_FT_NG1.N.16_BV_303 (see Table A.15 FT_IXIT_11). C21602: IF NG1.N.16_18 "Outgoing calls list" is supported THEN "M" ELSE "I". C21603: IF NG1.N.14 "Multiple lines" is supported THEN "O" ELSE "I". C21604: IF NG1.N.17 "Calling line identity restriction" is supported THEN "M" ELSE "I". C21605: IF NG1.M.5 "no-emission mode" is supported THEN "M" ELSE "I". C21606: IF NG1.N.10 "Call intrusion" is supported THEN "M" ELSE "I". | | | | |

Table A.25a: Call forwarding (external calls) procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|--|--------------------------------|--------|-----------------------|
| NG1.N.18_4 | External Call Forwarding on Busy subscriber (CFB) to external number | 7.4.13.4 [14] | C21801 | TC_FT_NG1.N.18_BV_401 |
| C21801: IF FP triggers the Call Forwarding Busy when second incoming call occur THEN "M" else "I" (see FT_IXIT_16 in Table A.15). | | | | |

For each mandatory and optional tone, the FP shall declare if procedure NG1.N.20_2 "Tones provision by the system" or NG1.N.20_3 "Transparency to tones provision by the network or PABX" is used to provide this tone. Only the TC(s) corresponding to the supported procedure shall be tested.

Table A.26: Tones provision procedures supported for each tone

| Tone | Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|--------------|--|--------------------------------|--------|--|
| Ring back tone | NG1.N.20_2 | Tones provision by the system | 7.4.15.2 | C22001 | TC_FT_NG1.N.20_BV_201 TC_FT_NG1.N.20_BV_210 |
| | NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 | C22001 | TC_FT_NG1.N.20_BV_301 TC_FT_NG1.N.20_BV_304 |
| Busy tone | NG1.N.20_2 | Tones provision by the system | 7.4.15.2 | C22002 | TC_FT_NG1.N.20_BV_202 |
| | NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 | C22002 | TC_FT_NG1.N.20_BV_302 |
| Call waiting tone | NG1.N.20_2 | Tones provision by the system | 7.4.15.2 | C22003 | TC_FT_NG1.N.20_BV_203 |
| | NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 | C22003 | TC_FT_NG1.N.20_BV_303 |
| Dial tone | NG1.N.20_2 | Tones provision by the system | 7.4.15.2 | C22006 | TC_FT_NG1.N.20_BV_206 |
| | NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 | C22006 | TC_FT_NG1.N.20_BV_301 TC_FT_NG1.N.20_BV_304 |
| Off hook warning tone | NG1.N.20_2 | Tones provision by the system | 7.4.15.2 | C22007 | TC_FT_NG1.N.20_BV_207 |
| | NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 | C22007 | TC_FT_NG1.N.20_BV_301 |
| Network congestion tone | NG1.N.20_2 | Tones provision by the system | 7.4.15.2 | C22008 | Not tested |
| | NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 | C22008 | TC_FT_NG1.N.20_BV_301 |
| C22001, C22002, C22003: Tone is mandatory. The manufacturer shall declare which procedure is supported to provide this tone on external call (NG1.N.20_2 or NG1.N.20_3) and run only the corresponding test cases. | | | | | |
| C22006: Tone is optional. If declared, the manufacturer shall declare which procedure is supported to provide this tone on external call (NG1.N.20_2 or NG1.N.20_3) and run only the corresponding test cases. | | | | | |
| C22007: Tone is optional. If declared, the manufacturer shall declare which procedure is supported to provide this tone on external call (NG1.N.20_2 or NG1.N.20_3) and run only the corresponding test cases. | | | | | |
| C22008: Tone is optional. If declared, the manufacturer shall declare which procedure is supported to provide this tone on external call (NG1.N.20_2 or NG1.N.20_3) and run only the corresponding test cases. | | | | | |
| NOTE 1: For example Ring back tone is mandatory, depending on declaration: <ul style="list-style-type: none"> - If supplier declares that FP uses procedure NG1.N.20_2 "Tones provision by the system" on external call, supplier shall perform tests cases TC_FT_NG1.N.20_BV_201 and TC_FT_NG1.N.20_BV_210. - If supplier declares that FP uses procedure NG1.N.20_3 "Transparency to tones provision by the network or PABX", supplier shall perform tests case TC_FT_NG1.N.20_BV_301 and TC_FT_NG1.N.20_BV_304. | | | | | |
| NOTE 2: For tones provisioned by the system, only a <<SIGNAL>> IE can be used towards Part 3 PPs. | | | | | |
| NOTE 3: For tones provisioned by the system and requiring a 'Tones off' (all tones above except 'call waiting tone'), the declaration also applies to the 'Tones off' <<SIGNAL>>. | | | | | |

Table A.27: Handling of lines where second calls are signalled in-band procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|--|--------------------------------|--------|-----------------------|
| NG1.N.22_3 | Off-hook CLIP enabled 'double call with in-band signalling' lines - call release (of the indicated call) | 7.4.3.10.3.2 | C22301 | TC_FT_NG1.N.22_BV_301 |
| NG1.N.22_3 | Off-hook CLIP enabled 'double call with in-band signalling' lines - call waiting rejection | 7.4.3.10.3.2 | C22302 | TC_FT_NG1.N.22_BV_302 |
| NG1.N.22_3 | Off-hook CLIP enabled 'double call with in-band signalling' lines - Putting a call on-hold | 7.4.3.10.3.2 | C22303 | TC_FT_NG1.N.22_BV_303 |
| C22301: IF the call release command is not supported by the line THEN M ELSE N/A (see Table A.16 FT_IXIT_24 or Table A.17 FT_IXIT_34 according to the tested line). | | | | |
| C22302: IF the call waiting rejection command is not supported by the line THEN "M" ELSE "N/A" (see Table A.16 FT_IXIT_25 or Table A.17 FT_IXIT_35 according to the tested line). | | | | |
| C22303: IF the putting a call on-hold command is not supported by the line THEN "M" ELSE "N/A" (see Table A.16 FT_IXIT_26 or Table A.17 FT_IXIT_36 according to the tested line). | | | | |

Table A.28: CNIP procedure supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|---|----------------|--------------------------------|--------|--|
| GAP.N.34_2 | UTF-8 CNIP | 7.4.17.1 | C43401 | TC_FT_GAP.N.34_BV_201 TC_FT_GAP.N.34_GC_201 |
| C43401: IF FP is connected to an UTF-8 CNIP enabled line THEN "M" ELSE "N/A" (see Table A.16 FT_IXIT_23). | | | | |

Table A.29: Enhanced security procedures supported

| Procedure no | Procedure name | Reference to EN 300 444 [12] | Status | TC reference |
|--------------|--------------------------------------|------------------------------|--------|--|
| GAP.N.35_2 | Re-keying during a call | 8.45.2 | O | TC_FT_GAP.N.35_BV_201 TC_FT_GAP.N.35_BV_202 TC_FT_GAP.N.35_BV_203 TC_FT_GAP.N.35_BV_204 TC_FT_GAP.N.35_BV_205 TC_FT_GAP.N.35_BV_206 |
| GAP.N.35_3 | Storing the Derived Cipher Key (DCK) | 8.45.3 | O | TC_FT_GAP.N.35_BV_301 TC_FT_GAP.N.35_BV_302 TC_FT_GAP.N.35_BV_303 |

Table A.30: Easy PIN code registration procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|-----------------------------|--------------------------------|--------|----------------------|
| NG1.A.1_3 | Base station name selection | 7.10.1.3.2 | O | TC_FT_NG1.A.2_BV_501 |
| NG1.A.1_4 | Registration user feedback | 7.10.1.3.3 | O | TC_FT_NG1.A.1_BV_401 |

Table A.31: Easy pairing registration procedures supported

| Procedure no | Procedure name | Reference to TS 102 527-3 [14] | Status | TC reference |
|--------------|-----------------------------|--------------------------------|--------|----------------------|
| NG1.A.2_5 | Base station name selection | 7.10.1.3.2 | O | TC_FT_NG1.A.2_BV_501 |
| NG1.A.2_6 | Registration user feedback | 7.10.1.3.3 | O | TC_FT_NG1.A.1_BV_401 |

A.2.4 FT relevant test cases list

According to the support of NG1.N.22 "Handling of lines where second calls are signalled in-band" feature, the following configurations are possible:

- FT handles only 'Common parallel call procedures' lines.
- FT handles only 'double call with in-band signalling' lines.
- FT handles 'common parallel call procedures' lines and 'double call with in-band signalling' lines.

A.2.4.1 FT handling only 'Common parallel call procedures' lines

No restrictions or modifications are required. All mandatory test cases and those related to supported declarations are applicable.

A.2.4.2 FT handling only 'double call with in-band signalling' lines

By definition 'double call with in-band signalling' lines are 'single call mode' lines. Hence, NG1.N.15 'Multiple calls' test cases shall not be run. As a result, all mandatory test cases except the test cases subgroup N.15, and those related to supported declarations are applicable.

A.2.4.3 FT handling 'Common parallel call procedures' lines and 'double call with in-band signalling' lines

All mandatory test cases and those related to supported declarations, except the test cases subgroup N.22, are applicable on the 'common parallel call procedures' line.

In addition, the test cases subgroup N.22 'Handling of lines where second calls are signalled in-band' will be run on the 'double call with in-band signalling' line (see Clause 7.22 TC_FT_NG1.N.22_xx).

NOTE: An example of this of kind of system is a dual phone implementing a full VoIP line and a PSTN line without any tones detection.

Annex B (informative): List of NG-DECT Part 3 procedures

The following table gives the list of NG-DECT Part 3 procedures. The reference documents are TS 102 527-3 [14], TS 102 527-1 [13] or EN 300 444 [12]. The status of each feature and procedure are given in TS 102 527-3 [14].

The procedure number 'feature number_x' was created for the need of the present document. This procedure number is used in the TC naming convention. For example, the PT test cases related to the **NG1.N.2_1** "Codec change" procedure are called **TC_PT_NG1.N.2_BV_1xx**.

Table B.1: List of NG-DECT Part 3 procedures

| 1.1 New Generation DECT Speech Services support status | | Reference |
|---|--|------------------|
| NG1.1 | Narrow band ADPCM G.726 32 kbit/s voice service | 5.1 [13] |
| NG1.2 | Narrow band PCM G.711 64 kbit/s voice service | 5.1 [13] |
| NG1.3 | Wideband G.722 64 kbit/s voice service | 5.1 [13] |
| NG1.4 | Wideband G.729.1 32 kbit/s voice service | 5.1 [13] |
| NG1.5 | MPEG-4 ER AAC-LD super wideband 64 kbit/s voice service | 5.1 [13] |
| NG1.6 | MPEG-4 ER AAC-LD wideband 32 kbit/s voice service | 5.1 [13] |
| 1.2 NWK features support status | | |
| NG1.N.1 | Codec Negotiation | 5.2 [13] |
| NG1.N.1_1 | Exchange of codec list during registration and location registration | 7.3.1 [13] |
| NG1.N.1_2 | Basic service wideband speech and default attributes | 7.3.2 [13] |
| NG1.N.1_3 | Codec Negotiation during call establishment | 7.3.3 [13] |
| NG1.N.2 | Codec Switching | 5.2 [13] |
| NG1.N.2_1 | Codec Change | 7.3.4 [13] |
| NG1.N.2_2 | Slot type modification | 7.3.5 [13] |
| NG1.N.2_3 | MAC layer advanced connection slot type modification | 7.6.7 [13] |
| NG1.N.2_4 | MAC layer connection type modification: basic to/from advanced | 7.6.6 [13] |
| NG1.N.3 | Missed call notification | 5.2 [14] |
| NG1.N.3_1 | Generic events notification, general | 7.4.1.1 [14] |
| NG1.N.3_2 | Missed call notification | 7.4.1.3 [14] |
| NG1.N.4 | Voice message waiting notification | 5.2 [14] |
| NG1.N.4_1 | Generic events notification, general | 7.4.1.1 [14] |
| NG1.N.4_2 | Voice message waiting notification | 7.4.1.2 [14] |
| NG1.N.5 | Date and Time synchronization | 5.2 [14] |
| NG1.N.5_1 | Date and Time synchronization | 7.4.2 [14] |
| NG1.N.6 | Parallel calls | 5.2 [14] |
| NG1.N.6_1 | Parallel call common requirements | 7.4.3.1 [14] |
| NG1.N.6_2 | Control messages | 7.4.3.2 [14] |
| NG1.N.6_3 | Sending Keypad information | 8.10 [12] |
| NG1.N.6_4 | Codec change for parallel calls | 7.4.3.3 [14] |
| NG1.N.6_5 | Sending negative acknowledgement | 7.4.3.4 [14] |
| NG1.N.6_6 | Busy system or line notification | 7.4.8.3 [14] |
| NG1.N.7 | Common parallel call procedures (external or internal) | 5.2 [14] |
| NG1.N.7_1 | Outgoing parallel call initiation (external or internal) | 7.4.3.5.1 [14] |
| NG1.N.7_2 | Call waiting indication (external or internal) | 7.4.3.5.2 [14] |
| NG1.N.7_3 | Call toggle (external or internal) | 7.4.3.5.3 [14] |
| NG1.N.7_4 | Call release and call release rejection | 7.4.3.5.4 [14] |
| NG1.N.7_5 | Void | |
| NG1.N.7_6 | Call waiting acceptance (from PP to FP) | 7.4.3.5.6 [14] |
| NG1.N.7_7 | Active call release with replacement (from PP to FP) | 7.4.3.5.12 [14] |
| NG1.N.7_8 | Call waiting rejection (from PP to FP) | 7.4.3.5.7 [14] |
| NG1.N.7_9 | Putting a call on-hold | 7.4.3.5.8 [14] |
| NG1.N.7_10 | Resuming a call put on-hold | 7.4.3.5.9 [14] |
| NG1.N.7_11 | CLIP on call waiting indication | 7.4.3.5.10 [14] |
| NG1.N.7_12 | CNIP on call waiting indication | 7.4.3.5.11 [14] |

| | | |
|-------------|---|----------------------------|
| NG1.N.8 | Call transfer (external or internal) | 5.2 [14] |
| NG1.N.8_1 | Announced call transfer | 7.4.3.6.1 [14] |
| NG1.N.8_2 | Unannounced call transfer | 7.4.3.6.2 [14] |
| NG1.N.8_3 | Call re-injection to the system (external or internal) | 7.4.3.6.3 [14] |
| NG1.N.8_4 | Remote party CLIP on call transfer | 7.4.3.6.4 [14] |
| NG1.N.8_5 | Remote party CNIP on call transfer | 7.4.3.6.5 [14] |
| NG1.N.9 | 3-party conference with established external and/or internal calls | 5.2 [14] |
| NG1.N.9_1 | 3-party Conference with established internal and external calls | 7.4.3.7 [14] |
| NG1.N.10 | Intrusion call | 5.2 [14] |
| NG1.N.10_1 | Implicit call intrusion into a line in "single call" mode | 7.4.3.8.1 [14] |
| NG1.N.10_2 | Explicit call intrusion (from PP to FP) | 7.4.3.8.2 [14] |
| NG1.N.10_3 | Explicit handset intrusion | 7.4.3.8.2 [14] (note 1) |
| NG1.N.10_4 | Explicit line intrusion | 7.4.3.8.2 [14] (note 1) |
| NG1.N.11 | Call deflection (external or internal) | 5.2 [14] |
| NG1.N.11_1 | Call deflection (internal) | 7.4.4.2 [14] |
| NG1.N.11_2 | Call deflection (external) | 7.4.4.2 [14] |
| NG1.N.11_3 | Call deflection control messages | 7.4.4.1.1 [14] |
| NG1.N.12 | Line identification | 5.2 [14] |
| NG1.N.12_1 | Line identification general requirements | 7.4.5.1 [14] |
| NG1.N.12_2 | General line identification requirements for external outgoing calls | 7.4.5.2.1 [14] |
| NG1.N.12_3 | Line identification for a first external outgoing call using <<CALL-INFO>> IE | 7.4.5.2.2 [14] |
| NG1.N.12_4 | Line identification for a <u>first</u> external outgoing call using <<MULTI-KEYPAD>> IE | 7.4.5.2.3 [14] |
| NG1.N.12_5 | FP managed line selection for a <u>first</u> external outgoing call | 7.4.5.2.4 [14] |
| NG1.N.12_6 | General line identification requirements for external incoming calls | 7.4.5.3.1 [14] |
| NG1.N.12_7 | Line identification for a first external incoming call | 7.4.5.3.2 [14] |
| NG1.N.13 | Call identification | 5.2 [14] |
| NG1.N.13_1 | Call identifier general requirements | 7.4.6.1 [14] |
| NG1.N.13_2 | Call identifier assignment on outgoing call (FP to PP) | 7.4.6.2 [14] |
| NG1.N.13_3 | Call identifier assignment on incoming call (FP to PP) | 7.4.6.3 [14] |
| NG1.N.13_4 | Call status indication to the handset (FP to PP) | 7.4.6.4 [14] |
| NG1.N.14 | Multiple Lines | 5.2 [14] |
| NG1.N.14_1 | Multiple lines common requirements | 7.4.7.1 [14] |
| NG1.N.14_2 | Terminal attachment and line settings | 7.4.7.2 [14] |
| NG1.N.14_3 | Incoming and outgoing external calls on a multiple line system | 7.4.7.3 [14] |
| NG1.N.14_4 | Internal calls in multiple line context | 7.4.7.4 [14] |
| NG1.N.14_5 | Compatibility with non multiple line PP or FP | 7.4.7.5 [14] |
| NG1.N.15 | Multiple calls | 5.2 [14] |
| NG1.N.15_1 | Multiple calls general requirements | 7.4.8.1 [14] |
| NG1.N.15_2 | Incoming and outgoing external calls on a multiple call line | 7.4.8.2 [14] |
| NG1.N.15_3 | Busy system or line notification | 7.4.8.3 [14] |
| NG1.N.16 | List access service | 5.2 [14] |
| NG1.N.16_1 | General considerations | 7.4.10.1 [14] |
| NG1.N.16_2 | List change notification | 7.4.10.2 [14] |
| NG1.N.16_3 | Start / end session | 7.4.10.4.1 [14] |
| NG1.N.16_4 | Query supported entry fields | 7.4.10.4.2 [14] |
| NG1.N.16_5 | Read entries | 7.4.10.4.3 [14] |
| NG1.N.16_6 | Edit entry | 7.4.10.4.4 [14] |
| NG1.N.16_7 | Save entry | 7.4.10.4.5 [14] |
| NG1.N.16_8 | Delete entry | 7.4.10.4.6 [14] |
| NG1.N.16_9 | Delete list | 7.4.10.4.7 [14] |
| NG1.N.16_10 | Search entries | 7.4.10.4.8 [14] |
| NG1.N.16_11 | Negative acknowledgement | 7.4.10.4.9 [14] |
| NG1.N.16_12 | Data packet / Last data packet | 7.4.10.4.10 [14] |
| NG1.N.16_13 | DECT system and line settings considerations | 7.4.11.1 [14] |
| NG1.N.16_14 | Interactions between registration, attachment of handsets and lists | 7.4.11.2 [14] |
| NG1.N.16_15 | Fields description | 7.4.10.5.1 [14] |

| | | |
|-------------|---|------------------|
| | [Supported lists:] | |
| NG1.N.16_16 | List of supported lists | 7.4.10.5.2 [14] |
| NG1.N.16_17 | Missed calls list | 7.4.10.5.3 [14] |
| NG1.N.16_18 | Outgoing calls list | 7.4.10.5.4 [14] |
| NG1.N.16_19 | Incoming accepted calls list | 7.4.10.5.5 [14] |
| NG1.N.16_20 | All calls list | 7.4.10.5.6 [14] |
| NG1.N.16_21 | Contact list | 7.4.10.5.7 [14] |
| NG1.N.16_22 | Internal names list | 7.4.10.5.8 [14] |
| NG1.N.16_23 | All incoming calls list | 7.4.10.5.11 [14] |
| NG1.N.16_24 | DECT system settings list | 7.4.11.3 [14] |
| NG1.N.16_25 | Line settings list | 7.4.11.4 [14] |
| NG1.N.16_26 | Virtual contact list and call list per line | 7.4.11.5 [14] |
| | [Supported DECT system settings] | |
| NG1.N.16_27 | Current PIN code | 7.4.11.3.1 [14] |
| NG1.N.16_28 | Clock master | 7.4.11.3.2 [14] |
| NG1.N.16_29 | Base reset | 7.4.11.3.3 [14] |
| NG1.N.16_30 | FP IP address / type | 7.4.11.3.4 [14] |
| NG1.N.16_31 | FP IP address / value | 7.4.11.3.5 [14] |
| NG1.N.16_32 | FP IP address / subnet mask | 7.4.11.3.6 [14] |
| NG1.N.16_33 | FP IP address / gateway | 7.4.11.3.7 [14] |
| NG1.N.16_34 | FP IP address / DNS server | 7.4.11.3.8 [14] |
| NG1.N.16_35 | FP version / Firmware version | 7.4.11.3.9 [14] |
| NG1.N.16_36 | FP version / EEPROM version | 7.4.11.3.10 [14] |
| NG1.N.16_37 | FP version / Hardware version | 7.4.11.3.11 [14] |
| NG1.N.16_51 | Emission mode | 7.4.11.3.12 [14] |
| NG1.N.16_52 | New PIN code | 7.4.11.3.13 [14] |
| | [Supported line settings] | |
| NG1.N.16_38 | Line name | 7.4.11.4.1 [14] |
| NG1.N.16_39 | Line id | 7.4.11.4.2 [14] |
| NG1.N.16_40 | Attached handsets | 7.4.11.4.3 [14] |
| NG1.N.16_41 | Dialling prefix | 7.4.11.4.4 [14] |
| NG1.N.16_42 | FP melody | 7.4.11.4.5 [14] |
| NG1.N.16_43 | FP volume | 7.4.11.4.6 [14] |
| NG1.N.16_44 | Blocked number | 7.4.11.4.7 [14] |
| NG1.N.16_45 | Multiple calls mode (single/multiple) | 7.4.11.4.8 [14] |
| NG1.N.16_46 | Intrusion call | 7.4.11.4.9 [14] |
| NG1.N.16_47 | Permanent CLIR | 7.4.11.4.10 [14] |
| NG1.N.16_48 | Call forwarding Unconditional | 7.4.11.4.11 [14] |
| NG1.N.16_49 | Call forwarding on No Answer | 7.4.11.4.12 [14] |
| NG1.N.16_50 | Call forwarding on Busy subscriber | 7.4.11.4.13 [14] |
| NG1.N.17 | Calling line identity restriction | 5.2 [14] |
| NG1.N.17_1 | Considerations | 7.4.12.1 [14] |
| NG1.N.17_2 | Permanent CLIR mode (all calls) | 7.4.12.2 [14] |
| NG1.N.17_3 | Temporary CLIR mode (call by call) | 7.4.12.3 [14] |
| NG1.N.18 | Call forwarding (external calls) | 5.2 [14] |
| NG1.N.18_1 | Call Forwarding common requirements | 7.4.13.1 [14] |
| NG1.N.18_2 | External Call Forwarding Unconditional (CFU) to external number | 7.4.13.2 [14] |
| NG1.N.18_3 | External Call Forwarding on No Answer (CFNA) to external number | 7.4.13.3 [14] |
| NG1.N.18_4 | External Call Forwarding on Busy subscriber (CFB) to external number | 7.4.13.4 [14] |
| NG1.N.19 | DTMF handling | 5.2 [14] |
| NG1.N.19_1 | Uplink DTMF transmission at call setup when FP connected to classic switching network | 7.4.14.1.1 [14] |
| NG1.N.19_2 | Uplink DTMF transmission when connected | 7.4.14.1.2 [14] |
| NG1.N.19_3 | Downlink DTMF reception | 7.4.14.2 [14] |
| NG1.N.19_4 | Local DTMF feedback of dialled digits | 7.4.14.3 [14] |
| NG1.N.20 | Tones provision | 5.2 [14] |
| NG1.N.20_1 | General considerations | 7.4.15.1 [14] |
| NG1.N.20_2 | Tones provision by the system | 7.4.15.2 [14] |
| NG1.N.20_3 | Transparency to tones provision by the network or PABX | 7.4.15.3 [14] |

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|------------|---|-----------------|
| NG1.N.21 | Headset management | 5.2 [14] |
| NG1.N.21_1 | Headset considerations | 7.4.16.1 [14] |
| NG1.N.21_2 | Headset call interception | 7.4.16.2 [14] |
| NG1.N.21_3 | Headset incoming call | 7.4.16.3 [14] |
| NG1.N.21_4 | Re-dial of last outgoing call | 7.4.16.4 [14] |
| NG1.N.21_5 | Re-dial of last incoming call | 7.4.16.5 [14] |
| NG1.N.21_6 | Switching from headset to handset (headset initiated) | 7.4.16.6 [14] |
| NG1.N.21_7 | Switching from headset to handset (handset initiated) | 7.4.16.7 [14] |
| NG1.N.21_8 | Compatibility with other telephony features and profiles | 7.4.16.8 [14] |
| NG1.N.22 | Handling of lines where second calls are signalled in-band | 5.2 [14] |
| NG1.N.22_1 | General requirements | 7.4.3.10.1 [14] |
| NG1.N.22_2 | Basic 'double call with in-band signalling' lines | 7.4.3.10.2 [14] |
| NG1.N.22_3 | Off-hook CLIP enabled 'double call with in-band signalling' lines | 7.4.3.10.3 [14] |
| NG1.N.22_4 | Use of transparent commands on DCIBS lines (Basic or Off-hook CLIP enabled) or any other line | 7.4.3.10.4 [14] |
| GAP.N.1 | Outgoing call | 4.1 [12] |
| GAP.N.2 | Off hook | 4.1 [12] |
| GAP.N.3 | On hook (full release) | 4.1 [12] |
| GAP.N.4 | Dialled digits (basic) | 4.1 [12] |
| GAP.N.5 | Register recall | 4.1 [12] |
| GAP.N.6 | Go to DTMF signalling (defined tone length) | 4.1 [12] |
| GAP.N.7 | Pause (dialling pause) | 4.1 [12] |
| GAP.N.8 | Incoming call | 4.1 [12] |
| GAP.N.9 | Authentication of PP | 4.1 [12] |
| GAP.N.10 | Authentication of user | 4.1 [12] |
| GAP.N.11 | Location registration | 4.1 [12] |
| GAP.N.12 | On air key allocation | 4.1 [12] |
| GAP.N.13 | Identification of PP | 4.1 [12] |
| GAP.N.14 | Service class indication/assignment | 4.1 [12] |
| GAP.N.15 | Alerting | 4.1 [12] |
| GAP.N.16 | ZAP | 4.1 [12] |
| GAP.N.17 | Encryption activation FT initiated | 4.1 [12] |
| GAP.N.18 | Subscription registration procedure on-air | 4.1 [12] |
| GAP.N.19 | Link control | 4.1 [12] |
| GAP.N.20 | Terminate access rights FT initiated | 4.1 [12] |
| GAP.N.21 | Partial release | 4.1 [12] |
| GAP.N.22 | Go to DTMF (infinite tone length) | 4.1 [12] |
| GAP.N.23 | Go to Pulse | 4.1 [12] |
| GAP.N.24 | Signalling of display characters | 4.1 [12] |
| GAP.N.25 | Display control characters | 4.1 [12] |
| GAP.N.26 | Authentication of FT | 4.1 [12] |
| GAP.N.27 | Encryption activation PT initiated | 4.1 [12] |
| GAP.N.28 | Encryption deactivation FT initiated | 4.1 [12] |
| GAP.N.29 | Encryption deactivation PT initiated | 4.1 [12] |
| GAP.N.30 | Calling Line Identification Presentation (CLIP) | 4.1 [12] |
| GAP.N.31 | Internal call | 4.1 [12] |
| GAP.N.31_1 | Internal call setup | 7.3.6 [13] |
| GAP.N.31_2 | Internal call keypad | 4.1 [12] |
| GAP.N.31_3 | Internal call CLIP | 4.1 [12] |
| GAP.N.31_4 | Internal call CNIP | 4.1 [12] |
| GAP.N.31_5 | UTF-8 CNIP | 7.4.17 [14] |
| GAP.N.31_6 | Internal call codec priority | 7.4.3.9 [14] |
| GAP.N.32 | Service call | 4.1 [12] |
| GAP.N.33 | Enhanced U- plane connection | 4.1 [12] |
| GAP.N.34 | Calling Name Identification Presentation (CNIP) | 4.1 [12] |
| GAP.N.34_1 | Calling Name Identification Presentation (CNIP) Indication | 8.42 [12] |
| GAP.N.34_2 | UTF-8 CNIP | 7.4.17 [14] |
| GAP.N.35 | Enhanced security | 4.1 [12] |
| GAP.N.35_1 | Encryption of all calls | 8.45.1 [12] |
| GAP.N.35_2 | Re-keying during a call | 8.45.2 [12] |
| GAP.N.35_3 | Early encryption | 8.45.3 [12] |
| GAP.N.35_4 | Subscription requirements | 8.45.4 [12] |
| GAP.N.35_5 | Behaviour against legacy devices | 8.45.5 [12] |

| 1.3 Data Link Control (DLC) services support status | | |
|--|--|----------|
| NG1.D.1 | LU1 Transparent UnProtected service (TRUP) Class 0 /minimum_delay | 5.3 [13] |
| NG1.D.2 | LU1 Transparent UnProtected service (TRUP) Class 0 | 5.3 [13] |
| NG1.D.3 | LU7 64 kbit/s protected bearer service | 5.3 [13] |
| NG1.D.4 | LU 12 Unprotected Framed service (UNF) Class 0 | 5.3 [13] |
| NG1.D.5 | FU1 DLC frame | 5.3 [13] |
| NG1.D.6 | FU7 DLC frame | 5.3 [13] |
| NG1.D.7 | FU12 DLC frame with adaptation for codec G.729.1 | 5.3 [13] |
| GAP.D.1 | LAPC class A service and Lc | 5.1 [12] |
| GAP.D.2 | C _S channel fragmentation and recombination | 5.1 [12] |
| GAP.D.3 | Broadcast Lb service | 5.1 [12] |
| GAP.D.4 | Intra-cell voluntary connection handover | 5.1 [12] |
| GAP.D.5 | Intercell voluntary connection handover | 5.1 [12] |
| GAP.D.6 | Encryption activation | 5.1 [12] |
| GAP.D.7 | LU1 TRUP Class 0/min_delay | 5.1 [12] |
| GAP.D.8 | FU1 | 5.1 [12] |
| GAP.D.9 | Encryption deactivation | 5.1 [12] |
| 1.4 Medium Access Control (MAC) services support status | | |
| NG1.M.1 | I _N minimum delay symmetric MAC service type | 5.4 [13] |
| NG1.M.2 | I _N normal delay symmetric MAC service type | 5.4 [13] |
| NG1.M.3 | I _{PQ} error_detection symmetric MAC service type | 5.4 [13] |
| NG1.M.4 | Advanced connections | 5.4 [13] |
| NG1.M.5 | 'no-emission' mode | 5.4 [14] |
| GAP.M.1 | General | 5.1 [12] |
| GAP.M.2 | Continuous broadcast | 5.1 [12] |
| GAP.M.3 | Paging broadcast | 5.1 [12] |
| GAP.M.4 | Basic connections | 5.1 [12] |
| GAP.M.5 | C _S higher layer signalling | 5.1 [12] |
| GAP.M.6 | Quality control | 5.1 [12] |
| GAP.M.7 | Encryption activation | 5.1 [12] |
| GAP.M.8 | Extended frequency allocation | 5.1 [12] |
| GAP.M.9 | Bearer Handover, intra-cell | 5.1 [12] |
| GAP.M.10 | Bearer Handover, inter-cell | 5.1 [12] |
| GAP.M.11 | Connection Handover, intra-cell | 5.1 [12] |
| GAP.M.12 | Connection Handover, inter-cell | 5.1 [12] |
| GAP.M.13 | SARI support | 5.1 [12] |
| GAP.M.14 | Encryption deactivation | 5.1 [12] |
| GAP.M.15 | Re-keying | 5.1 [12] |
| GAP.M.16 | Early encryption | 5.1 [12] |
| 1.5 Physical layer (PHL) services support status | | |
| NG1.P.1 | 2 level GFSK modulation | 5.5 [13] |
| NG1.P.2 | Physical Packet P32 | 5.5 [13] |
| NG1.P.3 | Physical Packet P64 | 5.5 [13] |
| NG1.P.4 | Physical Packet P67 | 5.5 [13] |
| NG1.P.5 | Physical Packet P80 | 5.5 [13] |
| 1.6 Speech coding and audio features support status | | |
| NG1.SC.1 | G.726 32 kbit/s ADPCM codec | 5.6 [13] |
| NG1.SC.2 | G.711 64 kbit/s PCM codec | 5.6 [13] |
| NG1.SC.3 | G.722 64 kbit/s 7 kHz wideband codec | 5.6 [13] |
| NG1.SC.4 | G.729.1 32 kbit/s 7 kHz wideband codec | 5.6 [13] |
| NG1.SC.5 | MPEG4 AAC-LD 64 kbit/s 14 kHz superwideband codec | 5.6 [13] |
| NG1.SC.6 | MPEG4 AAC-LD 32 kbit/s 11 kHz wideband codec | 5.6 [13] |
| NG1.SC.7 | Packet loss Concealment (PLC) for G.722] | 5.6 [13] |
| NG1.SC.8 | Detection of Fax/modem tone | 5.6 [13] |
| NG1.SC.9 | Codec selection and switching | 5.6 [13] |
| NG1.SC.10 | PP Audio profile type 1a (classic GAP handset) | 5.6 [13] |
| NG1.SC.11 | PP Audio profile type 1b (improved GAP handset) | 5.6 [13] |
| NG1.SC.12 | PP Audio profile type 1c (HATS 3,1 kHz handset) | 5.6 [13] |
| NG1.SC.13 | PP Audio profile type 1d (HATS 3,1 kHz improved handset) | 5.6 [13] |
| NG1.SC.14 | PP Audio profile type 2a (Recommendation ITU-T P.311 [i.27] 7 kHz handset) | 5.6 [13] |
| NG1.SC.15 | PP Audio profile type 2b (HATS 7 kHz handset) | 5.6 [13] |
| NG1.SC.16 | PP Audio profile type 2c (HATS 7 kHz improved handset) | 5.6 [13] |
| NG1.SC.17 | PP Audio profile type 3a (HATS 3,1 kHz handsfree) | 5.6 [13] |
| NG1.SC.18 | PP Audio profile type 3b (HATS 3,1 kHz improved handsfree) | 5.6 [13] |
| NG1.SC.19 | PP Audio profile type 4a (HATS 7 kHz handsfree) | 5.6 [13] |

| | | |
|---|--|-----------------------|
| NG1.SC.20 | PP Audio profile type 4b (HATS 7 kHz improved handsfree) | 5.6 [13] |
| NG1.SC.21 | PP Audio profile type 5a superwideband (14 kHz) handset | 5.6 [13] |
| NG1.SC.22 | PP Audio profile type 5b superwideband (14 kHz) handsfree | 5.6 [13] |
| NG1.SC.23 | FP Audio type 1b (new ISDN 3,1 kHz) | 5.6 [13] |
| NG1.SC.24 | PP echo canceller for FP, narrowband | 5.6 [13] |
| NG1.SC.25 | PP echo suppressor for FP, narrowband | 5.6 [13] |
| NG1.SC.26 | FP Audio type 2 (analog PSTN 3,1 kHz) | 5.6 [13] |
| NG1.SC.27 | FP Audio type 3 (VoIP 3,1 kHz) | 5.6 [13] |
| NG1.SC.28 | FP Audio type 4 (ISDN wideband) | 5.6 [13] |
| NG1.SC.29 | FP Audio type 5 (VoIP wideband) | 5.6 [13] |
| NG1.SC.30 | PP echo canceller for FP, wideband | 5.6 [13] |
| NG1.SC.31 | PP echo suppressor for FP, wideband | 5.6 [13] |
| NG1.SC.32 | FP Audio type 6a (internal call) | 5.6 [13] |
| NG1.SC.33 | FP Audio type 6b (internal conference) | 5.6 [13] |
| NG1.SC.34 | Adaptive volume control for FP | 5.6 [13] |
| 1.7 Application features support status | | |
| NG1.A.1 | Easy PIN-code registration | 5.7 [14] |
| NG1.A.1_1 | Registration mode automatic access | 7.10.1.3.1 [14] |
| NG1.A.1_2 | Searching mode and PIN code requests | 7.10.1.1.1 [14] |
| NG1.A.1_3 | Base station name selection | 7.1 [13] 0.1.3.2 [14] |
| NG1.A.1_4 | Registration user feedback | 7.1 [13] 0.1.3.3 [14] |
| NG1.A.2 | Easy pairing registration | 5.7 [14] |
| NG1.A.2_1 | Easy pairing description | 7.10.1.2.1 [14] |
| NG1.A.2_2 | Registration mode automatic access | 7.10.1.3.1 [14] |
| NG1.A.2_3 | Base station limited registration mode | 7.10.1.2.2 [14] |
| NG1.A.2_4 | Searching mode request | 7.10.1.2.3 [14] |
| NG1.A.2_5 | Base station name selection | 7.10.1.3.2 [14] |
| NG1.A.2_6 | Registration user feedback | 7.10.1.3.3 [14] |
| NG1.A.3 | Handset locator | 5.7 [14] |
| NG1.A.3_1 | Handset locator | 7.10.2 [14] |
| GAP.A.1 | AC_bitstring_mapping | 4.2 [12] |
| GAP.A.2 | Multiple subscription registration | 4.2 [12] |
| GAP.A.3 | Manual entry of the PARK | 4.2 [12] |
| GAP.A.4 | Terminal identity number assignment in mono cell system | 4.2 [12] |
| NOTE: These procedures are not covered in a dedicated clause but are described in clause 7.4.3.8.2. | | |

Annex C (normative): Configuration for testing

The information contained within the following tables is required for configuration of the test equipment referred to in the present document. The label of each item does not explicitly appear in the test cases, nevertheless the related information are used either within stimulus or pass criteria to avoid human intervention when running some test cases.

C.1 Portable part configuration to be declared by supplier

None.

C.2 Fixed part internal configuration to be declared by supplier

The supplier shall provide additional information related to the FT testing. This information is used by the TS for the testing of the FP.

Table C.1: Internal configuration information for FT testing

| Internal configuration item | Description | Example of value (to be declared by manufacturer) | Example of test group where used and purpose |
|--|---|---|---|
| PIN_CODE | Pin code of the FP | "0000" | TC_FT_NG1.N.1: Used by TS to register on FP. |
| RFPI | RFPI of the FP | "1122334455" | TC_FT_NG1.N.1: Used by TS to check if it is registered to the correct FP (FP under test). |
| HANDSET_TS_1_NUMBER | Internal number of TS_1. Same as digit subfield in TS 102 527-3 [14], Clause 7.4.10.5.1.2. Put here the number that your FP will assign to the 1 st handset registered on your FP (see notes 1 and 2). | "1" | TC_FT_GAP.N.31: Used by TS to perform the internal call to handset 1 TC_FT_GAP.A.4: Used by TS to check FP has assigned the correct Terminal Id number |
| HANDSET_TS_1_NAME | Internal name of TS_1. Same as characters subfield in TS 102 527-3 [14], Clause 7.4.10.5.1.3 (see note 3) | "DECT 1" | TC_FT_GAP.N.31: Used by TS to check internal call CNIP is correct. |
| HANDSET_TS_2_NUMBER | Internal number of TS_2. See handset 1 description | "2" | TC_FT_GAP.N.31: Used by TS to check the internal call CLIP. |
| HANDSET_TS_2_NAME | Internal name of TS_2. See handset 1 description | "DECT 2" | TC_FT_GAP.N.31: Used by TS to check the internal call CNIP. |
| NOTE 1: The handset number and names declared here are the ones that will be set by the FP under test when the TS (TS_1 or TS_2) will register to this FP. Declaring this, allows to avoid the TS do a list access session to retrieve this data. | | | |
| NOTE 2: As defined in GAP.A.4 feature (see EN 300 444 [12]), the terminal identity number is in the interval [1: 127] for monocell systems (i.e. residential products). In addition, the first handset should be assigned value '00000001B' (but this is not a mandatory requirement). | | | |
| NOTE 3: The default naming of the standard was chosen as example. Other values are possible. | | | |

Table C.2: Test cases where these FT internal configuration items are used

| Configuration Item | Test case number(s) in which TS uses the configuration item |
|---------------------|--|
| PIN_CODE | TC_FT_NG1.N.1_BV_101, 103, 104 |
| RFPI | TC_FT_NG1.N.1_BV_101, 103, 104 |
| HANDSET_TS_1_NUMBER | TC_FT_NG1.N.7_BV_202, 602, 1202 TC_FT_NG1.N.8_BV_401 TC_FT_NG1.N.9_BV_102 TC_FT_NG1.N.16_BV_2201, 2202, 2210 TC_FT_NG1.N.21_BV_201, 202, 701 TC_FT_GAP.N.31_BV_301 TC_FT_GAP.A4_BV_101 |
| HANDSET_TS_1_NAME | TC_FT_NG1.N.8_BV_501 |
| HANDSET_TS_2_NUMBER | TC_FT_NG1.N.6_BV_401 TC_FT_NG1.N.7_BV_102, 202, 902 TC_FT_NG1.N.8_BV_101, 201, 401, 501 TC_FT_NG1.N.9_BV_101, 102 TC_FT_NG1.N.10_BV_101, 105, 106, 201, 202 TC_FT_NG1.N.11_BV_101 TC_FT_NG1.N.13_BV_203, 205 TC_FT_NG1.N.14_BV_401 TC_FT_NG1.N.16_BV_2202, 2203 TC_FT_GAP.N.31_BV_301 |
| HANDSET_TS_2_NAME | TC_FT_NG1.N.7_BV_1202 TC_FT_GAP.N.31_BV_401 |

C.3 Test environment configuration to be declared by test house or supplier

The test house or supplier shall provide additional information related to the testing environment. This information is used by the TS for the testing of the FP.

Table C.3: Test environment information for the FT testing

| Test environment item | Description | Example of value (to be declared by manufacturer) | Test group where used and purpose |
|-----------------------|--|---|---|
| PHONE_A_NUMBER | Telephone number of remote party Phone A | "210" | TC_FT_NG1.N.1: Used by TS to place outgoing to Phone A. |
| PHONE_A_CLIP | Calling party number of remote party Phone A (In principle the same as telephone number): characters of the CLIP information element (see EN 300 175-5 [5], Clause 7.7.9). | "210" | TC_FT_GAP.N.30: Used by TS to check if the CLIP is correct on incoming call from Phone A. |
| PHONE_A_CNIP | Calling party name of remote party Phone A (see EN 300 175-5 [5], Clause 7.7.53 and note) | "PHONE A" | TC_FT_GAP.N.34: Used by TS to check if the CNIP is correct on incoming call from Phone A. |
| PHONE_B_NUMBER | Same description as Phone A | "220" | See Phone A. |
| PHONE_B_CLIP | Same description as Phone A | "220" | See Phone A. |
| PHONE_B_CNIP | Same description as Phone A | "Phone B èàü" | See Phone A. This phone is explicitly used in the test case TC_FT_GAP.N.34_BV_201 where TS checks CNIP from an UTF-8 enabled network and phone (phone B) |
| PHONE_C_NUMBER | Same description as Phone A | "230" | See Phone A. |
| NOTE: | If the phone is connected to an UTF-8 enabled line (see Clause A.2.2), remote party name should include UTF-8 characters (e.g. 'Phone B èàü'). | | |

Table C.4: Test cases where test environment items are used

| Configuration Item | Test case number(s) in which TS uses the configuration item |
|--------------------|--|
| PHONE_A_NUMBER | TC_FT_NG1.N.1_BV_301, 303, 305, 306, 307 TC_FT_NG1.N.6_BV_601 TC_FT_NG1.N.7_BV_101, 102, 103, 104, 201, 202, 301, 302, 401, 601, 602, 701, 702, 801, 901, 1201, 1202 TC_FT_NG1.N.8_BV_101, 201, 301, 302 TC_FT_NG1.N.9_BV_102, 103, 104 TC_FT_NG1.N.10_BV_101, 105, 106, 201, 202 TC_FT_NG1.N.11_BV_202 TC_FT_NG1.N.12_BV_301, 302, 501, 502 TC_FT_NG1.N.12_GC_401, 402 TC_FT_NG1.N.13_BV_201, 202, 204 TC_FT_NG1.N.13_BV_304 TC_FT_NG1.N.14_BV_302, 303, 305, 306 TC_FT_NG1.N.15_BV_205, 206, 207, 208 TC_FT_NG1.N.16_BV_1706, 1802, 2002 TC_FT_NG1.N.17_BV_201 TC_FT_NG1.N.20_BV_201, 202, 203, 204, 205, 207, 210, 301, 303, 304 TC_FT_NG1.N.22_BV_101, 301, 302, 303 |
| PHONE_A_CLIP | TC_FT_NG1.N.13_BV_302 TC_FT_NG1.N.16_BV_1702, 1902, 2002, 2111 TC_FT_GAP.N.30_BV_01 |
| PHONE_A_CNIP | TC_FT_NG1.N.16_BV_1702, 1902, 2302 TC_FT_GAP.N.34_BV_101 |
| PHONE_B_NUMBER | TC_FT_NG1.N.6_BV_402, 601 TC_FT_NG1.N.7_BV_101, 103, 104, 301, 401, 702 TC_FT_NG1.N.9_BV_103, 104 TC_FT_NG1.N.11_BV_201 TC_FT_NG1.N.14_BV_305, 306 TC_FT_NG1.N.15_BV_201, 202, 205, 206, 207, 208, 301 TC_FT_NG1.N.16_BV_1705, 1706, 1802, 2002 TC_FT_NG1.N.18_BV_201, 301, 401 TC_FT_NG1.N.20_BV_202, 204, 210, 302, 304 TC_FT_NG1.N.21_BV_201, 202, 204, 701 TC_FT_NG1.N.22_BV_101, 301 |
| PHONE_B_CLIP | TC_FT_NG1.N.11_BV_202 TC_FT_NG1.N.16_BV_1702, 1705, 1706, 2002 |
| PHONE_B_CNIP | TC_FT_NG1.N.7_BV_1201 TC_FT_NG1.N.16_BV_1702, 1705, 1706, 2302 TC_FT_GAP.N.34_BV_201 TC_FT_GAP.N.34_GC_201 |
| PHONE_C_NUMBER | TC_FT_NG1.N.1_BV_302, 304 TC_FT_NG1.N.11_BV_202 TC_FT_NG1.N.18_BV_401 |

Annex D (normative): Amendments to other DECT specifications

D.1 Amendments to the Technical Basis for Regulation TBR 022 amended by TBR 022/A1 applicable to equipment compliant with TS 102 527-3

This annex list the requirements and tests which are optional in TBR 022 [i.4] amended by TBR 022/A1 [i.5], but that become mandatory by the support of the corresponding GAP features in TS 102 527-3 [14].

NOTE 1: This annex is a second amendment to TBR 022 [i.4]. TBR 022 [i.4] was first amended by TBR 022/A1 [i.5]. The present annex introduces new modifications that should be applied after the effect of TBR 022/A1 [i.5].

NOTE 2: Not all tables of TBR 022 [i.4] modified by the present annex have been modified by TBR 022/A1 [i.5].

The GAP features that became mandatory in NG-DECT Part 3 are:

- GAP.N.9 Authentication of the PP, GAP.N.12 On air key allocation and GAP.N.17 Encryption activation FT initiated which are required by GAP.N.35 Enhanced security.
- GAP.N.20 Terminate access rights FT initiated which is required by NG1.N.16_22 Internal names list procedure.
- GAP.N.30 Calling Line Identification Presentation (CLIP). The requirements of this feature have changed since the publication of TBR 022/A1 [i.5]: CLIP can be now sent either in {CC-SETUP} or in subsequent {CC-INFO}. The FT is required to support one of the methods, the PT is required to support both methods. Therefore, the CLIP test cases on FT side are not required as they might fail.
- GAP.N.31 Internal call: The requirements of this feature have changed since the publication of TBR 022/A1 [i.5]: 'Internal call setup' basic service shall be used instead of 'Normal call setup' basic service previously. Nevertheless, this basic service change will have no consequence when running the GAP internal test cases as the FT shall be backward compatible and the PT will answer to both type of call setup.

The following amendments to the Technical Basis for Regulation TBR 022 [i.4] amended by TBR 022/A1 [i.5] shall apply for the purpose of the present document.

D.1.1 Additional testing requirements for PP side

The following modifications shall apply when testing equipment compliant with TS 102 527-3 [14].

D.1.1.1 Modifications to Clause A.2.1.1.2 "CC features"

Table A.2 of TBR 022 [i.4] shall be replaced by the following Table D.1.

**Table D.1 (Table A.2 of TBR 022 [i.4]): EN 300 476-1 [i.18] Table A.13
CC features supported**

| Item | C | Call Control features | Reference | Status | Support |
|------|------|--|-----------|----------|---------|
| 1 | f | Bell off (Alerting) | 6.2 | m | |
| 2 | f | Bell on (Alerting) | 6.2 | m | |
| 3 | | Control of supervisory tones | - | i | |
| 4 | | Dial tone detection indication | - | i | |
| 5 | f | Dialled digits (basic) | 6.2 | m | |
| 6 | | Dialled digits additional | - | i | |
| 7 | | Dialling delimiter | - | i | |
| 8 | | Dialling delimiter request | - | i | |
| 9 | f | Display control characters | 6.2 | o | |
| 10 | | Emergency service access request | - | i | |
| 11 | | External Handover (inter-cell) | - | i | |
| 12 | | Fixed part / portable part capability exchange | - | i | |
| 13 | f | Go to DTMF (infinite tone length) | 6.2 | o | |
| 14 | f | Go to DTMF signalling (defined tone length) | 6.2 | m | |
| 15 | f | Go to Pulse | 6.2 | o | |
| 16 | | Group address | - | i | |
| 17 | f | Incoming call | 6.2 | m | |
| 18 | f | Internal call | 6.2 | m (note) | |
| 19 | f | Off hook | 6.2 | m | |
| 20 | f | On hook (full release) | 6.2 | m | |
| 21 | f | Outgoing call | 6.2 | m | |
| 22 | | Packet mode | - | i | |
| 23 | e, f | Partial release | 6.2 | o | |
| 24 | f | Pause (dialling pause) | 6.2 | m | |
| 25 | f | Register recall | 6.2 | m | |
| 26 | f | Signalling of display characters | 6.2 | o | |
| 27 | | Selection of bearer service | - | i | |
| 28 | | Service call | - | i | |
| 29 | | Service change | - | i | |

NOTE: Corresponding feature is optional in "Generic Access Profile" (GAP, EN 300 444 [12]) but mandatory in TS 102 527-3 [14].

D.1.1.2 Modifications to Clause A.2.1.1.4 "SS features (services)"

Table A.4 of TBR 022 [i.4] shall be replaced by the following Table D.2.

**Table D.2 (Table A.4 of TBR 022 [i.4]): EN 300 476-1 [i.18] Table A.15
SS features (services) supported**

| Item | C | CC(CRSS) and CISS features | Reference | Status | Support |
|------|---|---|-----------|----------|---------|
| 8 | f | Calling Line Identification Presentation (CLIP) | 6.2 | m (note) | |

NOTE: Corresponding feature is optional in "Generic Access Profile" (GAP, EN 300 444 [12]) but mandatory in TS 102 527-3 [14].

D.1.1.3 Modifications to Clause A.2.1.1.6 "Procedures"

Table A.6 of TBR 022 [i.4] shall be replaced by the following Table D.3.

**Table D.3 (Table A.6 of TBR 022 [i.4]): EN 300 476-1 [i.18] Table A.18
CC procedures supported**

| Item | CC procedures | Reference | Status | Support |
|---------|--|--------------------|----------|---------|
| 1 | cc_outgoing_normal_call_request | 8.2 | m | |
| 4 | cc_outgoing_selection_of_lower_layer_resources | - | i | |
| 5 | cc_outgoing_connection_of_U_plane | 8.3, 8.4, 8.5, 8.6 | m | |
| 6 | cc_outgoing_overlap_sending | 8.3 | m | |
| 7 | cc_outgoing_call_proceeding | 8.4 | m | |
| 8 | cc_outgoing_call_confirmation | 8.5 | m | |
| 9 | cc_outgoing_call_connection | 8.6 | m | |
| 10 | cc_incoming_call_request | 8.12 | m | |
| 11 | cc_incoming_selection_of_lower_layer_resources | - | i | |
| 12 | cc_incoming_connection_of_U_plane | 8.15 | m | |
| 13 | cc_incoming_overlap_receiving | - | i | |
| 14 | cc_incoming_call_proceeding | - | i | |
| 15 | cc_incoming_call_confirmation | 8.13 | m | |
| 16 | cc_incoming_call_connection | 8.15 | m | |
| 17 | cc_sending_terminal_capability | - | i | |
| 18 | cc_sending_keypad_info | 8.10 | m | |
| 19 | cc_call_information | 8.10 | m | |
| 20 | cc_normal_call_release | 8.7 | m | |
| 21 | cc_partial_release | 8.9 | c601 | |
| 22 | cc_abnormal_call_release | 8.8 | m | |
| 23 | cc_release_collisions | 8.7.2.1 | m | |
| 31 | cc_timer_p_cc_02_mgt | 8.7 | m | |
| 32 | cc_timer_p_cc_03_mgt | 8.2 | m | |
| 33 | cc_timer_p_cc_04_mgt | - | i | |
| 34 | cc_timer_p_cc_05_mgt | 8.15 | m | |
| 35 | cc_internal_call_setup | 8.18 | m (note) | |
| 39 | cc_internal_call_keypad | 8.19 | c602 | |
| 40 | pt_alerting | 8.14 | m | |
| 41 | display | 8.16 | c603 | |
| NOTE: | Corresponding feature is optional in "Generic Access Profile" (GAP, EN 300 444 [12]) but mandatory in TS 102 527-3 [14]. | | | |
| c601: | IF A. 2/23 THEN m ELSE n/a | | | |
| c602: | IF A. 2/18 THEN o. 601 ELSE n/a | | | |
| c603: | IF A. 2/9 OR A. 2/26 THEN m ELSE n/a | | | |
| o. 601: | It is mandatory to support at least one of these options | | | |

D.1.2 Additional testing requirements for FP side

The following modifications shall apply when testing equipment compliant with TS 102 527-3 [14].

D.1.2.1 Modifications to Clause A.3.1.1.2 "CC features"

Table A.54 of TBR 022 [i.4] shall be replaced by the following Table D.4.

**Table D.4 (Table A.54 of TBR 022 [i.4]): EN 300 476-4 [i.21] Table A.13
CC features supported**

| Item | C | Call Control features, Residential/Business | Reference | Status | Support |
|-------|--|--|-----------|----------|---------|
| 1 | f | Bell off (Alerting) | 6.2 | m | |
| 2 | f | Bell on (Alerting) | 6.2 | m | |
| 3 | | Control of supervisory tones | - | i | |
| 4 | | Dial tone detection indication | - | i | |
| 5 | f | Dialled digits (basic) | 6.2 | m | |
| 6 | | Dialled digits additional | - | i | |
| 7 | | Dialling delimiter | - | i | |
| 8 | | Dialling delimiter request | - | i | |
| 9 | f | Display control characters | 6.2 | o | |
| 10 | | Emergency service access request | - | i | |
| 11 | | External Handover (inter-cell) | - | i | |
| 12 | | Fixed part / portable part capability exchange | - | i | |
| 13 | f | Go to DTMF (infinite tone length) | 6.2 | o | |
| 14 | f | Go to DTMF signalling (defined tone length) | 6.2 | o | |
| 15 | f | Go to Pulse | 6.2 | o | |
| 16 | | Group address | - | i | |
| 17 | f | Incoming call | 6.2 | m | |
| 18 | f | Internal call | 6.2 | m (note) | |
| 19 | f | Off hook | 6.2 | m | |
| 20 | f | On hook (full release) | 6.2 | m | |
| 21 | f | Outgoing call | 6.2 | m | |
| 22 | | Packet mode | - | i | |
| 23 | e, f | Partial release | 6.2 | o | |
| 24 | f | Pause (dialling pause) | 6.2 | o | |
| 25 | f | Register recall | 6.2 | o | |
| 26 | f | Signalling of display characters | 6.2 | o | |
| 27 | | Selection of bearer service | - | i | |
| 28 | | Service call | - | i | |
| 29 | | Service change | - | i | |
| NOTE: | Corresponding feature is optional in "Generic Access Profile" (GAP, EN 300 444 [12]) but mandatory in TS 102 527-3 [14]. | | | | |

D.1.2.2 Modifications to Clause A.3.1.1.3 "MM features"

Table A.56 of TBR 022 [i.4] shall be replaced by the following Table D.5.

**Table D.5 (Table A.22 of TBR 022 [i.4]): EN 300 476-4 [i.21] Table A.14
MM features supported**

| Item | C | Mobility Management features, Residential/Business | Reference | Status | Support |
|--|------|--|-----------|----------|---------|
| 1 | f | Authentication of FT | 6.2 | o | |
| 2 | d, f | Authentication of PT | 6.2 | m (note) | |
| 3 | d, f | Authentication of user | 6.2 | o | |
| 4 | f, g | Encryption activation FT initiated | 6.2 | m (note) | |
| 5 | f, g | Encryption activation PT initiated | 6.2 | o | |
| 6 | f, g | Encryption deactivation FT initiated | 6.2 | o | |
| 7 | f, g | Encryption deactivation PT initiated | 6.2 | o | |
| 8 | d, f | Identification of PP | 6.2 | o | |
| 9 | | Inter-operator roaming registration | - | i | |
| 10 | | Location de-registration | - | i | |
| 11 | d, f | Location registration | 6.2 | o | |
| 12 | e, f | Multiple subscription registration | 6.6 | n/a | |
| 13 | d, f | On air key allocation | 6.2 | m (note) | |
| 14 | d, f | Service class indication/assignment | 6.2 | o | |
| 15 | | Silent polling | - | i | |
| 16 | d, f | Subscription registration procedure on-air | 6.2 | m | |
| 17 | | Subscription registration user procedure with DECT authentication module | - | i | |
| 18 | | Subscription registration user procedures keypad (digit entry only) | - | i | |
| 19 | d, f | Terminate access rights FT initiated | 6.2 | m (note) | |
| 20 | | Terminate access rights PT initiated | - | i | |
| 21 | d, f | ZAP | 6.2 | o | |
| 22 | e, f | MM Partial release (Link control) | 8.39 | m | |
| 23 | | Temporary identity assign | - | i | |
| NOTE: Corresponding feature is conditional/optional in "Generic Access Profile" (GAP, EN 300 444 [12]) but mandatory in TS 102 527-3 [14]. | | | | | |

D.1.2.3 Modifications to Clause A.3.1.1.6 "Procedures"

Table A.60 of TBR 022 [i.4] shall be replaced by the following Table D.6.

**Table D.6 (Table A.60 of TBR 022 [i.4]): EN 300 476-4 [i.21] Table A.18
CC procedures supported**

| Item | CC procedures | Reference | Status | Support |
|--------|---|--------------------|----------|---------|
| 1 | cc_outgoing_normal_call_request | 8.2 | m | |
| 4 | cc_outgoing_selection_of_lower_layer_resources | - | i | |
| 5 | cc_outgoing_connection_of_U_plane | 8.3, 8.4, 8.5, 8.6 | m | |
| 6 | cc_outgoing_overlap_sending | 8.3 | o | |
| 7 | cc_outgoing_call_proceeding | 8.4 | o | |
| 8 | cc_outgoing_call_confirmation | 8.5 | o | |
| 9 | cc_outgoing_call_connection | 8.6 | m | |
| 10 | cc_incoming_call_request | 8.12 | m | |
| 11 | cc_incoming_selection_of_lower_layer_resources | - | i | |
| 12 | cc_incoming_connection_of_U_plane | 8.15 | m | |
| 13 | cc_incoming_overlap_receiving | - | i | |
| 14 | cc_incoming_call_proceeding | - | i | |
| 15 | cc_incoming_call_confirmation | 8.13 | m | |
| 16 | cc_incoming_call_connection | 8.15 | m | |
| 17 | cc_sending_terminal_capability | - | i | |
| 18 | cc_sending_keypad_info | 8.10 | m | |
| 19 | cc_call_information | 8.10 | i | |
| 20 | cc_normal_call_release | 8.7 | m | |
| 21 | cc_partial_release | 8.9 | c6001 | |
| 22 | cc_abnormal_call_release | 8.8 | m | |
| 23 | cc_release_collisions | 8.7.2.1 | m | |
| 31 | cc_timer_f_cc_02_mgt | 8.7 | m | |
| 32 | cc_timer_f_cc_03_mgt | 8.2 | m | |
| 33 | cc_timer_f_cc_04_mgt | - | i | |
| 34 | cc_timer_f_cc_01_mgt | 8.3 | c6002 | |
| 35 | cc_internal_call_setup | 8.18 | m (note) | |
| 39 | cc_internal_call_keypad | 8.19 | C6004 | |
| 40 | pt_alerting | 8.14 | M | |
| 41 | display | 8.16 | c6005 | |
| NOTE: | Corresponding feature is conditional in "Generic Access Profile" (GAP, EN 300 444 [12]) but mandatory in TS 102 527-3 [14]. | | | |
| c6001: | IF A. 55/23 THEN m ELSE n/a | | | |
| c6002: | IF A. 60/6 THEN m ELSE n/a | | | |
| c6003: | IF A. 55/18 THEN m ELSE n/a | | | |
| c6004: | IF A. 55/18 THEN o ELSE n/a | | | |
| c6005: | IF A. 55/9 OR A. 55/26 THEN m ELSE n/a | | | |

D.1.3 Additional Test Cases applicable to equipment compliant with TS 102 527-3

This clause lists the additional Test Cases, compared to those mandated by the Technical Basis for Regulation TBR 022 [i.4] amended by TBR 022/A1 [i.5], that are applicable to equipment compliant with TS 102 527-3 [14].

The following additional testing requirements shall apply to equipment compliant with TS 102 527-3 [14].

D.1.3.1 Additional PT NWK layer test cases

The following abstract test cases are specified in the EN 300 494-2 [i.7] which gives the test specification for DECT GAP Portable Part applications. The test purposes details are given in EN 300 497-6 [i.14] and the test case dynamic behaviour in EN 300 497-7 [i.15].

The following additional test cases (Table D.7) shall apply to PPs compliant with TS 102 527-3 [14].

Table D.7: Additional GAP test cases for NG-DECT Part 3 PP

| TBR 22: Test Case Index | |
|--|--|
| Test Case Id | Description |
| GAP.N.30: Calling Line Identification Presentation (CLIP) | |
| TC_PT_CC_BV_RS_01 | T-00; Incoming call; {CC-SETUP} with << Calling party number >>; CLIP handling |
| GAP.N.31: Internal Call | |
| TC_PT_CC_BV_CI_11 | Internal Call |

D.1.3.2 Additional FT NWK layer test cases

The following abstract test cases are specified in the EN 300 494-3 [i.8] which gives the test specification for DECT GAP Fixed Part applications. The test purposes details are given in EN 300 497-8 [i.16] and the test case dynamic behaviour in EN 300 497-9 [i.17].

The following additional test cases (Table D.8) shall apply to FPs compliant with TS 102 527-3 [14].

Table D.8: Additional GAP test cases for NG-DECT Part 3 FP

| TBR 22: Test Case Index | |
|---|---|
| Test Case Id | Description |
| GAP.N.9 1: Authentication of PT | |
| TC_FT_MM_BV_AU_01 | Authentication of PT; PT has no stored ZAP value and service class info |
| TC_FT_MM_TI_02 | Authentication of PT; timer F - < MM_auth.1 > expiry (10 % margin) |
| GAP.N.12 1: Key allocation | |
| TC_FT_MM_BV_KA_01 | Key allocate; IUT initiated |
| TC_FT_MM_BV_KA_02 | Key allocate; IUT initiated; "implicit PT authentication" failure; IUT rejects |
| TC_FT_MM_TI_05 | Key allocation; timer F - < MM_key.1 > expiry (-10 % margin) |
| GAP.N.17 1: Cipher-switching initiated by FT | |
| TC_FT_MM_BV_CH_03 | Cipher switching; IUT(FT) initiated; "cipher-off" to "cipher-on" |
| TC_FT_MM_BV_CH_08 | Cipher switching; IUT(FT) initiated; "cipher-off" to "cipher-on" fails |
| TC_FT_MM_BV_CH_14 | Cipher switching; IUT(FT) initiated; "cipher-off" to "cipher-on" and intracell handover |
| TC_FT_MM_BO_01 | Cipher switching; IUT(FT) initiated; ignoring unexpected {IDENTITY-REPLY} |
| TC_FT_MM_TI_06 | Cipher switching; IUT (FT) initiated; timer F - < MM_cipher.1 > expiry (margin: -20 %) |
| GAP.N.20 1: FT terminating access rights | |
| TC_FT_MM_BV_AR_03 | Terminate access rights; IUT(FT) initiated; PT authenticates FT |
| TC_FT_MM_TI_04 | Terminate access rights; IUT(FT) initiated; timer F-<MM_access.2> expiry (-10 % margin) |

History

| Document history | | |
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