

TS.11 - Annex D

Detailed Test Procedures for RAT independent services

Version 45

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# Annex D: Detailed Test Procedures for RAT independent services

This Annex contains the detailed procedures that are recommended to be used for Field and Lab Tests of RAT independent services.

NOTE: For a Dual or Multi RAT Terminal Device, all RAT independent Test Scenarios should be executed as specified below:

- Devices supporting GERAN/UTRA technology shall be tested in UTRA network and subset of test scenarios shall be executed in GERAN network as a regression test.

- Devices supporting GERAN/UTRA/E-UTRA technology shall be tested in E-UTRA network and a subset of Test Scenarios shall be executed in a GERAN & UTRA network as a regression test.

# 40 CS Voice Call

## 40.1 Basic Voice Call

### 40.1.1 Mobile Originated Voice Call (MO)

#### 40.1.1.1 MO Voice Call - Successful

Description

The DUT shall make an outgoing voice call.

Related core specifications

TS 24.008 clause 5

Reason for test

The DUT is of limited use if it cannot complete an outgoing call.

Initial configuration

Call Forwarding disabled at Client-1

Test scenarios (overview)

**Scenario A:** Mobile (CS registered) is used as Client-1.

**Scenario B:** Mobile (IMS registered) is used as Client-1.

**Scenario C:** Non-Cellular (Fixed Line) is used as Client-1 (For example: PBX, PSTN or ISDN).

The below test procedure is applicable to all scenarios.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, make MO voice call to Client-1. | DUT is alerting. Client-1 displays MSISDN of DUT. |
| 2 | Answer call on Client-1. | 2-Way audio connection is established. |
| 3 | At DUT, end voice call to Client-1. | Voice call is ended between DUT and Client-1. |

#### 40.1.1.2 MO Voice Call - To Occupied Client

Description

The DUT shall make an outgoing voice call to a busy Client and correctly indicate the busy status.

Related core specifications

TS 24.008 clause 5

Reason for test

DUT should make the user aware when a line is busy.

Initial configuration

Call Waiting disabled at Client 1.

Voicemail disabled at Client-1.

Call Forwarding disabled at Client-1

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, make MO voice call to Client-1. | Call is not connected and DUT displays “User Busy” or similar and emits busy tones from the speaker. |

#### 40.1.1.3 MO Voice Call - International Format

Description

The DUT shall correctly make an international call using a number provided in the international format (using the + prefix)

Related GSM core specifications

TS 24.008 clause 5

Reason for test

Use of the + prefix is essential for making international calls, and for correct use of stored numbers while roaming.

Initial configuration

DUT in idle mode.

CLIR disabled at DUT.

CLIP enabled at Client 1 and Client 2.Client 1 has same international prefix as DUT.

Client 2 has different international prefix as DUT.

Test procedure

**Scenario A: Same Country, Not Stored**

1. Delete all entries in DUT phonebook.
2. At DUT, make MO voice call to Client 1 using the + international prefix and full international number.
3. At DUT, end voice call to Client 1.

**Scenario B: Same Country, Stored**

1. Store Client 1 ADN in DUT phonebook.
2. At DUT, make MO voice call to Client 1 using the + international prefix and full international number.
3. At DUT, end voice call to Client 1.

**Scenario C: Different Country, Not Stored**

1. Delete all entries in DUT phonebook.
2. At DUT, make MO voice call to Client 2 using the + international prefix and full international number.
3. At DUT, end voice call to Client 2.

**Scenario D: Different Country, Stored**

1. Store Client 2 ADN in DUT phonebook.
2. At DUT, make MO voice call to Client 2 using the + international prefix and full international number.
3. At DUT, end voice call to Client 2.

Expected behaviour

1. DUT phonebook is updated.
2. Client displays CLIP information of DUT during alerting phase.
3. DUT is alerting.

The call is answered at Client.

2-way audio is established between DUT and Client.

1. Voice call is ended between DUT and Client.

#### 40.1.1.4 MO Voice Call - DTMF Emission

Description

The DUT can transmit DTMF tones during a voice call.

Related GSM core specifications

TS 24.008 sub clause 5.5.7

Reason for test

To ensure the DUT can transmit DTMF tones during a voice call.

Initial configuration

DUT is in Idle mode.

Client 1 is capable of interpreting DTMF tones (e.g. voicemail system).

Test procedure

**Scenario A: Direct input**

1. Delete all entries in DUT phonebook.
2. At DUT, make MO voice call to Client 1.
3. Using DUT keypad, successfully send DTMF tones for digits 0-9, \* and #.

**Scenario B: From phonebook**

1. Store Client 1 ADN in DUT phonebook with a pause, followed by digits 0-9, \* and #, e.g. +441111111111P0123456789\*#
2. Direct from DUT phonebook, make MO voice call to Client 1.
3. Observe the DTMF tones stored after the Pause are sent correctly.

Expected behaviour

1. DUT phonebook is updated.
2. Voice call is established between DUT and Client.
3. DTMF tones for digits 0-9, \* and # are sent correctly and interpreted by the Client.

#### 40.1.1.5 MO Voice Call - Display message of registered and activated call forwarding during MOC setup

Description

Display a notification of Call Forwarding status when making an MO voice call.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that call forwarding status of the DUT is displayed correctly to the user during or after voice call setup.

Initial configuration

Network support for “NotifySS” message.

DUT is in Idle mode.

Test Procedure

1. At DUT setup a conditional call forwarding to Client 1 using \*\*004\*DN#.

2. Make MO voice call to Client 2.

3. At DUT, erase the conditional divert using ##004#.

4. At DUT setup an unconditional call forwarding to Client 1 using \*\*21\*DN#.

5. Make MO voice call to Client 2.

6. At DUT, erase the unconditional divert using ##21#.

**Expected behaviour**

1. DUT indicates to the user that the service is registered.

2. MO voice call to Client 2 is successful and DUT displays SS notification “Conditional call Forwarding Active or similar”. If DUT does not support call forwarding notifications during MOC setup, the call is set up without any disturbance.

3. DUT indicates to the user that the service is erased.

4. DUT indicates to the user that the service is registered.

5. MO voice call to Client 2 is successful and DUT displays SS notification “Unconditional call Forwarding Active or similar”. If DUT does not support call forwarding notifications during MOC setup, the call is set up without any disturbance.

6. DUT indicates to the user that the service is erased.

### 40.1.2 Mobile Terminated Voice Call (MT)

#### 40.1.2.1 MT Voice Call - Successful

Description

The DUT shall present the correct CLIP information on an incoming call.

Related core specifications

TS 24.081 sub clause 1.1

Reason for test

To ensure that calling line identification is presented on the DUT.

Initial configuration

Call Forwarding disabled at DUT

Test scenarios (overview)

**Scenario A:** Mobile (CS registered) is used as Client-1.

**Scenario B:** Mobile (IMS registered) is used as Client-1.

**Scenario C:** Non-Cellular (Fixed Line) is used as Client-1 (For example: PBX, PSTN or ISDN).

The below test procedure is applicable to all scenarios.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, receive MT voice call from Client-1. | DUT is alerting and displays MSISDN of Client-1. |
| 2 | Answer call on DUT. | 2-Way audio connection is established. |
| 3 | At Client-1, end voice call to DUT. | Voice call is ended between DUT and Client-1. |

## 40.2 Emergency Call

### 40.2.1 Emergency Call

#### 40.2.1.1 Emergency Call - Idle Screen

Description

The DUT shall make an Emergency Call attempt from the Idle screen.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt from the Idle screen.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

DUT is CS attached and in Idle.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 2 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | Normal Call is initiated.  DUT UI indicates to the user a normal call is being initiated. |
| 4 | Dial any other specific National Emergency number of the country. | Normal Call is initiated.  DUT UI indicates to the user a normal call is being initiated. |
| 5 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.2 Emergency Call - Keypad Locked

Description

The DUT shall make an Emergency Call attempt when the keypad is locked.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when the keypad is locked.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

DUT is CS attached and in Idle.

Keypad lock is enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 2 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that keypad is locked / DUT displays an indication that only Emergency Calls are allowed according to design concept. |
| 4 | Dial any other specific National Emergency number of the country. | DUT displays an indication that keypad is locked / DUT displays an indication that only Emergency Calls are allowed according to design concept. |
| 5 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.3 Emergency Call - Phone Locked

Description

The DUT shall make an Emergency Call attempt when the phone lock is enabled.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when the phone lock is enabled.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

DUT is CS attached and in Idle.

Phone/screen lock is enabled (e.g. Password, PIN, Pattern etc.).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Wake up DUT from sleep mode. | Phone/screen lock is displayed. |
| 2 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 4 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 6 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.4 Emergency Call - FDN Enabled

Description

The DUT shall make an Emergency Call attempt when FDN is enabled.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when FDN is enabled.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

DUT is CS attached and in Idle.

FDN is enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 2 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only calls to FDN numbers are permitted when FDN is enabled. |
| 4 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only calls to FDN numbers are permitted when FDN is enabled. |
| 5 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.5 Emergency Call - Emergency Camping

Description

The DUT shall make an Emergency Call attempt when in emergency camping.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when in emergency camping.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

DUT is in Emergency camping (camped on an acceptable cell).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is not used as DUT identity - TMSI or IMSI shall be used instead.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 2 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is not used as DUT identity - TMSI or IMSI shall be used instead.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 4 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is not used as DUT identity - TMSI or IMSI shall be used instead.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.6 Emergency Call - PIN Locked

Description

The DUT shall make an Emergency Call attempt before the PIN is entered.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt before the PIN is entered.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

PIN lock is enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Restart DUT but do not enter PIN. | PIN unlock screen is displayed. |
| 2 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 4 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 6 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.7 Emergency Call - PIN Blocked

Description

The DUT shall make an Emergency Call attempt when the PIN is blocked.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when the PIN is blocked.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

PIN lock is enabled.

PIN is blocked (e.g. enter wrong PIN 3x when trying to unlock PIN).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Restart DUT but do not enter PUK. | PUK unlock screen is displayed. |
| 2 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 4 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 6 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.8 Emergency Call - PUK Blocked

Description

The DUT shall make an Emergency Call attempt when the PUK is blocked.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when the PUK is blocked.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

PIN lock is enabled.

PUK is blocked (e.g. enter wrong PUK 10x when trying to unlock PUK).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Restart DUT. | PUK blocked notification is displayed. |
| 2 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 4 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 6 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.9 Emergency Call - Network Locked

Description

The DUT shall make an Emergency Call attempt when Network lock is enabled.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when Network lock is enabled.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

A network lock is setup on the DUT for an operator which is different to the network of the UICC in the device or the network provisioned on the eUICC.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Restart DUT but do not enter Network unlock code. | Network unlock screen is displayed. |
| 2 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is not used as DUT identity - TMSI or IMSI shall be used instead.  (The UE is expected only to include IMSI Identity and not to have successful security procedures as per 3GPP TS 33.102, chapter 6.4.9.2)  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is not used as DUT identity - TMSI or IMSI shall be used instead.  (The UE is expected only to include IMSI Identity and not to have successful security procedures as per 3GPP TS 33.102, chapter 6.4.9.2)  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 4 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 6 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is not used as DUT identity - TMSI or IMSI shall be used instead.  (The UE is expected only to include IMSI Identity and not to have successful security procedures as per 3GPP TS 33.102, chapter 6.4.9.2)  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

#### 40.2.1.10 Emergency Call - Deactivated UICC / eUICC

Description

The DUT shall make an Emergency Call attempt when UICC / eUICC is deactivated.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt when UICC / eUICC is deactivated.

Initial configuration

EFECC field may be empty or populated according to the operator profile of the UICC / eUICC.

UICC / eUICC is deactivated.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Restart DUT. | After switching on the DUT, wait a sufficient time to allow the network to reject the location update. The network responds with “IMSI unknown in HLR” to the location update attempt. |
| 2 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is used as DUT identity - Neither TMSI or IMSI shall be used.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial the Emergency number(s) stored in EFECC field of the UICC / eUICC (If EFECC is empty then skip this step and continue with the next step). | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is used as DUT identity - Neither TMSI or IMSI shall be used.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 4 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | DUT displays an indication that only Emergency Calls are allowed. |
| 5 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 6 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is used as DUT identity - Neither TMSI or IMSI shall be used.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

### 40.2.2 Void

#### 40.2.2.1 Void

#### 40.2.2.2 Void

#### 40.2.2.3 Void

#### 40.2.2.4 Void

#### 40.2.2.5 Void

#### 40.2.2.6 Void

#### 40.2.2.7 Void

#### 40.2.2.8 Void

#### 40.2.2.9 Void

#### 40.2.2.10 Void

### 40.2.3 Emergency Call – No UICC / eUICC not provisioned

#### 40.2.3.1 Emergency Call - No UICC / eUICC not provisioned - Idle Screen

Description

The DUT shall make an Emergency Call without a UICC / eUICC or when the eUICC is not provisioned.

Related core specifications

3GPP TS 22.101 R99 clause 8

Reason for test

To ensure the DUT can make an Emergency Call attempt without a UICC / eUICC or when the eUICC is not provisioned.

Initial configuration

DUT is powered on without UICC / eUICC or without the eUICC provisioned.

DUT is in Emergency camping (camped on an acceptable cell).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Dial the following International Emergency numbers: 112, 911 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is used as DUT identity - Neither TMSI or IMSI shall be used.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 2 | Dial the following standardised National Emergency numbers: 08, 000, 110, 118, 119, 999 | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is used as DUT identity - Neither TMSI or IMSI shall be used.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |
| 3 | Dial any other specific National Emergency number of the country. | DUT displays an indication that only Emergency Calls are allowed. |
| 4 | Dial the Emergency Services without dialling any dedicated number, e.g. SOS soft key. | Emergency Call is initiated.  DUT UI indicates to the user an Emergency call is being initiated.  Confirm IMEI is used as DUT identity - Neither TMSI or IMSI shall be used.  DUT is alerting and 2-way audio connection is established with the Emergency Services. |

## 40.3 WB-AMR Voice Call

### 40.3.1 Mobile Originated WB-AMR Voice Call (MO)

#### 40.3.1.1 MO WB-AMR Voice Call - To WB-AMR Client

Description

The DUT shall make an outgoing WB-AMR voice call.

Related core specifications

3GPP TS 24.008, 3GPP TS 44.018, 3GPP TS 26.190, 3GPP TS 26.201, 3GPP TS 26.194, 3GPP TS 26.173

Reason for test

To ensure the DUT can make an outgoing WB-AMR voice call to another WB-AMR supporting client.

Initial configuration

DUT in idle mode.

DUT and Client 1 camping to a RAT supporting WB-AMR.

DUT and Client 1 have WB-AMR voice codec enabled.

Test procedure

1. At DUT, make MO voice call to Client 1.
2. Answer call on Client 1.
3. At DUT, end voice call to Client 1.

Expected behaviour

1. DUT is alerting. Client 1 displays CLIP information of DUT.
2. 2-Way WB-AMR audio connection is established.

Observe the voice clarity to check for WB-AMR codec.

If available, use a measuring tool or internal monitor to check the codec rate of the call is WB-AMR.

1. Voice call is ended between DUT and Client 1.

#### 40.3.1.2 MO WB-AMR Voice Call - To NB-AMR Client

Description

When DUT attempts a WB-AMR call to a NB device, it shall successfully establish the voice call in NB codec.

Related core specifications

3GPP TS 24.008, 3GPP TS 44.018, 3GPP TS 26.190, 3GPP TS 26.201, 3GPP TS 26.194, 3GPP TS 26.173

Reason for test

To ensure that WB-AMR devices establish voice calls to non WB-AMR supporting device.

Initial configuration

DUT in idle mode.

DUT and Client 1 camping to a RAT supporting WB-AMR.

DUT has WB-AMR voice codec enabled.

Client 1 does not support WB-AMR voice codec.

Test procedure

1. At DUT, make MO voice call to Client 1.
2. Answer call on Client 1.
3. At DUT, end voice call to Client 1.

Expected behaviour

1. DUT is alerting. Client 1 displays CLIP information of DUT.
2. 2-Way NB audio connection is established.
3. Voice call is ended between DUT and Client 1.

#### 40.3.1.3 MO WB-AMR Voice Call - To NB-AMR Client - Transcoding to G.711

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 40.3.1.4 MO WB-AMR Voice Call - To WB-AMR Client - During PS Data

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 40.3.1.5 MO WB-AMR Voice Call - DTMF Emission

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 40.3.2 Mobile Terminated WB-AMR Voice Call (MT)

#### 40.3.2.1 MT WB-AMR Voice Call - From WB-AMR Client

Description

The DUT shall receive an incoming WB-AMR voice call.

Related core specifications

3GPP TS 24.008, 3GPP TS 44.018, 3GPP TS 26.190, 3GPP TS 26.201, 3GPP TS 26.194, 3GPP TS 26.173

Reason for test

To ensure the DUT can receive an incoming WB-AMR voice call from another WB-AMR supporting client.

Initial configuration

DUT in idle mode.

DUT and Client 1 camping to a RAT supporting WB-AMR.

DUT and Client 1 have WB-AMR voice codec enabled.

Test procedure

1. At DUT, receive MT voice call from Client 1.
2. Answer call on DUT.
3. At Client 1, end voice call to DUT.

Expected behaviour

1. DUT is alerting. DUT displays CLIP information of Client 1.
2. 2-Way WB-AMR audio connection is established.

Observe the voice clarity to check for WB-AMR codec.

If available, use a measuring tool or internal monitor to check the codec rate of the call is WB-AMR.

1. Voice call is ended between DUT and Client 1.

#### 40.3.2.2 MT WB-AMR Voice Call - From WB-AMR Client - During PS Data

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 40.3.3 WB-AMR Codec Mode Change

#### 40.3.3.1 WB-AMR Codec Mode Change - 2G to 2G

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 40.3.3.2 WB-AMR Codec Mode Change - 3G to 3G

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 40.3.3.3 WB-AMR Codec Mode Change - 2G to 3G, Ordered From 2G

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 40.3.3.4 WB-AMR Codec Mode Change - 2G to 3G, Ordered From 3G

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 40.3.3.5 WB-AMR Codec Mode Change - To Non-WB-AMR Codecs

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 41 Short Message Service (SMS)

## 41.1 Mobile Originated SMS (MO SMS)

### 41.1.1 Default 7-bit alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 | @ |  | SP | 0 | ¡ | P | ¿ | p |
| 1 | £ | \_ | ! | 1 | A | Q | a | q |
| 2 | $ |  | " | 2 | B | R | b | r |
| 3 | ¥ |  | # | 3 | C | S | c | s |
| 4 | è |  | ¤ | 4 | D | T | d | t |
| 5 | é |  | % | 5 | E | U | e | u |
| 6 | ù |  | & | 6 | F | V | f | v |
| 7 | ì |  | ' | 7 | G | W | g | w |
| 8 | ò |  | ( | 8 | H | X | h | x |
| 9 | Ç |  | ) | 9 | I | Y | i | y |
| 10 | LF |  | \* | : | J | Z | j | z |
| 11 | Ø | 1) | + | ; | K | Ä | k | ä |
| 12 | ø | Æ | , | < | L | Ö | l | ö |
| 13 | CR | æ | - | = | M | Ñ | m | ñ |
| 14 | Å | ß | . | > | N | Ü | n | ü |
| 15 | å | É | / | ? | O | § | o | à |

#### 41.1.1.1 MO SMS - Default 7-bit (Empty)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.1.2 MO SMS - Default 7-bit

Description

The DUT shall be able to send a 1 segment SMS containing characters from the Default 7-bit alphabet.

Related GSM core specifications

GSM 03.40, GSM 04.11

Reason for test

To ensure the DUT correctly sends a 1 segment SMS containing characters of the Default 7-bit alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or Default 7-bit only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter exactly 160 characters (1 segment) of the Default 7-bit alphabet in the SMS text.
3. Send the SMS to Client 1.
4. Open the SMS at Client 1 and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with exactly 160 characters (1 segment) of the Default 7-bit alphabet.
3. SMS is successfully sent from DUT and received on Client 1.
4. The message content is identical to the message prepared on DUT.

#### 41.1.1.3 MO SMS - Default 7-bit (Concatenated)

| **Segment** | **No. Characters** | **Accumulated** |
| --- | --- | --- |
| 1 | 160 | 160 |
| 2 | 146 | 306 |
| 3 | 153 | 459 |
| 4 | 153 | 612 |
| 5 | 153 | 765 |
| 6 | 153 | 918 |
| 7 | 153 | 1071 |
| 8 | 153 | 1224 |
| 9 | 153 | 1377 |
| 10 | 153 | 1530 |

Description

The DUT shall be able to send a concatenated SMS containing characters from the Default 7-bit alphabet.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure the DUT correctly sends a concatenated SMS containing characters of the Default 7-bit alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or Default 7-bit only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter up to 10 segments of the Default 7-bit alphabet in the SMS text. If the DUT supports a maximum of less than 10 segments then test with the maximum supported amount.
3. Send the SMS to Client 1.
4. Open the SMS at Client 1 and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with up to 10 segments.
3. SMS is successfully sent from DUT and received on Client 1.
4. The message content is identical to the message prepared on DUT.

### 41.1.2 Extended Default 7-bit alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 |  |  |  |  | | |  |  |  |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  | ^ |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  | € |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  | { |  |  |  |  |  |
| 9 |  |  | } |  |  |  |  |  |
| 10 | 3) |  |  |  |  |  |  |  |
| 11 |  | 1) |  |  |  |  |  |  |
| 12 |  |  |  | [ |  |  |  |  |
| 13 |  |  |  | ~ |  |  |  |  |
| 14 |  |  |  | ] |  |  |  |  |
| 15 |  |  | \ |  |  |  |  |  |

#### 41.1.2.1 MO SMS - Extended Default 7-bit

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.2.2 MO SMS - Extended Default 7-bit (Concatenated)

Description

The DUT shall be able to send a concatenated SMS containing characters from the Extended Default 7-bit alphabet.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure the DUT correctly sends a concatenated SMS with more containing characters of the Extended Default 7-bit alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or Default 7-bit only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter 2 characters of the Extended 7-bit alphabet per segment and fill the rest of the segment with Default 7-bit alphabet characters. Repeat this until a 10 segment SMS is created. If the DUT supports a maximum of less than 10 segments then test with the maximum supported amount.
3. Send the SMS to Client 1.
4. Open the SMS at Client 1 and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with up to 10 segments.
3. SMS is successfully sent from DUT and received on Client 1.
4. The message content is identical to the message prepared on DUT.

### 41.1.3 UCS-2 alphabet

#### 41.1.3.1 MO SMS - UCS-2

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.3.2 MO SMS - UCS-2 (Concatenated)

| **Segment** | **No. Characters** | **Accumulated** |
| --- | --- | --- |
| 1 | 70 | 70 |
| 2 | 64 | 134 |
| 3 | 67 | 201 |
| 4 | 67 | 268 |
| 5 | 67 | 335 |
| 6 | 67 | 402 |
| 7 | 67 | 469 |
| 8 | 67 | 536 |
| 9 | 67 | 603 |
| 10 | 67 | 670 |

Description

The DUT shall be able to send a concatenated SMS containing characters from the UCS-2 alphabet.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure the DUT correctly sends a concatenated SMS containing characters of the UCS-2 alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or UCS-2 only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter up to 10 segments of the UCS-2 alphabet in the SMS text. If the DUT supports a maximum of less than 10 segments then test with the maximum supported amount.
3. Send the SMS to Client 1.
4. Open the SMS at Client 1 and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with up to 10 segments of the UCS-2 alphabet or the maximum supported amount of characters on the DUT.
3. SMS is successfully sent from DUT and received on Client 1.
4. The message content is identical to the message prepared on DUT.

#### 41.1.3.3 MO SMS - UCS-2 & Default 7-bit

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.1.4 EMS Content

#### 41.1.4.1 MO SMS - EMS content

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.1.5 Additional MO SMS Functionality

#### 41.1.5.1 MO SMS - Validity Period

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.5.2 MO SMS - Reply Path

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.5.3 MO SMS - Status Report

Description

The status report (often referred to as "Delivery Report") gives an indication as to whether an SMS has been delivered to its recipient.

Related GSM core specifications

GSM 03.40, GSM 04.11

Reason for test

To ensure the status report can be set and a delivery report is received to indicate the status of a sent SMS.

Initial configuration

SMSC supports status report.

Client 1 is able to receive MT SMS.

Test procedure

1. On DUT, enable SMS status report.
2. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
3. Enter some text in the message body.
4. Send the SMS to Client 1.

Expected behaviour

1. Status report is enabled on DUT.
2. The Messaging application is opened and the MSISDN of Client 1 is entered.
3. The message is prepared.
4. SMS is successfully sent from DUT and received on Client 1.

A status report is available on DUT which indicates the SMS has been "Delivered".

#### 41.1.5.4 MO SMS - During call

Description

The DUT should be able to send an MO SMS during an active call.

Related GSM core specifications

3GPP TS 23.040, GSM 03.40, GSM 04.11

Reason for test

To ensure the DUT can send an SMS during an active call.

Initial configuration

Client 1 is able to receive MT SMS.

Test scenarios (overview)

**Scenario A:** Voice call.

**Scenario B:** FAX call.

**Scenario C:** Video call.

**Scenario D:** CS Data call with active download.

**Scenario E:** PS Data call with active download.

The below test procedure is applicable to all scenarios.

Test procedure

1. Establish call according to the scenario listed above.
2. During active call, create MO SMS at DUT and send to Client 1.
3. Open and read SMS at Client 1.

Expected behaviour

1. Successful call established.
2. An SMS can be created at DUT and is successfully sent to Client 1.
3. The SMS content is displayed correctly at Client 1.

#### 41.1.5.5 MO SMS - When out of coverage

Description

When an SMS is prepared and an attempt to send it while out of coverage occurs, the DUT shall correctly send the SMS when it returns to coverage.

Related GSM core specifications

GSM 03.40, GSM 04.11

Reason for test

To ensure that when an SMS is prepared and there is an attempt to send it while the DUT is out of coverage, the DUT shall correctly send the SMS when it returns to coverage.

Initial configuration

DUT is out of coverage.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter some text in the message body.
3. Send the SMS to Client 1.
4. Move DUT back into an area of network coverage.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared.
3. The DUT displays a notification that it is out of coverage and that the SMS will be sent when it is back in network coverage.
4. SMS is successfully sent from DUT and received on Client 1.

#### 41.1.5.6 MO SMS - Text Alignment - Default right aligned

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.5.7 MO SMS - Text Alignment - Default left aligned

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.1.6 MO SMS - Alphabet

#### 41.1.6.1 MO SMS - Default 7-bit alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 | @ |  | SP | 0 | ¡ | P | ¿ | p |
| 1 | £ | \_ | ! | 1 | A | Q | a | q |
| 2 | $ |  | " | 2 | B | R | b | r |
| 3 | ¥ |  | # | 3 | C | S | c | s |
| 4 | è |  | ¤ | 4 | D | T | d | t |
| 5 | é |  | % | 5 | E | U | e | u |
| 6 | ù |  | & | 6 | F | V | f | v |
| 7 | ì |  | ' | 7 | G | W | g | w |
| 8 | ò |  | ( | 8 | H | X | h | x |
| 9 | Ç |  | ) | 9 | I | Y | i | y |
| 10 | LF |  | \* | : | J | Z | j | z |
| 11 | Ø | 1) | + | ; | K | Ä | k | ä |
| 12 | ø | Æ | , | < | L | Ö | l | ö |
| 13 | CR | æ | - | = | M | Ñ | m | ñ |
| 14 | Å | ß | . | > | N | Ü | n | ü |
| 15 | å | É | / | ? | O | § | o | à |

Description

All characters of the Default 7-bit alphabet should be available on the DUT. The character counter should update correctly when each character is entered and the DUT should be able to send an SMS containing all the characters.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure all the characters of the Default 7-bit alphabet are available on the DUT. The character counter should update correctly when each character is entered and the DUT should be able to send an SMS containing all the characters.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Default 7-bit only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter ALL characters of the Default 7-bit alphabet as displayed in the table above in the SMS text.
3. Using the DUT MMI command, store the SMS in draft messages.
4. Retrieve the stored SMS from drafts.
5. Send the SMS to Client 1.
6. Open the SMS at Client 1 and check the content.
7. Check message drafts folder.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with ALL characters of the Default 7-bit alphabet. The character counter should initially indicate the 1st segment can contain 160 characters and for each character entered, the character counter will reduce by 1. I.e. if 10 characters are entered, the character counter may display "10/160" or "150" or similar.
3. SMS is correctly stored in message drafts.
4. SMS is correctly retrieved from message drafts and the content is as expected.
5. SMS is successfully sent from DUT and received on Client 1.
6. The message content is identical to the message prepared on DUT.
7. The draft SMS is no longer available in message drafts folder.

#### 41.1.6.2 MO SMS - Extended Default 7-bit alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 |  |  |  |  | | |  |  |  |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  | ^ |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  | € |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  | { |  |  |  |  |  |
| 9 |  |  | } |  |  |  |  |  |
| 10 | 3) |  |  |  |  |  |  |  |
| 11 |  | 1) |  |  |  |  |  |  |
| 12 |  |  |  | [ |  |  |  |  |
| 13 |  |  |  | ~ |  |  |  |  |
| 14 |  |  |  | ] |  |  |  |  |
| 15 |  |  | \ |  |  |  |  |  |

Description

All characters of the Extended Default 7-bit alphabet should be available on the DUT. The character counter should update correctly when each character is entered and the DUT should be able to send an SMS containing all the characters.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure all the characters of the Extended Default 7-bit alphabet are available on the DUT. The character counter should update correctly when each character is entered and the DUT should be able to send an SMS containing all the characters.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Default 7-bit only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter ALL characters of the Extended Default 7-bit alphabet as displayed in the table above in the SMS text.
3. Using the DUT MMI command, store the SMS in draft messages.
4. Retrieve the stored SMS from drafts.
5. Send the SMS to Client 1.
6. Open the SMS at Client 1 and check the content.
7. Check message drafts folder.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with ALL characters of the Extended Default 7-bit alphabet. The character counter should initially indicate the 1st segment can contain 160 characters and for each character entered, the character counter will reduce by 2. I.e. if 8 characters are entered, the character counter may display "16/160" or "144" or similar.
3. SMS is correctly stored in message drafts.
4. SMS is correctly retrieved from message drafts and the content is as expected.
5. SMS is successfully sent from DUT and received on Client 1.
6. The message content is identical to the message prepared on DUT.
7. The draft SMS is no longer available in message drafts folder.

#### 41.1.6.3 MO SMS - UCS-2 alphabet

Description

UCS-2 characters should be available on the DUT. The character counter should update correctly when each character is entered and the DUT should be able to send an SMS containing UCS-2 characters.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure UCS-2 characters are available on the DUT. The character counter should update correctly when each character is entered and the DUT should be able to send an SMS containing UCS-2 characters.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to UCS-2 only.

Client 1 is able to receive MT SMS.

Test procedure

1. Using the DUT messaging application, create a new SMS and enter the MSISDN of Client 1 as the recipient.
2. Enter ALL available UCS-2 characters supported by DUT.
3. Using the DUT MMI command, store the SMS in draft messages.
4. Retrieve the stored SMS from drafts.
5. Send the SMS to Client 1.
6. Open the SMS at Client 1 and check the content.
7. Check message drafts folder.

Expected behaviour

1. The Messaging application is opened and the MSISDN of Client 1 is entered.
2. The message is prepared with ALL available UCS-2 characters supported by DUT. The character counter should initially indicate the 1st segment can contain 70 characters and for each character entered, the character counter will reduce by 1. I.e. if 10 characters are entered, the character counter may display "10/70" or "60" or similar.
3. SMS is correctly stored in message drafts.
4. SMS is correctly retrieved from message drafts and the content is as expected.
5. SMS is successfully sent from DUT and received on Client 1.
6. The message content is identical to the message prepared on DUT.
7. The draft SMS is no longer available in message drafts folder.

### 41.1.7 SMS handling on SIM

#### 41.1.7.1 MO SMS - SMSC Message Centre Number

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.7.2 MO SMS - SIM Memory empty – Create/Store/Delete

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.7.3 MO SMS - SIM Memory full – Create/Store/Delete

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.1.8 SMS handling on DUT

#### 41.1.8.1 MO SMS - DUT Memory empty – Create/Store/Delete

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.1.8.2 MO SMS - DUT Memory full – Create/Store/Delete

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 41.2 Mobile Terminated SMS (MT SMS)

### 41.2.1 Default 7-bit alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 | @ |  | SP | 0 | ¡ | P | ¿ | p |
| 1 | £ | \_ | ! | 1 | A | Q | a | q |
| 2 | $ |  | " | 2 | B | R | b | r |
| 3 | ¥ |  | # | 3 | C | S | c | s |
| 4 | è |  | ¤ | 4 | D | T | d | t |
| 5 | é |  | % | 5 | E | U | e | u |
| 6 | ù |  | & | 6 | F | V | f | v |
| 7 | ì |  | ' | 7 | G | W | g | w |
| 8 | ò |  | ( | 8 | H | X | h | x |
| 9 | Ç |  | ) | 9 | I | Y | i | y |
| 10 | LF |  | \* | : | J | Z | j | z |
| 11 | Ø | 1) | + | ; | K | Ä | k | ä |
| 12 | ø | Æ | , | < | L | Ö | l | ö |
| 13 | CR | æ | - | = | M | Ñ | m | ñ |
| 14 | Å | ß | . | > | N | Ü | n | ü |
| 15 | å | É | / | ? | O | § | o | à |

#### 41.2.1.1 MT SMS - Default 7-bit (Empty)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.1.2 MT SMS - Default 7-bit

Description

The DUT shall be able to receive a 1 segment SMS containing characters from the Default 7-bit alphabet.

Related GSM core specifications

GSM 03.40, GSM 04.11

Reason for test

To ensure the DUT correctly receives a 1 segment SMS containing characters of the Default 7-bit alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or Default 7-bit only.

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

Client 1 is able to send MO SMS.

Test procedure

1. On Client 1, create a new SMS and enter the MSISDN of DUT as the recipient.
2. Enter exactly 160 characters of the Default 7-bit alphabet in the SMS text.
3. Send the SMS to DUT.
4. Receive MT SMS on DUT.
5. Open the SMS at DUT and check the content.

Expected behaviour

1. The Client 1 Messaging application is opened and the MSISDN of DUT is entered.
2. The message is prepared with exactly 160 characters.
3. SMS is successfully sent from Client.
4. DUT indicates to the user that a new message has been received (Audible and, or visual notification depending on DUT implementation).
5. The message content is identical to the message prepared on Client 1.

#### 41.2.1.3 MT SMS - Default 7-bit (Concatenated)

| **Segment** | **No. Characters** | **Accumulated** |
| --- | --- | --- |
| 1 | 160 | 160 |
| 2 | 146 | 306 |
| 3 | 153 | 459 |
| 4 | 153 | 612 |
| 5 | 153 | 765 |
| 6 | 153 | 918 |
| 7 | 153 | 1071 |
| 8 | 153 | 1224 |
| 9 | 153 | 1377 |
| 10 | 153 | 1530 |

Description

The DUT shall be able to receive a concatenated SMS containing characters from the Default 7-bit alphabet.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure the DUT correctly receives a concatenated SMS containing characters of the Default 7-bit alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or Default 7-bit only.

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

Client 1 is able to send MO SMS.

Test procedure

1. On Client 1, create a new SMS and enter the MSISDN of DUT as the recipient.
2. Enter up to 10 segments of the Default 7-bit alphabet in the SMS text. If the DUT supports a maximum of less than 10 segments then test with the maximum supported amount.
3. Send the SMS to DUT.
4. Receive MT SMS on DUT.
5. Open the SMS at DUT and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of DUT is entered.
2. The message is prepared with up to 1530 characters (10 segments) of the Default 7-bit alphabet or the maximum supported amount of characters on the DUT.
3. SMS is successfully sent from Client.
4. DUT indicates to the user that a new message has been received (Audible and, or visual notification depending on DUT implementation).
5. The message content is identical to the message prepared on Client 1.

**…**

#### 41.2.1.4 MT SMS - Default 7-bit (Concatenated - over max capacity)

Note: This test is only applicable if the DUT supports less than 10 segments of terminated SMSs.

Description

The DUT shall be able to receive a concatenated SMS (over max capacity) containing characters from the Default 7-bit alphabet.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure the DUT correctly receives a concatenated SMS with more than the maximum amount of characters of the Default 7-bit alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or Default 7-bit only.

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

Client 1 is able to send MO SMS.

Test procedure

1. On Client 1, create a new SMS and enter the MSISDN of DUT as the recipient.
2. Enter 10 segments of the Default 7-bit alphabet in the SMS text.
3. Send the SMS to DUT.
4. Receive MT SMS on DUT.
5. Open the SMS at DUT and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of DUT is entered.
2. The message is prepared with 10 segments of the Default 7-bit alphabet.
3. SMS is successfully sent from Client.
4. DUT indicates to the user that a new message has been received (Audible and, or visual notification depending on DUT implementation).
5. Depending on DUT implementation, the SMS shall either be received (i) In 1 full message, or (ii) In separate messages according to the max supported size. In both cases, the SMS content is displayed in full and is identical to the message prepared on Client 1.

### 41.2.2 Extended Default 7-bit alphabet

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 |  |  |  |  | | |  |  |  |
| 1 |  |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |
| 4 |  | ^ |  |  |  |  |  |  |
| 5 |  |  |  |  |  |  | € |  |
| 6 |  |  |  |  |  |  |  |  |
| 7 |  |  |  |  |  |  |  |  |
| 8 |  |  | { |  |  |  |  |  |
| 9 |  |  | } |  |  |  |  |  |
| 10 | 3) |  |  |  |  |  |  |  |
| 11 |  | 1) |  |  |  |  |  |  |
| 12 |  |  |  | [ |  |  |  |  |
| 13 |  |  |  | ~ |  |  |  |  |
| 14 |  |  |  | ] |  |  |  |  |
| 15 |  |  | \ |  |  |  |  |  |

#### 41.2.2.1 MT SMS - Extended Default 7-bit

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.2.3 UCS-2 alphabet

#### 41.2.3.1 MT SMS - UCS-2

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.3.2 MT SMS - UCS-2 (Concatenated)

| **Segment** | **No. Characters** | **Accumulated** |
| --- | --- | --- |
| 1 | 70 | 70 |
| 2 | 64 | 134 |
| 3 | 67 | 201 |
| 4 | 67 | 268 |
| 5 | 67 | 335 |
| 6 | 67 | 402 |
| 7 | 67 | 469 |
| 8 | 67 | 536 |
| 9 | 67 | 603 |
| 10 | 67 | 670 |

Description

The DUT shall be able to receive a concatenated SMS containing characters from the UCS-2 alphabet.

Related GSM core specifications

GSM 03.40, GSM 03.38, GSM 04.11

Reason for test

To ensure the DUT correctly receives a concatenated SMS containing characters of the UCS-2 alphabet.

Initial configuration

Alphabet Input mode (Default 7-bit, UCS-2) on DUT is set to Automatic or UCS-2 only.

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

Client 1 is able to send MO SMS.

Test procedure

1. On Client 1, create a new SMS and enter the MSISDN of DUT as the recipient.
2. Enter up to 10 segments of the UCS-2 alphabet in the SMS text. If the DUT supports a maximum of less than 10 segments then test with the maximum supported amount.
3. Send the SMS to DUT.
4. Receive MT SMS on DUT.
5. Open the SMS at DUT and check the content.

Expected behaviour

1. The Messaging application is opened and the MSISDN of DUT is entered.
2. The message is prepared with up to 10 segments of the UCS-2 alphabet or the maximum supported amount of characters on the DUT.
3. SMS is successfully sent from Client.
4. DUT indicates to the user that a new message has been received (Audible and, or visual notification depending on DUT implementation).
5. The message content is identical to the message prepared on Client 1.

**…**

#### 41.2.3.3 MT SMS - UCS-2 (Concatenated - over max capacity)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.2.4 EMS Content

#### 41.2.4.1 MT SMS - EMS content

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.2.5 SMS Class

#### 41.2.5.1 MT SMS - Class 0 (Displayed, but not directly stored)

Description

Class 0 SMS indicates that this message is to be displayed on the DUT immediately. The message is not saved to the DUT or UICC/eUICC (unless selected to do so by the user).

Related GSM core specifications

TS 23.040, TS 24.011

Reason for test

To ensure that a Class 0 SMS is displayed but not stored.

Initial configuration

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, receive MT Class 0 SMS. | SMS is successfully received. |
| 2 | At DUT, confirm the SMS is received as a flash message and an audible alert is sounded to indicate reception of the message. | SMS is displayed as a flash message outside of the messaging application. |
| 3 | Confirm SMS is not stored in the messaging application. | The SMS is not available in the messaging application. |
| 4 | If the DUT supports a dedicated menu or UI indication for Class 2 SMS (SIM card messages), check the received Class 0 SMS is not displayed there. If a dedicated menu or UI icon is not available for SIM card messages then this step can be skipped. | The SMS is not available in the dedicated SIM card messages menu/UI. |

#### 41.2.5.2 MT SMS - Class 1 (Stored on DUT)

Description

Class 1 SMS shall be stored in the DUT internal memory.

Related GSM core specifications

TS 23.040, TS 24.011

Reason for test

To ensure Class 1 SMS can be correctly received.

Initial configuration

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, receive MT Class 1 SMS. | SMS is successfully received. |
| 2 | At DUT, confirm the SMS is received in the messaging application and an audible alert is sounded to indicate reception of the message. | The SMS can be viewed in the messaging application. |
| 3 | If the DUT supports a dedicated menu or UI indication for Class 2 SMS (SIM card messages), check the received Class 1 SMS is not displayed there. If a dedicated menu or UI icon is not available for SIM card messages then this step can be skipped. | The SMS is not available in the dedicated SIM card messages menu/UI. |

#### 41.2.5.3 MT SMS - Class 2 (Stored on SIM)

Description

Class 2 SMS shall be stored in the UICC/eUICC memory.

Related GSM core specifications

TS 23.040, TS 24.011, TS 51.011

Reason for test

To ensure Class 2 SMS can be correctly received.

Initial configuration

DUT audio setting is set to "Normal" or "Loud" so an alert will be heard for incoming messages.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, receive MT Class 2 SMS. | SMS is successfully received. |
| 2 | At DUT, confirm the SMS is received in the messaging application and an audible alert is sounded to indicate reception of the message. | The SMS can be viewed in the messaging application. |
| 3 | If the DUT supports a dedicated menu or UI indication for Class 2 SMS (SIM card messages), check the received Class 2 SMS is correctly displayed there. If a dedicated menu or UI icon is not available for SIM card messages then this step can be skipped. | The SMS is available in the dedicated SIM card messages menu/UI. |

#### 41.2.5.4 MT SMS - Class 3 (Direct to Terminal Equipment)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.2.6 Alphabet

#### 41.2.6.1 MT SMS - Default 7-bit alphabet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.6.2 MT SMS - Extended Default 7-bit alphabet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.6.3 MT SMS - UCS-2 alphabet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 41.2.7 Additional MT SMS Functionality

#### 41.2.7.1 MT SMS - Reply Path

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.7.2 MT SMS - Reception of unsupported SMS

Description

If an incoming contains unsupported content, unsupported SMS types, or invalid header field information the DUT shall be able to handle this without crashing.

Related core specifications

3GPP TS 23.040, 24.011, 11.11, 31.102

Reason for test

To ensure that the DUT remains operational and does not crash when receiving:

* Unsupported SMS types.
* Unsupported SMS content.
* SMS containing invalid header field information.

Initial configuration

DUT is in idle mode.

Test procedure

1. Send an SMS to DUT containing unsupported content, types and invalid headers.

* Messages encoded in unsupported character sets (e.g. UCS, NSS, 8 Bit)
* Unsupported OTA messages
* Messages that activate / deactivate fax icons on the DUT display.
* Messages that activate / deactivate email icons on the DUT display.
* Messages that activate / deactivate voicemail icons on the DUT display.
* WAP configuration messages

1. Attempt to forward the SMS. Depending on the implementation of the DUT, the message may be downloaded at application level. If it is then forwarding is possible. Else this step is not supported.

Expected behaviour

1. SMS is received on the DUT and no crashes occur. The DUT may display a notification that the content is unsupported.
2. The SMS is successfully forwarded (if implementation is supported by DUT).

#### 41.2.7.3 MT SMS - During call

Description

The DUT should be able to receive an MT SMS during an active call

Related GSM core specifications

3GPP TS 23.040, GSM 03.40, GSM 04.11, 3GPP TS 26.110, 3GPP TS 26.111

Reason for test

To ensure the DUT can receive an SMS during an active call.

Initial configuration

DUT in Idle Mode.

Test scenarios (overview)

**Scenario A:** Voice call.

**Scenario B:** FAX call.

**Scenario C:** Video call.

**Scenario D:** CS Data call with active download.

**Scenario E:** PS Data call with active download.

The below test procedure is applicable to all scenarios.

Test procedure

1. Establish call according to the scenario listed above.
2. At DUT, receive MT SMS from Client 1.
3. At DUT, end call.
4. At DUT, check for notification of received SMS.
5. At DUT, check SMS can be viewed and that content is not corrupted.

Expected behaviour

1. Successful call established.
2. SMS is received and the reception is indicated in a way that does not disturb the call.
3. Call is ended.
4. An indication is given that a new SMS has been received.
5. The SMS content is displayed correctly in a single SMS.

#### 41.2.7.4 MT SMS - Call sender

Description

If the DUT allows the user to call the sender of a received SMS directly from the message, the correct number should be dialled.

Related GSM core specifications

GSM 03.40, GSM 04.11

Reason for test

To ensure if the DUT allows the user to call the sender of a received SMS directly from the message, the correct number is dialled.

Initial configuration

Idle mode.

Test procedure

1. Using the Client 1 messaging application, create a new SMS and enter the MSISDN of DUT as the recipient.
2. Enter some text in the message body.
3. Send the SMS to DUT.
4. Using the DUT MMI, make an MO call to the SMS sender (Client 1) directly from the message.

Expected behaviour

1. The Messaging application is opened and the MSISDN of DUT is entered.
2. The message is prepared.
3. SMS is successfully received on DUT.
4. MO call is established with Client 1.

#### 41.2.7.5 MT SMS - Call a number included in the text of the SMS

Description

Where the MS has an option to dial a number included in the text of the SM, ensure that the correct number is dialled.

Related GSM core specifications

GSM 03.40, GSM 04.11

Reason for test

To ensure that where the MS has an option to dial a number included in the text of the SM, the correct number is dialled.

Initial configuration

Idle mode.

Test procedure

1. Using the Client 1 messaging application, create a new SMS and enter the MSISDN of DUT as the recipient.
2. Enter some text in the message body and a valid MSISDN of Client 2.
3. Send the SMS to DUT.
4. Using the DUT MMI, make an MO call to the MSISDN included in the SMS (Client 2) directly from the message.\*

Expected behaviour

1. The Messaging application is opened and the MSISDN of DUT is entered.
2. The message is prepared.
3. SMS is successfully received on DUT.
4. MO call is established with Client 2.

Note: There are several acceptable behaviours:

- DUT may only consider numbers between quotes (“…“),

- DUT may highlight the MSISDN as selectable.

- DUT may only highlight the first MSISDN if several numbers are included in the message.

- DUT may highlight all MSISDNs in the message.

#### 41.2.7.6 MT SMS - Replace mechanism for SM type 1-7

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.7.7 MT SMS - Type 0

Description

Ensure that a Type 0 SMS is correctly received and acknowledged to the network. This means that:

* The DUT is able to receive the Type 0 SMS irrespective of whether there is memory available in the SIM or DUT.
* The DUT does not indicate the receipt of the Type 0 short message to the user.
* The Type 0 SMS shall not be automatically stored in the SIM or DUT.

Related core specifications

3GPP TS 23.040, section 9.2.3.9; TS 24.011

Reason for test

To ensure that the DUT correctly receives and acknowledges a Type 0 SMS as described above.

Initial configuration

Idle mode.

Test procedure

**Scenario A:** Normal - space available on SIM and DUT internal memory.

**Scenario B:** SIM memory full

**Scenario C:** DUT internal memory full

1. Prepare DUT according to the procedure.
2. Arrange for a Type0 SMS to be sent to the DUT.

Expected behaviour

1. DUT is prepared.
2. Receive Type 0 SMS on DUT.

Ensure the DUT does not indicate the receipt of the SMS to the user.

Ensure SMS is not present in messaging inbox of DUT or on the SIM.

Where possible use a protocol trace tool to see the SMS reception.

#### 41.2.7.8 MT SMS - Forward SMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing [terminals@gsma.com](mailto:terminals@gsma.com)

#### 41.2.7.9 MT SMS - Special characters

Description

An SMS containing special characters in the originator field can be viewed correctly in DUT UI.

Related GSM core specifications

3GPP TS 23.040, TS 24.011

Reason for test

To ensure that an SMS containing special characters in the originator field can be viewed correctly in DUT UI.

Initial configuration

Idle mode.

Optionally this test can be performed using an Operator Service that returns a special character according to point 2 below.

Simulated configuration:

1. Using an SMS software program, create a new SMS and enter the MSISDN of DUT as the recipient.
2. On the software program, set the originator field to contain several punctuation characters. For example ". - \* ) ? , "
3. Enter some text in the message body.

Test procedure

1. Receive SMS on DUT.

Expected behaviour

1. The originator ID with special character is correctly displayed in DUT UI.

### 41.2.8 SMS handling on SIM

#### 41.2.8.1 MT SMS - Message read

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.8.2 MT SMS - Message unread

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.8.3 MT SMS - SIM memory empty - Receive/Delete

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.8.4 Void

### 41.2.9 Cell Broadcast

#### 41.2.9.1 Cell Broadcast - Enabled

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.9.2 Cell Broadcast - Disabled

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 41.2.9.3 Cell Broadcast - Enabled - Different channels

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 42 Supplementary services

## 42.1 Call Forwarding telephony, fax and data

NOTE: The tests of this supplementary service may be performed in any convenient order. To save time, it will be best to organise a testing order so that, in as many cases as possible, the initial configuration for one test is the same as the final configuration of the previous test. No attempt has been made to specify a particular order of tests in this document, as the optimum arrangement will depend on the features offered by the MS.

### 42.1.1 Call Forwarding Unconditional

Description

Call Forwarding Unconditional (CFU) will forward all calls.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that supplementary services work correctly on the network

Initial configuration

DUT in idle mode, supplementary service not registered

BS – Basic Service: 11 – Voice, 24 – Video, 25 - DataTest procedure

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Registration:  Use one of the following methods to register the service: CFU  - Menu: Register via the DUT GUI  - MMI: \*\*21\*DN# or \*\*21\*DN\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: CFU  - Menu: Interrogate via the DUT GUI  - MMI: \*#21# or \*#21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 3 | Deactivation:  Use one of the following methods to deactivate the service: CFU  - Menu: Deactivate via the DUT GUI  - MMI: #21# or #21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 4 | Interrogation:  Use one of the following methods to interrogate the service: CFU  - Menu: Interrogate via the DUT GUI  - MMI: \*#21# or \*#21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Activation:  Use one of the following methods to activate the service: CFU  - Menu: Activate via the DUT GUI  - MMI: \*21# or \*21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 6 | Interrogation:  Use one of the following methods to interrogate the service: CFU  - Menu: Interrogate via the DUT GUI  - MMI: \*#21# or \*#21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 7 | Erasure:  Use one of the following methods to erase the service: CFU  - Menu: Erase via the DUT GUI  - MMI: ##21# or ##21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |
| 8 | Interrogation:  Use one of the following methods to interrogate the service: CFU  - Menu: Interrogate via the DUT GUI  - MMI: \*#21# or \*#21\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |

### 42.1.2 Call Forwarding when Busy

Description

Call Forwarding when Busy (CFB) will forward calls when the DUT is busy.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that supplementary services work correctly on the network.

Initial configuration

DUT in idle mode, supplementary service not registered

BS – Basic Service 11 – Voice, 24 – Video, 25 – Data.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Registration:  Use one of the following methods to register the service: CFB  - Menu: Register via the DUT GUI  - MMI: \*\*67\*DN# or \*\*67\*DN\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: CFB  - Menu: Interrogate via the DUT GUI  - MMI: \*#67# or \*#67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 3 | Deactivation:  Use one of the following methods to deactivate the service: CFB  - Menu: Deactivate via the DUT GUI  - MMI: #67# or #67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 4 | Interrogation:  Use one of the following methods to interrogate the service: CFB  - Menu: Interrogate via the DUT GUI  - MMI: \*#67# or \*#67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Activation:  Use one of the following methods to activate the service: CFB  - Menu: Activate via the DUT GUI  - MMI: \*67# or \*67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 6 | Interrogation:  Use one of the following methods to interrogate the service: CFB  - Menu: Interrogate via the DUT GUI  - MMI: \*#67# or \*#67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 7 | Erasure:  Use one of the following methods to erase the service: CFB  - Menu: Erase via the DUT GUI  - MMI: ##67# or ##67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |
| 8 | Interrogation:  Use one of the following methods to interrogate the service: CFB  - Menu: Interrogate via the DUT GUI  - MMI: \*#67# or \*#67\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |

### 42.1.3 Call Forwarding No Reply

Description

Call Forwarding No Reply (CFNRy) will forward calls when the DUT is not answering after a set length of time.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that supplementary services work correctly on the network.

Initial configuration

DUT in idle mode, supplementary service not registered

T – Timer value. Between 5-30 seconds in 5 second increments.

BS – Basic Service 11 – Voice, 24 – Video, 25 – Data.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Registration:  Use one of the following methods to register the service: CFNRY  - Menu: Register via the DUT GUI  - MMI: \*\*61\*DN\*\*T# or \*\*61\*DN\*BS\*T#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: CFNRY  - Menu: Interrogate via the DUT GUI  - MMI: \*#61# or \*#61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 3 | Deactivation:  Use one of the following methods to deactivate the service: CFNRY  - Menu: Deactivate via the DUT GUI  - MMI: #61# or #61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 4 | Interrogation:  Use one of the following methods to interrogate the service: CFNRY  - Menu: Interrogate via the DUT GUI  - MMI: \*#61# or \*#61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Activation:  Use one of the following methods to activate the service: CFNRY  - Menu: Activate via the DUT GUI  - MMI: \*61# or \*61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 6 | Interrogation:  Use one of the following methods to interrogate the service: CFNRY  - Menu: Interrogate via the DUT GUI  - MMI: \*#61# or \*#61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 7 | Erasure:  Use one of the following methods to erase the service: CFNRY  - Menu: Erase via the DUT GUI  - MMI: ##61# or ##61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |
| 8 | Interrogation:  Use one of the following methods to interrogate the service: CFNRY  - Menu: Interrogate via the DUT GUI  - MMI: \*#61# or \*#61\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |

### 42.1.4 Call Forwarding Not Reachable

Description

Call Forwarding No Reply (CFNRc) will forward calls when the DUT is not reachable.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that supplementary services work correctly on the network.

Initial configuration

DUT in idle mode, supplementary service not registered.

BS – Basic Service: 11 – Voice, 24 – Video, 25 - DataTest procedure

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Registration:  Use one of the following methods to register the service: CFNRC  - Menu: Register via the DUT GUI  - MMI: \*\*62\*DN# or \*\*62\*DN\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: CFNRC  - Menu: Interrogate via the DUT GUI  - MMI: \*#62# or \*#62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is registered |
| 3 | Deactivation:  Use one of the following methods to deactivate the service: CFNRC  - Menu: Deactivate via the DUT GUI  - MMI: #62# or #62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 4 | Interrogation:  Use one of the following methods to interrogate the service: CFNRC  - Menu: Interrogate via the DUT GUI  - MMI: \*#62# or \*#62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Activation:  Use one of the following methods to activate the service: CFNRC  - Menu: Activate via the DUT GUI  - MMI: \*62# or \*62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 6 | Interrogation:  Use one of the following methods to interrogate the service: CFNRC  - Menu: Interrogate via the DUT GUI  - MMI: \*#62# or \*#62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 7 | Erasure:  Use one of the following methods to erase the service: CFNRC  - Menu: Erase via the DUT GUI  - MMI: ##62# or ##62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |
| 8 | Interrogation:  Use one of the following methods to interrogate the service: CFNRC  - Menu: Interrogate via the DUT GUI  - MMI: \*#62# or \*#62\*\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is erased |

### 42.1.5 All Conditional Call Forwarding

Description

All Conditional Call Forwarding (CCF) will forward calls when the DUT is Busy, not reachable and no Reply.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that supplementary services work correctly on the network.

Initial configuration

DUT in idle mode, supplementary service not registered

BS – Basic Service: 11 – Voice, 13 – FAX, 24 – Video, 25 – Data

Test procedure

**Scenario A: Code**

1. Registration. Dial \*\*004\*DN# or \*\*004\*DN\*BS#

2. Interrogation. Dial \*#67# or \*#67\*\*BS#

3. Interrogation. Dial \*#61# \*#61\*\*BS#

4. Interrogation. Dial \*#62# or \*#62\*\*BS#

5. Deactivation. Dial #004# or #004\*\*BS#

6. Interrogation. Dial \*#67# or \*#67\*\*BS#

7. Interrogation. Dial \*#61# or \*#61\*\*BS#

8. Interrogation. Dial \*#62# or \*#62\*\*BS#

9. Activation. Dial \*004# or \*004\*\*BS#

10. Interrogation. Dial \*#67# or \*#67\*\*BS#

11. Interrogation. Dial \*#61# or \*#61\*\*BS#

12. Interrogation. Dial \*#62# or \*#62\*\*BS#

13. Erasure. Dial ##004# or ##004\*\*BS#

14. Interrogation. Dial \*#67# or \*#67\*\*BS#

15. Interrogation. Dial \*#61# or \*#61\*\*BS#

16. Interrogation. Dial \*#62# or \*#62\*\*BS#

**Scenario B: Menu**

1. Registration. Register CCF via the menu.

2. Interrogation. Interrogate CFB via the menu.

3. Interrogation. Interrogate CFNRy via the menu.

4. Interrogation. Interrogate CFNRc via the menu.

5. Deactivation. Deactivate CCF via the menu.

6. Interrogation. Interrogate CFB via the menu.

7. Interrogation. Interrogate CFNRy via the menu.

8. Interrogation. Interrogate CFNRc via the menu.

9. Activation. Activate CCF via the menu.

10. Interrogation. Interrogate CFB via the menu.

11. Interrogation. Interrogate CFNRy via the menu.

12. Interrogation. Interrogate CFNRc via the menu.

13. Erasure. Erase CCF via the menu.

14. Interrogation. Interrogate CFB via the menu.

15. Interrogation. Interrogate CFNRy via the menu.

16. Interrogation. Interrogate CFNRc via the menu.

Expected behaviour

1. DUT indicates to the user that the service is registered

2. DUT indicates to the user that the service is registered

3. DUT indicates to the user that the service is registered

4. DUT indicates to the user that the service is registered

5. DUT indicates to the user that the service is deactivated

6. DUT indicates to the user that the service is deactivated

7. DUT indicates to the user that the service is deactivated

8. DUT indicates to the user that the service is deactivated

9. DUT indicates to the user that the service is activated

10. DUT indicates to the user that the service is activated

11. DUT indicates to the user that the service is activated

12. DUT indicates to the user that the service is activated

13. DUT indicates to the user that the service is erased

14. DUT indicates to the user that the service is erased

15. DUT indicates to the user that the service is erased

16. DUT indicates to the user that the service is erased.

### 42.1.6 All Call Forwarding

Description

All Call Forwarding (CF) will forward All Calls.

Related 3GPP core specifications

TS 24.082 subclasses 1-4

Reason for test

Ensure that supplementary services work correctly on the network.

Initial configuration

DUT in idle mode, supplementary service not registered

BS – Basic Service: 11 – Voice, 13 – FAX, 24 – Video, 25 - DataTest procedure

Test procedure

**Scenario A: Code**

1. Registration. Dial \*\*002\*DN# or \*\*002\*DN\*BS#

2. Interrogation. Dial \*#21# or \*#21\*\*BS#

3. Interrogation. Dial \*#67# or \*#67\*\*BS#

4. Interrogation. Dial \*#61# or \*#61\*\*BS#

5. Interrogation. Dial \*#62# or \*#62\*\*BS#

6. Deactivation. Dial #002# or #002\*\*BS#

7. Interrogation. Dial \*#21# or \*#21\*\*BS#

8. Interrogation. Dial \*#67# or \*#67\*\*BS#

9. Interrogation. Dial \*#61# or \*#61\*\*BS#

10. Interrogation. Dial \*#62# or \*#62\*\*BS#

11. Activation. Dial \*002# or \*002\*\*BS#

12. Interrogation. Dial \*#21# or \*#21\*\*BS#

13. Interrogation. Dial \*#67# or \*#67\*\*BS#

14. Interrogation. Dial \*#61# or \*#61\*\*BS#

15. Interrogation. Dial \*#62# or \*#62\*\*BS#

16. Erasure. Dial ##002#

17. Interrogation. Dial \*#21# or \*#21\*\*BS#

18. Interrogation. Dial \*#67# or \*#67\*\*BS#

19. Interrogation. Dial \*#61# or \*#61\*\*BS#

20. Interrogation. Dial \*#62# or \*#62\*\*BS#

**Scenario B: Menu**

1. Registration. Register CF via the menu.

2. Interrogation. Interrogate CFU via the menu.

3. Interrogation. Interrogate CFB via the menu.

4. Interrogation. Interrogate CFNRy via the menu.

5. Interrogation. Interrogate CFNRc via the menu.

6. Deactivation. Deactivate CF via the menu.

7. Interrogation. Interrogate CFU via the menu.

8. Interrogation. Interrogate CFB via the menu.

9. Interrogation. Interrogate CFNRy via the menu.

10. Interrogation. Interrogate CFNRc via the menu.

11. Activation. Activate CF via the menu.

12. Interrogation. Interrogate CFU via the menu.

13. Interrogation. Interrogate CFB via the menu.

14. Interrogation. Interrogate CFNRy via the menu.

15. Interrogation. Interrogate CFNRc via the menu.

16. Erasure. Erase CF via the menu.

17. Interrogation. Interrogate CFU via the menu.

18. Interrogation. Interrogate CFB via the menu.

19. Interrogation. Interrogate CFNRy via the menu.

20. Interrogation. Interrogate CFNRc via the menu.

Expected behaviour

1. DUT indicates to the user that the service is registered

2. DUT indicates to the user that the service is registered

3. DUT indicates to the user that the service is registered

4. DUT indicates to the user that the service is registered

5. DUT indicates to the user that the service is registered

6. DUT indicates to the user that the service is deactivated

7. DUT indicates to the user that the service is deactivated

8. DUT indicates to the user that the service is deactivated

9. DUT indicates to the user that the service is deactivated

10. DUT indicates to the user that the service is deactivated

11. DUT indicates to the user that the service is activated

12. DUT indicates to the user that the service is activated

13. DUT indicates to the user that the service is activated

14. DUT indicates to the user that the service is activated

15. DUT indicates to the user that the service is activated

16. DUT indicates to the user that the service is erased

17. DUT indicates to the user that the service is erased

18. DUT indicates to the user that the service is erased

19. DUT indicates to the user that the service is erased

20. DUT indicates to the user that the service is erased.

### 42.1.7 Void

### 42.2.12 General Deactivation of Barring Services

#### 42.2.12.1 General Deactivation of Barring Services – All Services

Description

Deactivation of all currently activated barring services

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that all call barring can be properly deactivated at once

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 13 – FAX, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Client 1 – Same International dialling prefix as DUT.

Test procedure

**Scenario A: Code**

1. Activation. Dial \*33\*PW#
2. Activation. Dial \*35\*PW#
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Dial #330\*PW#
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

**Scenario B: Menu**

1. Activation. Activate BAOC without Basic Service via the menu.
2. Activation. Activate BAIC without Basic Service via the menu.
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Deactivate All Call Barring services via the menu.
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

Expected behaviour

1. DUT displays a message to indicate the service is Activated.
2. DUT displays a message to indicate the service is Activated.
3. MO BS call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network).
4. MT BS call is not received.
5. DUT displays a message to indicate the service is deactivated.
6. MO BS call is successful.
7. MT BS call is successful.

## 42.2 Call Barring telephony, SMS, fax and data

### 42.2.1 Bar All Outgoing Calls (BAOC)

Description

Barring All Outgoing Calls (BAOC) will bar all outgoing calls.

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that call barring service for Barring All Outgoing Calls (BAOC) works correctly.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Client-1 – Same International dialling prefix as DUT.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Activation:  Use one of the following methods to activate the service: BAOC  - Menu: Activate via the DUT GUI  - MMI: \*33\*PW# or \*33\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: BAOC  - Menu: Interrogate via the DUT GUI  - MMI: \*#33#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 3 | Make MO voice call to Client-1. | MO voice call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network). |
| 4 | Deactivation:  Use one of the following methods to deactivate the service: BAOC  - Menu: Deactivate via the DUT GUI  - MMI: #33\*PW# or #33\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Interrogation:  Use one of the following methods to interrogate the service: BAOC  - Menu: Interrogate via the DUT GUI  - MMI: \*#33#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 6 | Make MO voice call to Client-1. | MO voice call is successful |

### 42.2.2 Bar Outgoing International Calls (BOIC)

Description

Barring Outgoing International Calls (BOIC) will bar all calls to all numbers with a different International dialling prefix.

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that call barring service for Barring Outgoing International Calls (BOIC) works correctly.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Client 1 – Different International dialling prefix to DUT.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Activation:  Use one of the following methods to activate the service: BOIC  - Menu: Activate via the DUT GUI  - MMI: \*331\*PW# or \*331\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: BOIC  - Menu: Interrogate via the DUT GUI  - MMI: \*#331#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 3 | Make MO voice call to Client-1. | MO voice call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network). |
| 4 | Deactivation:  Use one of the following methods to deactivate the service: BOIC  - Menu: Deactivate via the DUT GUI  - MMI: #331\*PW# or #331\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Interrogation:  Use one of the following methods to interrogate the service: BOIC  - Menu: Interrogate via the DUT GUI  - MMI: \*#331#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 6 | Make MO voice call to Client-1. | MO voice call is successful |

### 42.2.3 Bar Outgoing International Calls except Home Country (BOIC-exHC)

Description

Barring Outgoing International Calls except Home Country (BOIC-exHC) will bar all calls to all numbers with a different International dialling prefix except to International numbers that are local to the network the DUT is roaming in.

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that call barring service for Barring Outgoing International Calls (BOIC-exHC) works correctly.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 16 – SMS, 24 – Video, 25 – Data

DUT – DUT is roaming outside of HPLMN.

Client 1 – Different International dialling prefix to DUT and the country the DUT is roaming in.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Activation:  Use one of the following methods to activate the service: BOIC-exHC  - Menu: Activate via the DUT GUI  - MMI: \*332\*PW# or \*332\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: BOIC-exHC  - Menu: Interrogate via the DUT GUI  - MMI: \*#332#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 3 | Make MO voice call to Client-1. | MO voice call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network). |
| 4 | Deactivation:  Use one of the following methods to deactivate the service: BOIC-exHC  - Menu: Deactivate via the DUT GUI  - MMI: #332\*PW# or #332\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Interrogation:  Use one of the following methods to interrogate the service: BOIC-exHC  - Menu: Interrogate via the DUT GUI  - MMI: \*#332#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 6 | Make MO voice call to Client-1. | MO voice call is successful |

### 42.2.4 Bar All Incoming Calls (BAIC)

Description

Barring All Incoming Calls (BAIC) will bar all Incoming calls.

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that call barring service for Barring All Incoming Calls (BAIC) works correctly.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Client 1 – Same International dialling prefix as DUT.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Activation:  Use one of the following methods to activate the service: BAIC  - Menu: Activate via the DUT GUI  - MMI: \*35\*PW# or \*35\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: BAIC  - Menu: Interrogate via the DUT GUI  - MMI: \*#35#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 3 | Receive MT voice call from Client-1. | MT voice call is not received |
| 4 | Deactivation:  Use one of the following methods to deactivate the service: BAIC  - Menu: Deactivate via the DUT GUI  - MMI: #35\*PW# or #35\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Interrogation:  Use one of the following methods to interrogate the service: BAIC  - Menu: Interrogate via the DUT GUI  - MMI: \*#35#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 6 | Receive MT voice call from Client-1. | MT voice call is successful |

### 42.2.5 Bar All Incoming Calls when Roaming (BAIC-R)

Description

Barring All Incoming Calls when Roaming (BAIC-R) will bar all Incoming calls when Roaming outside of HPLMN.

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that call barring service for Barring All Incoming Calls when Roaming (BAIC-R) works correctly.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 16 – SMS, 24 – Video, 25 – Data

DUT – DUT is roaming outside of HPLMN.

Client 1 – Same International dialling prefix as DUT.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Activation:  Use one of the following methods to activate the service: BAIC-R  - Menu: Activate via the DUT GUI  - MMI: \*351\*PW# or \*351\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: BAIC-R  - Menu: Interrogate via the DUT GUI  - MMI: \*#351#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 3 | Receive MT voice call from Client-1. | MT voice call is not received |
| 4 | Deactivation:  Use one of the following methods to deactivate the service: BAIC-R  - Menu: Deactivate via the DUT GUI  - MMI: #351\*PW# or #351\*PW\*BS#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 5 | Interrogation:  Use one of the following methods to interrogate the service: BAIC-R  - Menu: Interrogate via the DUT GUI  - MMI: \*#351#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 6 | Receive MT voice call from Client-1. | MT voice call is successful |

### 42.2.6 Void

### 42.2.7 Void

### 42.2.8 Void

### 42.2.9 Void

### 42.2.10 Void

### 42.2.11 Call Barring activation – SIM without Call Barring services

Description

Activation of Call Barring services when a SIM card does not support the service should fail.

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

When a SIM card does not support Call Barring function, the DUT should indicate the activation request has failed.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

SIM – SIM card does not support Call Barring.

Test procedure

**Scenario A: Code**

1. Activation. Dial \*33\*PW#
2. Activation. Dial \*331\*PW#
3. Activation. Dial \*332\*PW#
4. Activation. Dial \*35\*PW#
5. Activation. Dial \*351\*PW\*BS#

**Scenario B: Menu**

1. Activation. Activate BAOC without Basic Service via the menu.
2. Activation. Activate BOIC without Basic Service via the menu.
3. Activation. Activate BOIC-exHC without Basic Service via the menu.
4. Activation. Activate BAIC without Basic Service via the menu.
5. Activation. Activate BAIC-R without Basic Service via the menu.

Expected behaviour

1. DUT displays a message to indicate the Activation attempt has failed.
2. DUT displays a message to indicate the Activation attempt has failed.
3. DUT displays a message to indicate the Activation attempt has failed.
4. DUT displays a message to indicate the Activation attempt has failed.
5. DUT displays a message to indicate the Activation attempt has failed.

### 42.2.12 General Deactivation of Barring Services

#### 42.2.12.1 General Deactivation of Barring Services – All Services

Description

Deactivation of all currently activated barring services

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that all call barring can be properly deactivated at once

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 13 – FAX, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Client 1 – Same International dialling prefix as DUT.

Test procedure

**Scenario A: Code**

1. Activation. Dial \*33\*PW#
2. Activation. Dial \*35\*PW#
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Dial #330\*PW#
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

**Scenario B: Menu**

1. Activation. Activate BAOC without Basic Service via the menu.
2. Activation. Activate BAIC without Basic Service via the menu.
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Deactivate All Call Barring services via the menu.
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

Expected behaviour

1. DUT displays a message to indicate the service is Activated.
2. DUT displays a message to indicate the service is Activated.
3. MO BS call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network).
4. MT BS call is not received.
5. DUT displays a message to indicate the service is deactivated.
6. MO BS call is successful.
7. MT BS call is successful.

#### 42.2.12.2 General Deactivation of Barring Services – All Outgoing

Description

Deactivation of all currently activated Outgoing barring services

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that all call barring for Outgoing services can be properly deactivated at once.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 13 – FAX, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Test procedure

**Scenario A: Code**

1. Activation. Dial \*33\*PW#
2. Activation. Dial \*35\*PW#
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Dial #333\*PW#
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

**Scenario B: Menu**

1. Activation. Activate BAOC without Basic Service via the menu.
2. Activation. Activate BAIC without Basic Service via the menu.
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Deactivate All Outgoing Call Barring services via the menu.
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

Expected behaviour

1. DUT displays a message to indicate the service is Activated.
2. DUT displays a message to indicate the service is Activated.
3. MO BS call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network).
4. MT BS call is not received.
5. DUT displays a message to indicate the service is deactivated.
6. MO BS call is successful.
7. MT BS call is not received.

#### 42.2.12.3 General Deactivation of Barring Services – All Incoming

Description

Deactivation of all currently activated Incoming barring services

Related GSM core specifications

TS 24.088 sub clause 1.2

Reason for test

Ensure that all call barring for Incoming services can be properly deactivated at once.

Initial configuration

DUT in idle mode with no barring services Activated.

PW – Password. This is the current Call Barring Password.

BS – Basic Service: 11 – Voice, 13 – FAX, 16 – SMS, 24 – Video, 25 – Data

DUT is in its HPLMN

Test procedure

**Scenario A: Code**

1. Activation. Dial \*33\*PW#
2. Activation. Dial \*35\*PW#
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Dial #353\*PW#
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

**Scenario B: Menu**

1. Activation. Activate BAOC without Basic Service via the menu.
2. Activation. Activate BAIC without Basic Service via the menu.
3. Make MO BS call to Client 1.
4. Receive MT BS call from Client 1.
5. Deactivation. Deactivate All Incoming Call Barring services via the menu.
6. Make MO BS call to Client 1.
7. Receive MT BS call from Client 1.

Expected behaviour

1. DUT displays a message to indicate the service is Activated.
2. DUT displays a message to indicate the service is Activated.
3. MO BS call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network).
4. MT BS call is not received.
5. DUT displays a message to indicate the service is deactivated.
6. MO BS call fails and DUT displays a message to indicate the call is barred. (Indication depends on release cause sent by network).
7. MT BS call is successful.

### 42.2.13 Change of Barring Password

#### 42.2.13.1 Change of Password

Description

Change of Call Barring Password

Related GSM core specifications

TS 24.010 sub clause 4.2

Reason for test

Ensure that the user is able to change the barring password

Initial configuration

DUT in idle mode with no barring services Activated.

OLD – This is the current Call Barring Password.

NEW – This is the new Call Barring Password.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Use one of the following methods to change the Call Barring password:  - Menu: Via the DUT GUI  - MMI:\*03\*\*OLD\*NEW\*NEW# or \*\*03\*\*OLD\*NEW\*NEW# or \*03\*330\*OLD\*NEW\*NEW#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the password has been changed. |

#### 42.2.13.2 Change of Password, old Password wrong

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.2.13.3 Change of Password, wrong repeating of new password

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.2.13.4 Change of Password, new password wrong (3 digits long)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 42.3 Call Waiting / Call Hold

### 42.3.1 Call Waiting

Description

Call Waiting service should inform a user that a second incoming call is waiting.

Related GSM core specifications

TS 24.083 clause 1.4

Reason for test

Ensure Call Waiting is working correctly.

Initial configuration

DUT in idle mode.

Call Waiting not activated on DUT.

BS – Basic Service: 11 – Voice, 24 – Video, 25 – Data.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Activation:  Use one of the following methods to activate the service: CW  - Menu: Activate via the DUT GUI  - MMI: \*43#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 2 | Interrogation:  Use one of the following methods to interrogate the service: CW  - Menu: Interrogate via the DUT GUI  - MMI: \*#43#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is activated |
| 3 | Setup MO voice call to Client-1 and accept it | Active voice call in progress between DUT and Client-1. |
| 4 | Setup MT voice call to DUT from Client-2. | Call Waiting service informs DUT that a second incoming call is waiting. |
| 5 | Deactivation:  Use one of the following methods to deactivate the service: CW  - Menu: Deactivate via the DUT GUI  - MMI: #43#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |
| 6 | Interrogation:  Use one of the following methods to interrogate the service: CW  - Menu: Interrogate via the DUT GUI  - MMI: \*#43#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The response indicates the service is deactivated |

### 42.3.2 Void

### 42.3.3 Call Waiting – non provisioned SIM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.3.4 Call Waiting, waiting call indication

Description

Normal operation of Call Waiting

Related GSM core specifications

TS 24.083 clause 1.1, 1.2.1, 1.2.3

Reason for test

Ensure that Call Waiting is correctly indicated and that the waiting call is accepted after the existing call is cleared

Initial configuration

DUT in idle mode.

Call Waiting activated on DUT.

Client 1 and Client 2 available.

Test procedure

**Scenario A: Local Call Clear**

1. Set up MO call to Client 1.
2. Arrange for an incoming call to be received from Client 2.
3. Clear the existing call on DUT.
4. Answer the waiting call.

**Scenario B: Local Call Hold**

1. Set up MO call to Client 1.
2. Arrange for an incoming call to be received from Client 2.
3. On DUT, place the existing call on hold.
4. Answer the waiting call.

**Scenario C: Distant Party clear**

1. Set up MO call to Client 1.
2. Arrange for an incoming call to be received from Client 2.
3. Clear the existing call on Client1.
4. Answer the waiting call.

Expected behaviour

1. Active voice call in progress between DUT and Client1.
2. Ensure that call waiting indication (appropriate tone and display) occurs.
3. Scenario A: First call is cleared and DUT alerts (could be with light, vibration, on screen display ringtone and/or beep).

Scenario B: First call is on hold.

Scenario C: First call is cleared and DUT alerts (could be with light, vibration, on screen display ringtone and/or beep).

1. The waiting call is accepted and 2-way audio is possible.

### 42.3.5 Call Waiting, Hold, Retrieve, Swap calls, Merge calls, Private call

Description

Operation of Call Hold

Related GSM core specifications

TS 24.083 sub clause 2.1

Reason for test

Ensure the correct operation of the hold-retrieve procedures

Initial configuration

DUT in idle mode.

Call Waiting activated on DUT.

Client 1 and Client 2 available.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Setup MO voice call to Client-1. | Active voice call in progress between DUT and Client-1. |
| 2 | Place the call on hold using one of the following methods:  - Menu: Via the DUT GUI  - MMI: 2SEND  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | Ensure Client-1 hears the call go on hold. |
| 3 | Retrieve the held call using one of the following methods:  - Menu: Via the DUT GUI  - MMI: 1SEND  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | Ensure 2-way audio is present between DUT and Client-1. |
| 4 | While in call with Client-1, setup MO voice call to Client-2 using one of the following methods:  - Menu: Via the DUT GUI  - MMI: DNSEND (where DN is Client 2) to make a second call.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | Client-1 automatically is put on hold and a new call to Client 2 is established. |
| 5 | Swap the calls using one of the following methods:  - Menu: Via the DUT GUI  - MMI: 2SEND  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | Client-2 is on hold and Client 1 is active. |
| 6 | Merge the calls using one of the following methods:  - Menu: Via the DUT GUI  - MMI: 3SEND  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | DUT is in a conference call with Client-1 and Client-2. All three parties can speak to each other. |
| 7 | Create a Private call with Client-1, using one of the following methods:  - Menu: Via the DUT GUI  - MMI: 21SEND  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | Ensure a private call is created with Client-1. Client-2 automatically goes on hold. |
| 8 | End all calls on DUT. | All call are ended. |

### 42.3.6 Call Waiting, Interrupts during Call Waiting

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 42.4 Multi Party

Description

MultiParty call handling

Related GSM core specifications

TS 24.084 sub clause 1.1

Reason for test

Ensure that a MultiParty call handling is correctly implemented.

Initial configuration

* Call waiting activated
* MS with one call active and one on hold
* Ensure that a variety of call types (PSTN, ISDN, PABX, mobile) are used within the MultiParty call.

Test procedure

**Scenario A:**

1. Dial the code 3 SEND to join the calls. Check that all three parties can speak to each other
2. Arrange for a further incoming call to be made. Check that the call is indicated, and then answer it, placing the multiparty call on hold automatically. Check that conversation is possible on the new call.
3. Dial the code 3 SEND to join the calls. Check that all four parties can speak to each other.
4. Place the multiparty call on hold by dialling code 2SEND and make a new outgoing call with code DN SEND. Check that conversation is possible on the new call.
5. Place the new call on hold and retrieve the multiparty call by dialling code 2 SEND. Check that conversation is possible between all parties of the multiparty call.
6. Dial the code 3 SEND to join the calls. Check that all five parties can speak to each other.
7. Place the multiparty call on hold by dialling code 2SEND and make a new outgoing call with code DN SEND. Check that conversation is possible on the new call.
8. Dial the code 3 SEND to join the calls. Check that all six parties can speak to each other.
9. Arrange for a further incoming call to be made (y). Check that the call is indicated, and then answer it, placing the multiparty call on hold automatically. Check that conversation is possible on the new call.
10. Dial the code 3 SEND to join call (y) to the multiparty. Check that the attempt fails, and that the mobile indicates that the maximum number of participants has been exceeded.
11. Place the new call (y) on hold and retrieve the multiparty call by dialling code 2 SEND. Clear one party from multiparty call by dialling code 1x SEND (x – number of call in the multiparty call e.g. 11 SEND will clear Party 1). Check that connection to call x has ended and only 5 parties remain in the multiparty call. Now dial the code 3 SEND to join call (y) to the multiparty. Check that the held call is added to the multiparty and all six parties can speak to each other.
12. Create a private communication with one of the distant parties with the code 2x SEND (x – number of call in the multiparty call. e.g. 24 SEND will create private call with Party 4), placing the remainder of the parties on hold. Check that conversation is possible with the chosen party, and that the correct party has been selected.
13. Make the distant party release the call during private conversation. Check that the call can be switched back to the multi party call (2 SEND).
14. Select another party for a private conversation and dial 2x SEND (x – number of call in the multiparty call. e.g. 23 SEND will create private call with Party 3) and make this party release the call during the attempt to switch to the private conversation. Check that the multi party call can be retrieved with 2 SEND.
15. Have one of the distant parties clear from the call. Ensure that the multiparty call is not disturbed for the remaining participants.

**Scenario B:**

1. Using the menu functionality, join the calls. Check that all three parties can speak to each other
2. Arrange for a further incoming call to be made. Check that the call is indicated, and then answer it, placing the multiparty call on hold automatically. Check that conversation is possible on the new call.
3. Using the menu functionality, join the calls. Check that all four parties can speak to each other.
4. Place the multiparty call on hold using the menu functionality and make a new outgoing call using the add call option available in the menu. Check that conversation is possible on the new call.
5. Place the new call on hold and retrieve the multiparty call by using the menu functionality to swap calls. Check that conversation is possible between all parties of the multiparty call.
6. Using the menu functionality, join the calls. Check that all five parties can speak to each other.
7. Place the multiparty call on hold using the menu functionality and make a new outgoing call using the add call option available in the menu. Check that conversation is possible on the new call.
8. Using the menu functionality, join the calls. Check that all six parties can speak to each other.
9. Arrange for a further incoming call to be made (y). Check that the call is indicated, and then answer it, placing the multiparty call on hold automatically. Check that conversation is possible on the new call.
10. Using the menu functionality, attempt to join call (y) to the multiparty. Check that either the attempt fails or the option to join the call is not available / not selectable. For mobiles where the menu option to join the calls is still available / selectable, confirm the mobile indicates that the maximum number of participants has been exceeded.
11. Place the new call (y) on hold and retrieve the multiparty call using the menu functionality for Swap Call. Clear one party (x) from multiparty call using the menu option to release an individual call. Check that connection to call (x) has ended and only 5 parties remain in the multiparty call. Use the menu functionality to join call (y) to the multiparty. Check that the held call is added to the multiparty and all six parties can speak to each other.
12. Create a private communication with one of the distant parties using the menu functionality, placing the remainder of the parties on hold. Check that conversation is possible with the chosen party, and that the correct party has been selected.
13. Make the distant party release the call during private conversation. Check that the Multi Party call can be retrieved via the menu functionality to retrieve.
14. Select another party for a private conversation using the menu functionality and make this party release the call during the attempt to switch to the private conversation. Check that the Multi Party call can be retrieved via the menu functionality to retrieve.
15. Have one of the distant parties clear from the call. Ensure that the multiparty call is not disturbed for the remaining participants.

Expected behaviour

The MS behaves as described in the test procedure.

## 42.5 Advice of Charge

### 42.5.1 Advice of Charge (Charging)

#### 42.5.1.1 MO call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.1.2 MT call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.1.3 MultiParty, waiting and held calls

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.1.4 Loss of connection

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.1.5 Credit expiry

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.1.6 Tariff Switch

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.5.2 Advice of Charge (Information)

#### 42.5.2.1 MO call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.2.2 MT call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.2.3 Loss of connection

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 42.5.2.4 MultiParty, waiting and held calls

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 42.6 USSD

### 42.6.1 Idle mode Network initiated USSD Notify

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.6.2 Dedicated mode Network initiated USSD Notify

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.6.3 Idle mode Network initiated USSD Request

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.6.4 Dedicated mode Network initiated USSD Request

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.6.5 Idle mode MO USSD

NOTE: DUT-initiated USSD is used within the network to allow for the invocation of features for other services, such as CAMEL. Since these features may vary from network to network, no specific network feature is mentioned in this test.

Description

Ensure that DUT-initiated USSD operations are carried out correctly.

Related GSM core specifications

GSM 04.90 and GSM 03.38

Reason for test

To ensure that DUT initiated USSD operations are carried out correctly.

Initial configuration

DUT in idle mode

Test procedure

1 By means of appropriate MMI commands, invoke a USSD request.

2 Check to see whether the network feature invoked responds as expected.

3 Check all characters, digits and symbols are correctly displayed in the response.

4 Repeat steps 1 - 3 for all supported USSD commands of the network under test.

Expected behaviour

1 USSD command is invoked.

2 Network responds to USSD command as appropriate for the command sent.

3 All characters, digits and symbols are correctly displayed in the response.

4 All USSD commands available for the network under test are invoked and responded as expected.

### 42.6.6 Dedicated mode MO USSD

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 42.6.7 USSD sequences for CCBS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 42.7 Calling Line Identification Presentation (CLIP)

The Calling Line Identification Presentation is concerned with the display of the incoming caller identity during an MT call. When the service is enabled, the incoming caller ID will be displayed on the receiving DUT. When the service is disabled, the incoming caller ID is not displayed on the receiving DUT.

### 42.7.1 CLIP Enabled

#### 42.7.1.1 Interrogation

Description

The DUT shall display the status of CLIP when interrogated by a user.

Related GSM core specifications

TS 24.081 sub clause 1.2, 3GPP TS 22.081

Reason for test

To ensure the DUT displays the status of CLIP when interrogated.

Initial configuration

SIM card with CLIP provisioning enabled inserted in DUT.

DUT in idle mode.

Test procedure

**Scenario A: Code**

Dial \*#30#

**Scenario B: Menu**

Via the DUT menu, interrogate the CLIP status.

Expected behaviour

The DUT interrogates the network status of CLIP and displays an indication that the service is enabled.

#### 42.7.1.2 Provisioning Check

Description

The DUT shall display the incoming caller ID when CLIP is enabled.

Related GSM core specifications

TS 24.081 sub clause 1.2, 3GPP TS 22.081

Reason for test

To ensure the DUT displays the incoming caller ID when CLIP is enabled.

Initial configuration

BS – Basic Service: Voice, FAX, Video

SIM card with CLIP provisioning enabled inserted in DUT.

DUT in idle mode.

Test procedure

**Scenario A: Not Stored**

1. Delete all entries in DUT phonebook.
2. Receive MT BS call from Client 1.
3. Answer call at DUT.

**Scenario B: Stored**

1. Store Client 1 MSISDN in DUT phonebook.
2. Receive MT BS call from Client 1.
3. Answer call at DUT.

Expected behaviour

1. DUT phonebook is updated.
2. Scenario A: Confirm DUT displays the MSISDN of Client 1 during call.

Scenario B: Confirm DUT displays the corresponding PB entry name of Client 1 during call.

1. A connection in both directions is established.

### 42.7.2 CLIP Disabled

#### 42.7.2.1 Interrogation

Description

The DUT shall display the status of CLIP when interrogated by a user.

Related GSM core specifications

TS 24.081 sub clause 1.2, 3GPP TS 22.081

Reason for test

To ensure the DUT displays the status of CLIP when interrogated.

Initial configuration

SIM card with CLIP provisioning disabled inserted in DUT.

DUT in idle mode.

Test procedure

**Scenario A: Code**

Dial \*#30#

**Scenario B: Menu**

Via the DUT menu, interrogate the CLIP status.

Expected behaviour

The DUT interrogates the network status of CLIP and displays an indication that the service is disabled.

#### 42.7.2.2 Provisioning Check

Description

The DUT shall hide the incoming caller ID when CLIP is disabled.

Related GSM core specifications

TS 24.081 sub clause 1.2, 3GPP TS 22.081

Reason for test

To ensure the DUT hides the incoming caller ID when CLIP is disabled.

Initial configuration

BS – Basic Service: Voice, FAX, Video

SIM card with CLIP provisioning disabled inserted in DUT.

DUT in idle mode.

Test procedure

**Scenario A: Not Stored**

1. Delete all entries in DUT phonebook.
2. Receive MT BS call from Client 1.
3. Answer call at DUT.

**Scenario B: Stored**

1. Store Client 1 MSISDN in DUT phonebook.
2. Receive MT BS call from Client 1.
3. Answer call at DUT.

Expected behaviour

1. DUT phonebook is updated.
2. Confirm DUT does not display the MSISDN/PB entry name of Client 1 during call. It displays “unknown”, “private” or similar.
3. A connection in both directions is established.

## 42.8 Calling Line Identification Restriction (CLIR)

The Calling Line Identification Restriction is concerned with the display of the outgoing caller identity during an MO call. When the service is enabled, the outgoing caller ID will be restricted and not displayed on receiving Client. When the service is disabled, the outgoing caller ID is displayed on the receiving Client.

### 42.8.1 CLIR Enabled

#### 42.8.1.1 Interrogation

Description

The DUT shall display the status of CLIR when interrogated by a user.

Related GSM core specifications

TS 24.081 clause 5, TS 24.081 sub clause 2.3, 3GPP TS 26.110 and TS 26.111

Reason for test

To ensure the DUT displays the status of CLIR when interrogated by a user.

Initial configuration

SIM card with CLIR enabled in the network

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Interrogate CLIR status using one of the following methods:  - Menu: Via the DUT GUI  - MMI: \*#31#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The DUT interrogates the network status of CLIR and displays indication that the service is enabled. |

#### 42.8.1.2 Invocation

Description

The DUT shall restrict the outgoing caller ID when CLIR is enabled.

Related GSM core specifications

TS 24.081 sub clause 1.2, 3GPP TS 22.081

Reason for test

To ensure the DUT restricts the outgoing caller ID when CLIR is enabled.

Initial configuration

BS – Basic Service: Voice, FAX, Video

CLIR provisioning disabled on network side.

DUT has “show my number” setting set to “hide number” in outgoing calls.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Setup MO voice call to Client-1 using one of the following methods:  - Menu: Via the DUT GUI  - MMI: #31#DN  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | Client-1 does not display the MSISDN of DUT during call. It displays “unknown”, “private” or similar. |

### 42.8.2 CLIR Disabled

#### 42.8.2.1 Interrogation

Description

The DUT shall display the status of CLIR when interrogated by a user.

Related GSM core specifications

TS 24.081 clause 5, TS 24.081 sub clause 2.3, 3GPP TS 26.110 and TS 26.111

Reason for test

To ensure the DUT displays the status of CLIR when interrogated by a user.

Initial configuration

SIM card with CLIR disabled in the network.

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Interrogate CLIR status using one of the following methods:  - Menu: Via the DUT GUI  - MMI: \*#31#  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | The DUT interrogates the network status of CLIR and displays indication that the service is disabled. |

#### 42.8.2.2 Invocation

Description

The DUT shall send the outgoing caller ID when CLIR is disabled.

Related GSM core specifications

TS 24.081 sub clause 1.2, 3GPP TS 22.081

Reason for test

To ensure the DUT sends the outgoing caller ID when CLIR is disabled.

Initial configuration

BS – Basic Service: Voice, FAX, Video

Test procedure

**Scenario A: Network Default setting: CLIR Disabled**

1. Insert SIM card with CLIR disabled on network side.
2. In DUT menu, ensure setting for "show my number" in outgoing calls is set to network default.
3. Make MO BS call to Client 1.
4. Answer call at Client 1.

**Scenario B: CLIR Temporarily Disabled (Menu)**

1. Insert SIM card with CLIR provisioning enabled in DUT.
2. In DUT menu, ensure setting for "show my number" in outgoing calls is set to "show number".
3. Make MO BS call to Client 1.
4. Answer call at Client 1.

**Scenario C: CLIR Temporarily Disabled (Code)**

1. Power on the DUT
2. In DUT menu, ensure setting for "show my number" in outgoing calls is set to ”show number”
3. Make MO BS call to Client 1 by dialling \*31#DN.
4. Answer call at Client 1.

Expected behaviour

1. DUT has appropriate SIM inserted and is in IDLE mode. DUT is attached to the network
2. CLIR option in DUT menu is selected accordingly.
3. Confirm Client 1 displays the MSISDN of DUT during call.
4. A connection in both directions is established.

## 42.9 Supplementary Service Notifications

The SS notification (if supported by the network) sends the SS status to the device. This may be Call Forwarding notification or Call Waiting notification.

### 42.9.1 Call Forwarding SS Notification

#### 42.9.1.1 MO Call Forwarding SS Notification

Description

The DUT shall display the SS notification information when sent by the network during MO call setup.

Related core specifications

TS 24.008 clause 5

Reason for test

The DUT shall display the SS notification information when sent by the network during MO call setup.

Initial configuration

At Client-1, enable Call Forwarding Unconditional to Client-2

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, make MO voice call to Client-1. | DUT is alerting. Client-2 displays MSISDN of DUT. |
| 2 | Check for SS notification on DUT. | DUT displays SS notification "Call is Forwarded" or similar. (SS notification support is network dependent) |
| 3 | At DUT, end voice call setup. | Voice call setup is ended between DUT and Client 2. |

#### 42.9.1.2 MT Call Forwarding SS Notification

Description

The DUT shall display the SS notification information when sent by the network during MT call setup.

Related core specifications

TS 24.008 clause 5

Reason for test

The DUT shall display the SS notification information when sent by the network during MT call setup.

Initial configuration

At Client-1, enable Call Forwarding Unconditional to DUT

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At Client-2, make MO voice call to Client-1. | DUT is alerting and displays MSISDN of Client-2. |
| 2 | Check for SS notification on DUT. | DUT displays SS notification "Forwarded Call" or similar. (SS notification support is network dependent) |
| 3 | At Client-2, end voice call setup. | Voice call setup is ended between DUT and Client-2. |

### 42.9.2 Call Waiting SS Notification

#### 42.9.2.1 MO Call Waiting SS Notification

Description

The DUT shall display the SS notification information when sent by the network during MO call setup.

Related core specifications

TS 24.008 clause 5

Reason for test

The DUT shall display the SS notification information when sent by the network during MO call setup.

Initial configuration

Call Waiting enabled at Client 1.

Client-1 is in an ongoing voice call with Client-2.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | At DUT, make MO voice call to Client-1. | DUT is alerting. |
| 2 | Check for SS notification on DUT. | DUT displays SS notification "Call is Waiting" or similar. (SS notification support is network dependent) |
| 3 | At DUT, end voice call setup. | Voice call setup is ended between DUT and Client-1. |

# 43 Multimedia Message Service (MMS)

## 43.1 MMS Mobile originated

### 43.1.1 Mobile originated with different address format

#### 43.1.1.1 Send message with various MSISDN address formats

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.1.2 Send message when the sender is anonymous

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.1.3 Send message with MSISDN recipient using the “To”, the “Cc” or the “Bcc” field

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.1.4 Send message with email recipient using the “To”, the “Cc” or the “Bcc” field

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.1.5 Send message with multiple recipients

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.1.6 Send message with multiple and unsubscribed recipient

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.1.2 Mobile originated with different fields and objects

#### 43.1.2.1 Send message with subject (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.2 Send message with text (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.3 Send message with sound object (iMelody)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.4 Send message with polyphonic sound object (MIDI)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.5 Send message with AMR sound

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.6 Send message with GIF image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.7 Send message with animated GIF image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.8 Send message with JPEG image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.9 Send message with WBMP image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.10 Send message with different objects

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.11 Send message with Business Card attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.12 Send message with appointment attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.13 Send message with VNotes attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.14 Send message with different objects to email client

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.2.15 Send message with Business Card to email client

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.1.3 Send MMS with Priorities

#### 43.1.3.1 Send message with NORMAL priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.3.2 Send message with LOW priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.3.3 Send message with HIGH priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.1.4 Reply and Forward Messages

#### 43.1.4.1 Reply to message with single recipient

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.4.2 Reply to message with multiple recipients

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.1.4.3 Forward a received message

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 43.2 MMS Mobile terminated

### 43.2.1 Mobile terminated with different address format

#### 43.2.1.1 Receive MMS notification with message size indicated

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.1.2 Receive message from MSISDN sender using the “To”, the “Cc” or the “Bcc” field

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.1.3 Receive message from email client

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.1.4 Receive message to multiple recipients using the fields “To”, “Cc” and “Bcc”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.2.2 Mobile terminated with different fields and objects

#### 43.2.2.1 Receive message with subject (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.2 Receive message with text (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.3 Receive message with sound object (iMelody)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.4 Receive message with polyphonic sound object (MIDI)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.5 Receive message with AMR sound object

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.6 Receive message with GIF image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.7 Receive message with animated GIF image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.8 Receive message with JPEG image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.9 Receive message with WBMP image (different sizes)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.10 Receive message with different objects

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.11 Receive message with Business Card attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.12 Receive message with an appointment attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.13 Receive message with VNotes attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.2.14 Receive message with different objects from email client

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.2.3 Receive MMS with Priorities

#### 43.2.3.1 Receive message with NORMAL Priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.3.2 Receive message with LOW Priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.3.3 Receive message with HIGH Priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.3.4 Receive message with the MS profile “Meeting or silence”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.2.4 Auto Download Messages

#### 43.2.4.1 Receive MMS when Auto Download is set to “Off” / Reject MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.4.2 Receive MMS when Auto Download is set to “Confirm”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.4.3 Receive MMS when Auto Download is set to “On”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.4.4 Receive MMS when Auto Download is set to “On” and the MS memory is full

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.4.5 Receive MMS when Auto Download is set to “On” and the sender is anonymous

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.2.4.6 Receive MMS when Auto Download is set to “Off”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 43.3 Message Reports

### 43.3.1 Messages with Delivery Report

#### 43.3.1.1 Send MMS with Delivery Report set to “On“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.2 Send MMS with Delivery Report set to “Off“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.3 Receive a Delivery Report when the MMS was retrieved / Successful

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.4 Receive a Delivery Report when the MMS was rejected

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.5 Receive a Delivery Report were the MMS was expired

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.6 Receive a Delivery Report when the MMS was sent to multiple recipients

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.7 Receive a Delivery Report when the recipient MSISDN is directly forwarded to a different MSISDN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.1.8 Deny Delivery Report

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.3.2 Message with Read Reply Report

#### 43.3.2.1 Sending a Message with Read Reply set to “On”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.2.2 Sending a Message with Read Reply set to “Off”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.2.3 Receiving a Message with Read Reply to single recipient

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.2.4 Receiving a Message with Read Reply to multiple recipients

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.3.2.5 Receive a Read Reply Report when the recipient MSISDN is directly forwarded to a different MSISDN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 43.4 Message attributes

### 43.4.1 Sending messages with validity period

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.4.2 Sending messages with delayed delivery

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.4.3 Receiving MMS with Message Classes

#### 43.4.3.1 Receiving messages with Message Class “Personal“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.4.3.2 Receiving messages with Message Class “Advertisement“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.4.3.3 Receiving messages with Message Class “Informational“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.4.3.4 Receiving messages with Message Class “Auto“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 43.5 MMS error handling and multitask interactions

### 43.5.1 Error handling for sending and receiving MMS

#### 43.5.1.1 Cancel the downloading MMS when Auto Download is set to “On”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.2 Cancel the downloading MMS when Auto Download is set to “Off”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.3 Cancel the downloading MMS when Auto Download is set to “Confirm”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.4 Abort the transmission when sending a message

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.5 Loss of coverage while sending a MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.6 Maximum message size exceeded when sending a MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.7 Send a MMS to a MSISDN which is not subscribed to the MMS service

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.1.8 Send MMS when MS is out of coverage

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.5.2 MMS multitask interactions

#### 43.5.2.1 Incoming Voice Call during downloading MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.2.2 Incoming CS Short Message during downloading MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.2.3 Incoming MMS during an active call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.2.4 Receiving a MMS during an active WAP Session

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.5.2.5 Receiving MMS and select “Call to Sender” from the menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 43.6 SMIL functions and options

### 43.6.1 SMIL function when sending a MMS

#### 43.6.1.1 Maximum message size when sending a MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.6.1.2 Preview the message size when sending a MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 43.6.1.3 Send a MMS with multiple pages

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 43.6.2 SMIL function when receiving a MMS

#### 43.6.2.1 Receive a MMS with multiple pages

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 43.7 MMS Handling

### 43.7.1 Handling of MMS Notification when changing the SIM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 44 Browsing

## 44.1 Web

### 44.1.1 Void

### 44.1.2 Void

### 44.1.3 Void

### 44.1.4 Browser

#### 44.1.4.1 Display of Browser version

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.1.4.2 Menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.1.4.3 Back option

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.1.4.4 Void

#### 44.1.4.5 Void

#### 44.1.4.6 Void

#### 44.1.4.7 Void

#### 44.1.4.8 Void

#### 44.1.4.9 Void

#### 44.1.4.10 Save Bookmark in Mobile Memory

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.1.4.11 Go to Bookmark from Mobile Memory

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 44.2 Additional tests for terminals supporting WAP 2.0 / Browsing 2.1 - 2.4

### 44.2.1 UAPROF document is accessed correctly

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 44.2.2 Certificate Handling

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 44.2.3 Void

### 44.2.4 Service Indication

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 44.2.5 HTML

#### 44.2.5.1 Void

#### 44.2.5.2 URL is not a valid HTML/WML document

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.3 Void

#### 44.2.5.4 Void

#### 44.2.5.5 Void

#### 44.2.5.6 Void

#### 44.2.5.7 Void

#### 44.2.5.8 Void

#### 44.2.5.9 Void

#### 44.2.5.10 Void

#### 44.2.5.11 Void

#### 44.2.5.12 Void

#### 44.2.5.13 International characters in content

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.14 Other special characters (< > “ & ‘ )

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.15 Void

#### 44.2.5.16 Void

#### 44.2.5.17 Void

#### 44.2.5.18 Void

#### 44.2.5.19 Void

#### 44.2.5.20 Void

#### 44.2.5.21 Void

#### 44.2.5.22 Input field as password (hidden characters)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.23 Input field without maxlength

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.24 Input field with maxlength = 5

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.25 Void

#### 44.2.5.26 Input field with default value

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.27 Void

#### 44.2.5.28 Formatted input field – e.g. Date NN\.NN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.29 Void

#### 44.2.5.30 Void

#### 44.2.5.31 Void

#### 44.2.5.32 Void

#### 44.2.5.33 Void

#### 44.2.5.34 Void

#### 44.2.5.35 Void

#### 44.2.5.36 Void

#### 44.2.5.37 Void

#### 44.2.5.38 Void

#### 44.2.5.39 Void

#### 44.2.5.40 Void

#### 44.2.5.41 Void

#### 44.2.5.42 WTAI

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.43 Go to secure URL

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.44 Go to embedded link

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.45 Void

#### 44.2.5.46 Void

#### 44.2.5.47 Void

#### 44.2.5.48 Void

#### 44.2.5.49 Check of supported image types

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.50 Check of supported video types

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.5.51 Check of supported audio types

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 44.2.6 Interworking between services

#### 44.2.6.1 Incoming SM while browsing

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 44.2.6.2 Incoming Call while online browsing

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 45 CS Video Call

NOTE: Instead of the term “Circuit Switched Multimedia Telephony” as used in 3GPP Specifications the shorter term “Video Call” will be used in this chapter.

## 45.1 Mobile Originated Video Call (MO)

### 45.1.1 MO Video Call - Successful

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.2 MO Video Call - International Format

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.3 MO Video Call - Hang Up Before Alerting Phase

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.4 MO Video Call - Hang Up During Alerting Phase

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.5 MO Video Call - No Answer From Client

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.6 MO Video Call - To Occupied Client

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.7 MO Video Call - Client Not Supporting Video Call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.8 MO Video Call - DUT Roaming Outside Its HPLMN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.9 MO Video Call - DTMF Emission

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.10 MO Video Call - Display message of registered and activated call forwarding during MOC setup

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.1.11 MO Video Call - Call Reject

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 45.2 Mobile Terminated Video Call (MT)

### 45.2.1 MT Video Call - Successful

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.2.2 MT Video Call - Call waiting - MT Video Call During Active Video Call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.2.3 MT Video Call - Call waiting - MT Voice Call During Active Video Call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.2.4 MT Video Call - Call waiting - MT Video Call During Active Voice Call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.2.5 MT Video Call - Call Accept Automatically

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.2.6 MT Video Call - Call Reject

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 45.3 Video Call - Quality of Service, Stability and Setup success

NOTE: In this section, we will consider that good radio conditions are symbolized by 4 or more network bars and bad radio conditions by only 1 network bar on the phone screen.

### 45.3.1 Video Call - Quality of Service

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.3.2 Video Call - Stability of Service

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.3.3 Video Call - Call Setup Success

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.3.4 Video Call - Network Bearer Establishment Time

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.3.5 Video Call - Codec Establishment Time

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 45.4 Video Call - Applications

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.4.2 Video Call - Applications - Blocked Video

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.4.3 Video Call - Applications - Outgoing / Incoming Video Stream Toggle

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 45.4.4 Video Call - Applications - In Call Timer

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 46 Java and J2ME

There are two main prevalent versions of Java for mobile phones/devices, J2ME (Java 2 Platform, Micro Edition) CLDC/MIDP(often called kJava) and Personal Java (also called pJava). Personal Java was transferred into the J2ME platform in 1999. The new version is called J2ME CDC/ Personal Profile.

The J2ME CDC/Personal Profile is replacing Personal Java, which has been a popular implementation in high-end devices. The two versions of J2ME are based on a combination of a profile and configuration.

Configurations comprise a virtual machine and a minimal set of class libraries. They provide the base functionality for a particular range of devices that share similar characteristics, such as network connectivity and memory footprint. Currently, there are two J2ME configurationsavailable:

* *CLDC (Connected Limited Device Configuration)*: This configuration is aimed at small, resource constrained devices for instance, mobile phones and pagers.
* *CDC (Connected Device Configuration):* This configuration is aimed at a range of network-connected consumer and embedded devices for instance, smart communicators, PDAs.

To provide a complete runtime environment for a specific device category, a configuration needs to be combined with a profile, a set of higher-level APIs that further define the application life-cycle model, the user interface, and access to device-specific properties. A profile supports a narrower category of devices within the framework of a chosen configuration. The following profileshave been established for J2ME:

* *MIDP (Mobile Information Device Profile)*: MIDPis based on the CLDC configuration and provides developers with essential information and guidance when writing programs for mobile phones and two-way pagers.
* *Foundation Profile (FP):* FP is based on CDC configuration and provides a set of Java APIs that support resource constrained devices without a standard-based GUI system.
* *Personal Basis Profile (PB):* PB along with CDC configuration provides a set of Java APIs that support resource constrained devices with a standard-based GUI system.
* *Personal Profile (PP):* PP along with the CDC configuration supports resource-constrained devices with a GUI Toolkit based on AWT (Abstract Windowing Toolkit).

## 46.1 Personal Java Devices

Personal Java, which is sometimes called pJava, was one of the first Java programming environments targeted at applications for resource-limited devices. These devices include for instance PDAs (Personal Digital Assistants) and Communicators/Smartphones. Personal Java introduced features that reduce memory usage and adapt applications to different screens and graphical interfaces.

High-end phones such as Smartphones based on the Symbian OS offer this advanced capability to develop feature-rich applications in Java. In addition to Personal Java, these devices also utilize JavaPhone to get access to the phone functionality. It is mandatory to support the JavaPhone API for Personal Java Devices.

### 46.1.1 Personal Java Application Installation

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.1.2 Power Monitor

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.1.3 Personal Java Network Protocol Support

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.1.4 Personal Java Capability Negotiation

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 46.2 J2ME CLDC/MIDP Devices

J2ME CLDC/MIDP devices are based on the Connected Limited Device Configuration (CLDC) with the Mobile Information Device Profile (MIDP). During 2003 an initiative was started to ensure interoperability in J2ME. The initiative is called "Java Technology for the Wireless Industry" JTWI also referred to as JSR-185. The initiative works to define a roadmap for MIDP/CLDC enabled mobile phones and to reduce any ambiguity in the specifications included.

The (mandatory) JSRs that are supported for JTWI (JSR 185) are:

* JSR-30 CLDC 1.0
* JSR-120 WMA
* JSR-118 MIDP 2.0

### 46.2.1 Retrieval of new MIDlet over Wireless Network

#### 46.2.1.1 Retrieval of new unsigned MIDlet over Wireless Network

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 46.2.1.2 Retrieval of new signed MIDlet over Wireless Network

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.2 Retrieval of new MIDlet over non-network interfaces

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.3 Retrieval of MIDlet without enough memory space on UE

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.4 Retrieval of MIDlet that already exists on UE

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.5 MIDlet Management Software

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.6 MIDlet requesting online information

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.7 Receiving Voice Call during CS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.8 Receiving SMS during CS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.9 Receiving MMS during CS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.10 Receiving SAT Message during CS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.11 Receiving CB Message during CS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.12 Receiving Voice Call during PS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.13 Receiving SMS during PS download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.14 Receiving MMS during PS Download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.15 Receiving SAT Message during PS Download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.16 Receiving CB Message during PS Download of MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.17 Receiving Voice Call while running MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.18 Receiving SMS while running MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.19 Receiving MMS while running MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.20 Receiving SAT Message while running MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.21 Receiving CB Message while running MIDlet

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.22 Running a Multiplayer MIDlet requesting information over different interfaces

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.23 Remote wakeup of MIDlet though SMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.2.24 Operation of MIDlet requiring continued access to UI

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 46.3 Security and Trust Services API for J2ME (SATSA); JSR 177

### 46.3.1 SATSA-APDU

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.3.2 SATSA-CRYPTO

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.3.3 SATSA-PKI

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 46.3.4 SATSA-RMI

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 47 Streaming

## 47.1 Basic Functionalities

### 47.1.1 Opening from the terminal Menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.2 Local and remote video clip access

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.3 URL Address

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.4 RTSP and HTTP URLs support

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.5 Long URLs support

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.6 Automatic playback

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.7 Exit directly from the playback

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.8 Playlist

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.9 Predefined page

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.10 Bookmarks management

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.11 Media Player closure

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.12 Speakers

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.13 Silent mode-meeting profile

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.1.14 Buffer status

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.2 Service Priorities

### 47.2.1 Incoming voice call with activated Media Player

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.2 Incoming voice call during streaming: accept and close

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.3 Incoming voice call during streaming: reject

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.4 Incoming voice call during a paused streaming: accept and close

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.5 Incoming voice call during a paused streaming: reject

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.6 Incoming voice call during buffering: accept and close

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.7 Incoming voice call during buffering: reject

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.8 Incoming SMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.9 Incoming IM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.10 Incoming FAX

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.11 Incoming Video Call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.12 Incoming MMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.13 Incoming Multimedia Message with single PDP context and active WAP Browser connection WAP browser and Streaming client use the same connection

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.2.14 Incoming Multimedia Message with multiple PDP contexts and active WAP Browser connection. WAP browser and Streaming client use different connections

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.3 Network Characteristics

### 47.3.1 Roaming

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.3.2 Buffering frequency

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.4 Session Establishment and Control

### 47.4.1 RTSP minimum implementation support: SETUP, PLAY and TEARDOWN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.4.2 RTSP port setting

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.4.3 Fast Forward

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.4.4 Rewind

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.5 Audio contents and codecs

### 47.5.1 Support to AMR narrow-band (AMR-NB) speech decoder

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.5.2 Support to AMR wideband (AMR-WB) speech decoder

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.5.3 Support to MPEG-4 AAC LC (Low Complexity object type) audio decoder

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.5.4 Support to "Real Audio 8" audio codec

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.5.5 Support to "Real Audio 9" audio codec

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.5.6 Support to surestream using the Audio Codec "Real Audio 8"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.5.7 Support to surestream using the Audio Codec "Real Audio 9"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.6 Video contents and codecs

### 47.6.1 Support to Video Codec "H.263 Profile 0 Level 10"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.6.2 Support to Video Codec "H.263 Profile 3 Level 10"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.6.3 Support to Video Codec "MPEG-4 Simple Visual Profile Level 0"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.6.4 Support to Video Codec "Real Video 8"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.6.5 Support to Video Codec "Real Video 9"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.6.6 Support to surestream using the Video Codec "Real Video 8"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.6.7 Support to surestream using the Video Codec "Real Video 9"

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.7 Video and Audio Codecs

### 47.7.1 H.263 Profile 0 Level 10 (video) and MPEG-4 AAC (audio)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.7.2 H.263 Profile 0 Level 10 (video) and AMR-NB (audio)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.7.3 H.263 Profile 3 Level 10 (video) and MPEG-4 AAC (audio)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.7.4 H.263 Profile 3 Level 10 (video) and AMR-NB (audio)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.7.5 MPEG-4 Simple Visual Profile Level 0 (video) and MPEG-4 AAC (audio)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.7.6 MPEG-4 Simple Visual Profile Level 0 (video) and AMR-NB (audio)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.8 Session Description Protocol (SDP) files

### 47.8.1 SDP files and SDP syntax

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.8.2 SDP file: pre-decoder attributes

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.9 Connections

### 47.9.1 Connection not configured

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.9.2 Different Connections

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.9.3 Connection confirmation

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.10 Playback

### 47.10.1 Decode rates

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.2 Simultaneous playback

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.3 Audio playback of unsupported encoding format

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.4 Video playback of unsupported encoding format

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.5 Playback of unsupported MIME type

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.6 Control functionality (Play, Stop, Pause)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.7 Control functionality (Volume)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.8 Control functionality (Mute/Unmute)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.9 Playback time indication

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.10 Metadata

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.11 Mono/stereo

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.12 Display sizes

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.13 Fullscreen Mode

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.10.14 Operator override

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 47.11 Progressive Download

### 47.11.1 Support to Progressive Download of 3gp files

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 47.11.2 Support to Progressive Download of MP4 files

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 48 Camera Interworking

Testing Camera is not in the scope of these guidelines, except for tests relating to the undisturbed function of the UE’s primary functionality as a communicating mobile device.

## 48.1 Service maintained during photo/video capture

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 48.2 Service maintained when using picture or movie program functions inbuilt or supplied with the UE

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 48.3 Service maintained during transfer of pictures or movie out (or in) the UE.

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 49 E-Mail Sending/Receiving

NOTE: The tests of this part should be applicable on e-mail feature supported terminal.

## 49.1 E-Mail Mobile originated

### 49.1.1 Mobile originated with different address format

#### 49.1.1.1 Send E-Mail with email recipient using the “To”, the “Cc” or the “Bcc” field

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.1.2 Send E-Mail with multiple recipients

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.1.3 Send E-Mail to an address book recipient

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.1.2 Mobile originated with different fields and objects

#### 49.1.2.1 Send E-Mail with subject (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.2.2 Send E-Mail with text (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### Send E-Mail with different objects (iMelody / MIDI / AMR sound / GIF / Animated GIF / JPEG / WBMP - max. size)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.2.4 Send E-Mail with different objects

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.2.5 Send E-Mail with Business Card attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.2.6 Send message with appointment attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.2.7 Send e-mail with VNotes attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.2.8 Send E-Mail with too long mail address recipient (exceed 255 characters)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.1.3 Send E-Mail with Priorities

#### 49.1.3.1 Send E-Mail with NORMAL / LOW / LOWEST / HIGH / HIGHEST / priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.1.4 Reply and Forward E-Mail Messages

#### 49.1.4.1 Reply to message with single recipient

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.4.2 Reply to message with multiple recipients

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.1.4.3 Forward a received message with and without attachment

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 49.2 E-Mail Mobile terminated

### 49.2.1 Mobile terminated with different address format

#### 49.2.1.1 Receive E-Mail from MSISDN / E-Mail Client sender using the “To”, the “Cc” or the “Bcc” field

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.2.2 Mobile terminated with different fields and objects

#### 49.2.2.1 Receive E-Mail with subject (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.2.2.2 Receive E-Mail with text (maximum length)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### Receive E-Mail with different objects (iMelody / MIDI / AMR sound / GIF image / Animated GIF / JPEG / WBMP) – play and save these objects

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.2.2.4 Receive E-Mail with different objects

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.2.2.5 Receive E-Mail with Business Card attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.2.2.6 Receive E-Mail with an appointment attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.2.2.7 Receive E-Mail with VNotes attached

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.2.3 Receive E-Mail with Priorities

#### 49.2.3.1 Receive E-Mail with Normal / Low / Lowest / High / Highest Priority

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.2.3.2 Receive E-Mail with the MS profile “Meeting or silence”

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 49.3 E-Mail Reports

### 49.3.1 E-Mails with Delivery Report

#### 49.3.1.1 Send E-Mail with Delivery Report set to “On“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.3.1.2 Send E-Mail with Delivery Report set to “Off“

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.3.1.3 Receive a Delivery Report when the E-Mail was retrieved / Successful

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 49.4 E-Mail Error Handling and Multitask Interactions

### 49.4.1 Error handling for sending and receiving E-Mail

#### 49.4.1.1 Abort the transmission when sending a message

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.4.1.2 Loss of coverage while sending an E-Mail

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.4.1.3 Maximum message size exceeded when sending an E-Mail

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.4.1.4 Send E-Mail when MS is out of coverage

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.4.2 E-Mail multitask interactions

#### 49.4.2.1 Incoming Voice Call during downloading E-Mail

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.4.2.2 Incoming CS Short Message during downloading E-Mail

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.4.2.3 Incoming E-Mail during an active call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 49.4.2.4 Receiving an E-Mail during an active WAP Session

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 49.5 E-Mail Settings

### 49.5.1 E-Mail Setting with POP3 protocol

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 49.5.2 E-Mail Setting with IMAP4 protocol

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 50 DRM Usability

NOTE: The tests of this part should be applicable on DRM feature supported terminal.

## 50.1 Revoked certificate notification

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 50.2 License files should not be visible by the user

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 50.3 Graphical indication to the user about the DRM file

### 50.3.1 Graphical indication to the User if a file is a DRM file with license

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 50.3.2 Graphical indication to the User if a file is a DRM file without license

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 50.3.3 Graphical indication to the User if a file is in plaintext

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 50.3.4 Graphical indication to the User if a file is forward-locked

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 50.4 The user is informed if trying to perform unauthorized actions

### 50.4.1 Verification that the user is informed correctly in the event of opening a DRM file not associated with a valid license

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 50.4.2 Verification that the user is informed with an appropriate message if he tries to forward a forward-locked file

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 50.5 The user is informed when receiving an invalid DRM file/license

### 50.5.1 Verification that the user is informed with an appropriate message when rendering an invalid DRM file

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 50.5.2 Verification that the user is informed by an appropriate message if he receives an invalid license

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 50.6 The user is informed when a DRM-protected file provides a preview function

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 51 Void

# 52 IPv6

Note: In GERAN and UTRAN the term “PDP context activation” is used for activating IP connectivity, while in E-UTRAN the term “default bearer activation” is used. In the following chapter, the term “bearer activation” is used for both.

## 52.1 Establishment of an IPv6-only Bearer

Description

Establishment of an IPv6-only bearer over GERAN, UTRAN and/or E-UTRAN with subsequent verification of IPv6 DNS reachability and web browsing to IPv6 web sites.

Related core specifications

3GPP TS 27.007, clause 10.1.1 (PDP context definition)

3GPP TS 24.008, table 10.5.155 (Packet data protocol address information element)

3GPP TS 24.301, clause 9.9.4.9 (PDN Address, E-UTRAN)

Reason for test

Verify the DUT can successfully establish an IPv6 only bearer over GERAN, UTRAN and/or E-UTRAN.

Initial configuration

* DUT is powered off.
* DUT is configured to establish an IPv6 only PDP context / IPv6 only default bearer. In the APN menu, set the protocol type to **IPv6 only**.
* In case the DUT provides connectivity to an external device (e.g. a notebook), the external device must be IPv6 capable and configured for IPv6 over the network connection provided by the DUT.
* 464XLAT (RFC6877) is not in use by the network, namely
* PLAT (RFC6146) is not enabled on the network side
* CLAT (RFC6145) is not enabled on the DUT side

Test procedure

1. Power on the DUT and establish a mobile originated PDP context activation / default bearer. This part of the procedure is either performed automatically by the device after power on, by the user requesting connectivity, or by an external device (e.g. notebook) requesting connectivity from the DUT (e.g. via at-commands).
2. Open a web browser on the DUT or external device. Enter a URL (not an IP address!) of an IPv6 only web site.
3. Enter a URL (not an IP address) of a web site that is reachable by both IPv4 and IPv6.

Expected behaviour

1. The DUT establishes an IPv6 connection and successfully retrieves information about the DNS server as instructed by the network (e.g. part of the PDP context activation accept message, DHCP, etc.). In case the connectivity is requested by an external device, the IPv6 address and DNS address(es) are properly forwarded to the external device.
2. The DUT or external device can successfully query the DNS server. For an IPv6 only reachable web site, the DUT only receives an IPv6 address for the requested URL of the web site from the DNS server. The web browser then successfully loads the page and displays it.
3. For an IPv4 and IPv6 reachable web site, the DUT may receive an IPv4 and IPv6 address from the DNS server. The web browser then successfully loads the page via IPv6 and displays it.

## 52.2 Establishment of an IPv4 + IPv6 Bearer

Description

Establishment of a dual stack IPv4v6 bearer over GERAN, UTRAN and/or E-UTRAN with subsequent verification of IPv4 and IPv6 DNS reachability for web browsing to IPv6 and IPv4 web sites.

Related core specifications

3GPP TS 27.007, clause 10.1.1 (PDP context definition)

3GPP TS 24.008, table 10.5.155 (Packet data protocol address information element)

3GPP TS 24.301, clause 9.9.4.9 (PDN Address, E-UTRAN)

Reason for test

Verify that the DUT can successfully establish dual stack IPv4 and IPv6 connectivity over GERAN, UTRAN and/or E-UTRAN.

Initial configuration

* DUT is powered off.
* DUT is configured to establish a dual stack IPv4v6 PDP context / IPv4v6 default bearer. In the APN menu, set the protocol type to **IPv4 and IPv6**.
* If case the DUT provides connectivity to an external device (e.g. a notebook), the external device is configured for dual stack IPv4v6 operation over the network connection provided by the DUT.

Test procedure

1. Power on the DUT and establish a mobile originated PDP context activation / default bearer. This part of the procedure is either performed automatically by the device after power on, by the user requesting connectivity, or by an external device (e.g. notebook) requesting connectivity from the DUT (e.g. via at-commands).
2. Open a web browser on the DUT or external device. Enter a URL (not an IP address!) of an IPv6 only web site.
3. Enter a URL (not an IP address) of a web site that is reachable by both IPv4 and IPv6.
4. Enter a URL (not an IP address) of a web site that is reachable by IPv4 only.

Expected behaviour

1. The DUT establishes an IPv4v6 dual stack connection and successfully retrieves information about the DNS server as instructed by the network (e.g. part of the PDP context activation accept message, DHCP, etc.). In case the connectivity is requested by an external device, the IPv4 address, the IPv6 address and DNS address(es) are properly forwarded to the external device.
2. The DUT or external device can successfully query the DNS server. The DNS server shall be queried for an IPv4 and an IPv6 address (i.e. a DNS A request and a DNS AAAA request).

For an IPv6 only reachable web site, the DUT only receives an IPv6 address for the requested URL of the web site from the DNS server. The web browser then successfully loads the page and displays it.

1. For an IPv4 and IPv6 reachable web site, the DUT receives an IPv4 and IPv6 address from the DNS server. The web browser then successfully loads the page and displays it. It shall be verified that the IPv6 address is used and NOT the IPv4 address as per RFC 3484 Chapter 2.1.
2. For an IPv4 reachable web site, the web page is successfully loaded over IPv4.

## 52.3 Establishment of an IPv4 + IPv6 Bearer with only one bearer type allowed

### 52.3.1 Establishment of an IPv4 + IPv6 Bearer with IPv4 only allowed

Description

Establishment of a dual stack IPv4v6 bearer over GERAN, UTRAN and/or E-UTRAN that results in an IPv4-only bearer response. Subsequently, IPv4 connectivity via web browsing is tested.

Related core specifications

3GPP TS 27.007, clause 10.1.1 (PDP context definition)

3GPP TS 24.008, table 10.5.155 (Packet data protocol address information element)

3GPP TS 24.301, clause 9.9.4.9 (PDN Address, E-UTRAN), 6.2.2 IP address allocation via NAS signalling

Reason for test

Verify that the UE requests dual stack IPv4 and IPv6 connectivity over GERAN, UTRAN and/or E-UTRAN and accepts an IPv4-only response.

Initial configuration

* UE is powered off.
* UE is configured to establish a dual stack IPv4v6 PDP context / IPv4v6 default bearer.
* If case the UE provides connectivity to an external device (e.g. a notebook), the external device is configured for dual stack IPv4v6 operation over the network connection provided by the UE.

Test procedure

1. Power on the UE and establish a mobile originated PDP context activation / default bearer. This part of the procedure is either performed automatically by the device after power on, by the user requesting connectivity, or by an external device (e.g. notebook) requesting connectivity from the UE (e.g. via at-commands).
2. Verify that the UE uses the proper IPv4v6 PDP type number value in the PDP context request message (GERAN/UTRAN) and the proper IPv4v6 PDN type value in the default bearer activation (E-UTRAN). This is required to ensure the UE requests dual stack operation and not IPv4 only. .or IPv6 only.
3. Verify that the PDP context activation accept / default bearer activation message only contains an IPv4 address. No IPv6 address information is present.
4. Enter a URL (not an IP address) of a web site that is reachable by both IPv4 and IPv6.

Expected behaviour

1. The UE establishes an IPv4 connection and successfully retrieves information about the DNS server as instructed by the network. In case the connectivity is requested by an external device, the IPv4 address and DNS address(es) are properly forwarded to the external device.
2. The UE or external device can successfully query the DNS server. The DNS server shall be queried for an IPv4 address only i.e. a DNS A request.
3. -
4. For an IPv4 and IPv6 reachable web site, the UE receives an IPv4 address from the DNS server. The web browser then successfully loads the page and displays it.

52.3.2 Establishment of an IPv4 + IPv6 Bearer with IPv6-only allowed

Description

Establishment of a dual stack IPv4v6 bearer over GERAN, UTRAN and/or E-UTRAN that results in an IPv6-only bearer response. Subsequently, IPv6 connectivity via web browsing is tested.

Related core specifications

3GPP TS 27.007, clause 10.1.1 (PDP context definition)

3GPP TS 24.008, table 10.5.155 (Packet data protocol address information element)

3GPP TS 24.301, clause 9.9.4.9 (PDN Address, E-UTRAN),), 6.2.2 IP address allocation via NAS signalling

Reason for test

Verify that the DUT requests dual stack IPv4 and IPv6 connectivity over GERAN, UTRAN and/or EUTRAN and accepts an IPv6-only response.

Initial configuration

* DUT is powered off.
* DUT is configured to establish a dual stack IPv4v6 PDP context / IPv4v6 default bearer.
* 464XLAT (RFC6877) is not in use by the network, namely
* PLAT (RFC6146) is not enabled on the network side
* CLAT (RFC6145) is not enabled on the DUT side

Test procedure

1. Power on the DUT and establish a mobile originated PDP context activation / default bearer.
2. Verify that the DUT uses the proper IPv4v6 PDP type number value in the PDP context request message (GERAN/UTRAN) and the proper IPv4v6 PDN type value in the default bearer activation (E-UTRAN). This is required to ensure the DUT requests dual stack operation and not IPv4-only or IPv6-only.
3. Verify that the PDP context activation accept / default bearer activation message only contains IPv6 related configuration information. No IPv4 related configuration information must be present.
4. Verify the PDP context activation accept / default bearer activation message includes SM Cause #51 "PDP Type IPv6-only allowed".
5. Enter a URL (not an IP address) of a web site that is reachable by both IPv4 and IPv6.

Expected behaviour

1. The DUT establishes an IPv6 connection and successfully configures its IPv6 stack including DNS servers reachable over IPv6.
2. The DUT can successfully query the DNS server. The DNS server shall be queried for an IPv6 address only i.e. a DNS AAAA request.
3. -
4. The DUT does NOT try to establish an additional IPv4 context / default bearer.
5. For an IPv4 and IPv6 reachable web site, the UE receives an IPv6 address from the DNS server. The web browser then successfully loads the page and displays it.

## 52.4 Establishment of separate IPv4 and IPv6 Bearers

Description

Establishment of individual IPv4 and IPv6 bearers over GERAN, UTRAN and/or E-UTRAN with subsequent verification of IPv4 and IPv6 DNS reachability for web browsing to IPv6 and IPv4 web sites if supported by the device.

Related core specifications

3GPP TS 27.007, clause 10.1.1 (PDP context definition)

3GPP TS 24.008, table 10.5.155 (Packet data protocol address information element)

3GPP TS 24.301, clause 9.9.4.9 (PDN Address, E-UTRAN)

Reason for test

Verify that the DUT can successfully establish IPv4 and IPv6 connectivity over separate bearers over GERAN, UTRAN and/or E-UTRAN.

Initial configuration

* DUT is powered off.
* DUT is configured to establish separate bearers for IPv4 and IPv6 (i.e. one PDP context activation for IPv4 and a separate PDP context activation for IPv6). In the APN menu, set the protocol type to **IPv6 only** for the APN 1 and **IPv4 only** for the APN 2.

Test procedure

1. Power on the DUT and establish two mobile originated PDP context activations / default bearers. This part of the procedure is either performed automatically by the device after power on or by the user requesting connectivity. The 1st PDP context / default bearer shall use APN 1 (with IPv6) and the 2nd PDP context / default bearer will use APN 2 (with IPv4).
2. Open a web browser on the DUT or external device that is using APN 1 (IPv6). Enter a URL (not an IP address!) of an IPv6 only web site.

Enter a URL (not an IP address) of a web site that is reachable by both IPv4 and IPv6.

1. Open a web browser on the DUT or external device that is using APN 2 (IPv4). Enter a URL (not an IP address!) of an IPv4 only web site.

Enter a URL (not an IP address) of a web site that is reachable by both IPv4 and IPv6.

Note: In case the operating system of the DUT only supports one of the two bearers per application, use two different applications to test that concurrent IPv4 and IPv6 connectivity is working.

Expected behaviour

1. The DUT establishes an IPv4 bearer and a separate IPv6 bearer. DNS server information is retrieved as instructed by the network (e.g. part of the PDP context activation accept message, DHCP, etc.).
2. The DUT or external device can successfully query the DNS server.

For an IPv6 only reachable web site, the DUT only receives an IPv6 address for the requested URL of the web site from the DNS server. The web browser then successfully loads the page and displays it.

For an IPv4 and IPv6 reachable web site, the DUT receives an IPv6 address from the DNS server. The web browser then successfully loads the page and displays it.

1. The DUT or external device can successfully query the DNS server.

For an IPv4 only reachable web site, the DUT only receives an IPv4For an IPv4 and IPv6 reachable web site, the DUT receives an IPv4 address from the DNS server. The web browser then successfully loads the page and displays it.

## 52.5 IPv6 Privacy Extension verification

Description

Establishment of IPv6 connectivity over GERAN, UTRAN and/or E-UTRAN with subsequent verification that the device has selected a random IPv6 address from the IPv6 address space given to it by the network.

Note that IPv6 privacy extensions are an optional feature and might not be implemented in the device.

Related core specifications

3GPP TS 27.007, clause 10.1.1 (PDP context definition)

3GPP TS 24.008, table 10.5.155 (Packet data protocol address information element)

3GPP TS 24.301, clause 9.9.4.9 (PDN Address, E-UTRAN)

IETF RFC 4941

Reason for test

Verify that a random IPv6 address is generated by the DUT each time a bearer is established to protect user privacy.

Note: This mechanism is specified by IETF RFC 4941 and activated in major operating systems by default and new devices should be checked for the proper activation of this functionality.

Initial configuration

* DUT is powered off.
* DUT is configured to establish a dual stack IPv4v6 PDP context / IPv4v6 default bearer. In the APN menu, set the protocol type to **IPv4 and IPv6**.
* In case the DUT provides connectivity to an external device (e.g. a notebook), the external device is configured for dual stack IPv4v6 operation over the network connection provided by the DUT.

Test procedure

1. Power on the DUT and establish a mobile originated PDP context activation / default bearer. This part of the procedure is either performed automatically by the device after power on, by the user requesting connectivity, or by an external device (e.g. notebook) requesting connectivity from the DUT (e.g. via at commands).
2. Note the IPv6 address of the device.
3. End the PDP context / bearer and establish a new one.
4. Note the IP address of the device.
5. Perform the same test with an IPv6 only PDP context / bearer.

Expected behaviour

1. The DUT establishes an IPv4v6 dual stack connection and successfully retrieves information about the DNS server as instructed by the network (e.g. part of the PDP context activation accept message, DHCP, etc.). In case the connectivity is requested by an external device, the IPv4 address, the IPv6 address and DNS address(es) are properly forwarded to the external device.
2. The host part of the IPv6 address is different after each PDP context activation / bearer establishment and is generated according to IETF RFC 4941. (Note: The IPv6 prefix may or may not be identical between bearer activations but this is decided by the network and outside the control of the DUT).

# 53 Identification of Network Names

## 53.1 List of Network Names

Description

This test case verifies that the DUT contains an up to date list of network names so it shows

* The correct home network name on the idle screen
* The correct roaming network name on the idle screen
* The correct networks names after a manual network scan.

Reason for test

If the list of network names in mobile devices is outdated it leads to incorrect network names being shown to the subscriber during manual network selection and on the idle screen when on the home network or when the subscriber roams to a foreign country.

For the purpose of the test the MCC, MNC, PPCI&N and Abbreviated network names are required.

Note: Some DUT’s may support both PPCI&N and Abbreviated network names, but others may support PPCI&N or Abbreviated network names depending on implementation.

Note: Some DUT’s may support multiple PLMN lists with different priority.

Related 3GPP core specifications

3GPP TS 27.007, clause 7.21

Initial configuration

None.

Test procedure

1. Obtain the list(s) of network names used in the DUT. These should contain the MCC, MNC, PPCI&N and Abbreviated network names. There are several ways this may be done; for example.

* Request from R&D directly for the hard coded PLMN file.
* Via the AT command: at+copn

1. Compare the list of PPCI&N and Abbreviated network names from the DUT with those in an up to date TS.25 document provided by GSMA.

Expected behaviour

1 The list(s) of network names are obtained.

2 The network names obtained from the DUT correspond to those found in the up to date TS.25 database (no more than 6 months old). At the minimum, the entries in the TS.25 corresponding to support RATs by the DUT must be available and correct in the list(s) of network names contained on the DUT.

# 54 Test of Ciphering Indicator

Note: Additional to live networks, the use of SIM simulators and/or network simulators and/or test bed networks are also permitted to verify the fulfilment of the Ciphering Indicator requirements.

These tests are applicable to both GERAN and UTRA technology.

## 54.1 Presentation Enabled by the SIM/USIM

Description

The UE shall indicate to the user that the 3GPP radio interface ciphering (user plane) is not switched on.

Related 3GPP core specifications

3GPP TS 22.101, section 14 (Types of features of UEs)

GSM TS 02.07, section 2 (Requirements for implementing MS features) and section Annex B.1.26 (Ciphering Indicator)

3GPP TS 31.102, section 4.2.18 (EFAD (Administrative Data))

GSM TS 11.11, section 10.3.18 (EF**AD** (Administrative data))

Reason for test

To verify that the UE successfully indicates to the user that the 3GPP radio interface ciphering (user plane) is not switched on.

Initial configuration

SIM/USIM Card settings (EFAD) are set to “ciphering indicator feature enabled”

The UE is attached in Packet and Circuit mode.

Ciphering in the network is not switched on.

Test procedure

**Scenario A:**

Setup a CS Voice Call in GERAN Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

**Scenario B:**

Setup a PS Data Connection in GERAN Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

**Scenario C:**

Setup a CS Voice Call in UTRA Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

**Scenario D:**

Setup a PS Data Connection in UTRA Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

Expected behaviour

For all Scenarios: The UE indicates to the user that ciphering is not switched on.

## 54.2 Presentation Disabled by the SIM/USIM

### 54.2.1 Non-Presentation of Ciphering Indicator

Description

The UE shall not indicate to the user that the 3GPP radio interface ciphering (user plane) is not switched on, when the SIM/USIM settings are set to “ciphering indicator feature disabled”.

Related 3GPP core specifications

3GPP TS 22.101, section 14 (Types of features of UEs)

GSM TS 02.07, section 2 (Requirements for implementing MS features) and section Annex B.1.26 (Ciphering Indicator)

3GPP TS 31.102, section 4.2.18 (EFAD (Administrative Data))

GSM TS 11.11, section 10.3.18 (EF**AD** (Administrative data))

Reason for test

To verify that the UE does not indicate to the user that the 3GPP radio interface ciphering (user plane) is not switched on when the SIM/USIM settings are set to “ciphering indicator feature disabled”.

Initial configuration

SIM/USIM Card settings (EFAD) are set to “ciphering indicator feature disabled”

The UE is attached in Packet and Circuit mode.

Ciphering in the network is not switched on.

Test procedure

**Scenario A:**

Setup a CS Voice Call in GERAN Radio Access Technology which is not ciphered. Check that the UE does not indicate to the user that ciphering is not switched on.

**Scenario B:**

Setup a PS Data Connection in GERAN Radio Access Technology which is not ciphered. Check that the UE does not indicate to the user that ciphering is not switched on.

**Scenario C:**

Setup a CS Voice Call in UTRA Radio Access Technology which is not ciphered. Check that the UE does not indicate to the user that ciphering is not switched on.

**Scenario D:**

Setup a PS Data Connection in UTRA Radio Access Technology which is not ciphered. Check that the UE does not indicate to the user that ciphering is not switched on.

Expected behaviour

For all Scenarios: The UE does not indicate to the user that ciphering is not switched on.

### 54.2.2 Presentation of Ciphering Indicator when User Menu overrides SIM/USIM Settings

Note: This test is only applicable to terminals which allow the user to configure the terminal to override the operator’s data setting in the SIM/USIM.

Description

The UE shall indicate to the user that the 3GPP radio interface ciphering (user plane) is not switched on, when the SIM/USIM settings are set to “ciphering indicator feature disabled” and the user has configured the terminal to override the operator’s data setting in the SIM/USIM.

Related 3GPP core specifications

3GPP TS 22.101, section 14 (Types of features of UEs)

GSM TS 02.07, section 2 (Requirements for implementing MS features) and section Annex B.1.26 (Ciphering Indicator)

3GPP TS 31.102, section 4.2.18 (EFAD (Administrative Data))

GSM TS 11.11, section 10.3.18 (EF**AD** (Administrative data))

Reason for test

To verify that the UE successfully indicates to the user that the 3GPP radio interface ciphering (user plane) is not switched on, when the SIM/USIM settings are set to “ciphering indicator feature disabled” and the user has configured the terminal to override the operator’s data setting in the SIM/USIM.

Initial configuration

SIM/USIM Card settings (EFAD) are set to “ciphering indicator feature disabled”

The UE is configured to override the operator’s data setting in the SIM/USIM.

The UE is attached in Packet and Circuit mode.

Ciphering in the network is not switched on.

Test procedure

**Scenario A:**

Setup a CS Voice Call in GERAN Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

**Scenario B:**

Setup a PS Data Connection in GERAN Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

**Scenario C:**

Setup a CS Voice Call in UTRA Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

**Scenario D:**

Setup a PS Data Connection in UTRA Radio Access Technology which is not ciphered. Check that the UE successfully indicates to the user that ciphering is not switched on.

Expected behaviour

For all Scenarios: The UE indicates to the user that ciphering is not switched on.

# 55 Void

NOTE: RCS 1.2 has been identified as obsolete for field testing and removed from TS.11. The entire contents of this chapter may be found in TS.11 V20. Email [terminals@gsma.com](mailto:terminals@gsma.com) with any questions.

# 56 Steering of Roaming (Managed Roaming), Reject Cause #17 ‘Network Failure’

Basic description of functionality to be tested

Steering of Roaming (SoR) is a procedure used by some mobile network operators to guide a mobile device to a visited network operator of their choice while a user is roaming. In other words, steering of roaming is used by network operators to prefer one or more roaming partners over others.

When steering of roaming is used by a home network operator and a roaming mobile device is in automatic network selection mode, the preferred networks are selected by rejecting location update requests in non-preferred networks four times with MM Reject Cause #17. This triggers a new network selection in the mobile device.

If only non-preferred networks are present in a certain location or if the user has switched the mobile device into manual network selection mode, also non-preferred networks can be selected by the mobile device during the network search procedure, as an additional location update procedure (usually the 5th) in the same network may be granted.

Some network operators perform CS steering only, in which case the simultaneous packet attach is immediately accepted. Other network operators perform CS and PS steering in which the PS attach requests are also rejected. A mobile device must be able to handle both types of steering. It is therefore recommended that SoR is tested for both possibilities.

Note 1: If the attach request for the PS Domain is rejected with cause #3; #6; #8; #11; #13; #15 – the SoR mechanism does not apply.

“PS Steering” means that the UE will be rejected in CS and in the PS Domain and the Attach procedure is not accepted right away. It does not imply that UE should initiate the PLMN search based in the PS Domain registration status independent of CS Domain registration status (i.e. the UE shall not stop the PLMN search in case the PS procedure was successful while the CS procedure is still rejected).

SoR behaviour also depends on a number of SIM card fields. This is described in more detail in the different scenarios and test cases below.

For Network Mode of Operation II: When Steering of Roaming is applied, in Automatic Network Selection and the rejected network is (is not) stored on the Preferred PLMN list, after the UE has received the fourth location update reject with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4), it shall start a new PLMN search according to 3GPP TS 24.008 section 4.2.1.2, last bullet point. It shall not wait for the T3212 timer to expire. Upon rejection of ATTACH procedure with reject cause #111 “Protocol error, unspecified”, the DUT may set the attempt counter in the PS domain being equal to maximum (>5) in case if it is compliant with Release 6 and above of 24.008.

For Network Mode of Operation I: PS auto attach shall be enabled in the device so a combined attach is performed. After the MS has received the fifth Rejection Cause #17 ‘Network Failure’ or #111 ‘Protocol error, unspecified’ (i.e. attempt counter >=5), it shall start a new PLMN search. The device shall not extend the PLMN selection by fallback to CS.

The new PLMN search shall happen according to the following procedure:

* The PLMN search shall be started in any case, independently from the result of the GPRS Attach / Routing Area Update procedure, independently from the Network Mode of Operation (NMO, i.e. Combined or Separate Routing Area Update) and independently of the content of the Preferred PLMN list on the SIM card.
* If other PLMNs can be found, the Terminal Device shall attempt to perform an IMSI Attach or a Location Update procedure at each of them taking into account the Attempt Counter, according to 3GPP TS 24.008 sections 4.4.4.5, 4.4.4.6 and 4.4.4.9.
* If no different PLMN apart from the rejected can be found, the terminal device shall attempt to access one of the already rejected networks once more (only one additional Location Update cycle).

Note 2: As per requirements above, if only one PLMN is available and this PLMN was already rejected four times with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4), the terminal device shall attempt to access the already rejected network once more. Only one Location Area shall be available to be a valid test.

Note 3: If HPPLMN timer expires, different scenarios can occur not following the signalling flow indicated in the test descriptions.

In the test cases below, the procedure describes the case where 4 networks are available at the test location. This will of course differ from test location to test location. If the test location has for example, 6 networks available, the test procedure needs to be adjusted accordingly. For Multiple network environment tests, more networks can be used in the cycle. For Single network environment, additional networks need to be added to the FPLMN list so that only one network is available for Automatic network selection.

The minimum number of networks needed for Multiple networks environment is 3.

The minimum number of networks needed for Single network environment is 2.

There are no maximum amounts for either network environment.

## 56.1 Steering of Roaming / Rejected network not stored on Preferred PLMN list (EFPLMNwAcT)

The following items are common to all tests with regards to “Steering of Roaming / Rejected network not stored on Preferred PLMN list (EFPLMNwAcT)” and will therefore not be mentioned again in the individual test case descriptions.

Description

The UE shall be able to perform automatic and manual network selection when Steering of Roaming is applied and when the rejected network is not stored on Preferred PLMN list (EFPLMNwAcT) and return consistent display messages to the user.

Related 3GPP core specifications

TS 24.008, sub clause 4.2.1.2

Reason for test

To ensure that the DUT is performing a new PLMN search when Rejected network is not stored on the Preferred PLMN list, and not waiting for T3212 to expire when Steering of Roaming is applied.

Initial configuration

* DUT switched off, with following configuration:
  + Automatic network selection mode
  + GPRS Attach at power on enabled
  + W-CDMA or GSM only Mode selected
  + PDP context activation at Power ON is disabled.
  + Backlight duration set to maximum setting (optional)
* Test to happen in live network
* Test to happen in static test location
* Networks available:
  + PLMN1: Preferred network
  + PLMN2: Non-preferred network
  + PLMN3: Non-preferred network
  + PLMN4: Non-preferred network

### 56.1.1 Multi Network Environment

Multiple Network Environments: This is a typical live network environment, for example, when the user switches-on his device in places such as airports, where several mobile networks are available. One or more of them are preferred and a location update is immediately successful. One or more of the networks are not preferred and location update attempts on these networks will be rejected several times as described above.

Initial configuration

* Apply Initial Configuration for “Steering of Roaming / Rejected network not stored on Preferred PLMN list” above.
* Used SIM card: Roaming SIM Card (PLMN 5, different MCC)
* Automated mechanisms for optimised network selection purposes on the SIM/UICC which change the configuration of Elementary Fields (such as EF\_FPLMN, EF\_PLMN, etc.) at re-start of the SIM/UICC shall be deactivated.
* SIM Card preparation (using SIM R/W Tool):
  + PLMN1 and PLMN2 on forbidden PLMN list (EFFPLMN)
  + All entries in EFPLMNwAcT are filled up with PLMNs not available at the test location.
  + EFLOCI = PLMN5, LAI=1234, TMSI=12345678, Update Status= 00 (Updated)
* Managed Roaming System of PLMN5 (Roaming SIM) configured as follows:
  + PLMN1 = Preferred Network of the Managed Roaming System = PN
  + PLMN2, PLMN3, PLMN4 = Non-preferred Network of the Managed Roaming System = NPN

**Scenario A:** **NMO II - CS Reject Scenario**

Test procedure

Note: If LAU Request is accepted during step 3 or 5, the test result is inconclusive and the test must be restarted from the beginning.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT.
3. DUT Starts LAU process on PLMN3 or PLMN4.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach Request | Attach Accept or RAU Reject cause #9 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |

1. DUT is PS attached to PLMN3 or PLMN4 (as appropriate).
2. DUT Starts LAU process on the other network (PLMN3 or PLMN4), not used in Step 3.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| RAU Request | RAU Reject cause #9 or RAU Accept |
| PS Attach | Attach Accept |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |

1. DUT is PS attached to PLMN3 or PLMN4 (as appropriate).
2. DUT must now start new LAU process on an already rejected network (PLMN3 or PLMN4). During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 8. If it does not receive LAU Accept message, continue to step 10.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| RAU Request | RAU Reject cause #9 or RAU Accept |
| PS Attach | Attach Accept (dependent on step above) |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |

*[Accepted case]:*

1. DUT is CS and PS attached to PLMN3 or PLMN4 (as appropriate).
2. Receive MT voice call.

*[Rejected case]:*

1. DUT is only PS attached to PLMN3 or PLMN4 (as appropriate).

Expected behaviour

2. DUT displays Limited Service information.

4. DUT has a suitable UI indication that PS services are available but not CS services.

6. DUT has a suitable UI indication that PS services are available but not CS services.

*[Accepted case]:*

8. DUT has a suitable UI indication that CS and PS services are both available.

9. MT call is successful.

*[Rejected case]:*

10. DUT has a suitable UI indication that PS services are available but not CS services.

**Scenario B: NMO II - CS+PS Reject Scenario**

Test procedure

Note: If the LAU Request is accepted during step 3 or 4, the test result is inconclusive and the test must be restarted from the beginning.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT
3. DUT Starts LAU process on PLMN3 or PLMN4.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| PS Attach | Attach Reject #17 or #111 |

Note 1: After the UE has received the fourth location update reject with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4) the DUT will start a new PLMN search according to 3GPP TS 24.008 section 4.2.1.2, last bullet point.

Note 2: Alternatively, the DUT may only start a new PLMN search after reaching the maximum attempt counter (=5) in the PS domain.

Both behaviours are compliant with the steering of roaming requirements.

Note 3: In response to the first Attach Reject #111, the DUT may set the maximum attempt counter (=5) in the PS domain.

1. DUT is not CS or PS attached to PLMN3 or PLMN4 (as appropriate)
2. DUT Starts LAU process on the other network (PLMN3 or PLMN4), not used in Step 3.

|  |  |
| --- | --- |
| **REQUEST** | **RESPONSE** |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| PS Attach | Attach Reject #17 or #111 |

Note 1: After the UE has received the fourth location update reject with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4) the DUT will start a new PLMN search according to 3GPP TS 24.008 section 4.2.1.2, last bullet point.

Note 2: Alternatively, the DUT may only start a new PLMN search after reaching the maximum attempt counter (=5) in the PS domain.

Both behaviours are compliant with the steering of roaming requirements.

Note 3: In response to the first Attach Reject #111, the DUT may set the maximum attempt counter (=5) in the PS domain.

1. DUT is not CS or PS attached to PLMN3 or PLMN4 (as appropriate)
2. DUT must now start new LAU process on an already rejected network (PLMN3 or PLMN4). During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 8. If it does not receive LAU Accept message, continue to step 10.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |

Note: In case the DUT selects the same network that was rejected in step 5 the UE will perform:

- either the remaining ATTACH procedures to reach maximum of 5 attempts. The sequential Attach cycle will restart after T3302 expiry which has default value of 12 min.

- or it will completely restart the PS attach procedure.

Both behaviours are compliant with the steering of roaming requirements.

*[Accepted case]:*

1. DUT is CS and PS attached to PLMN3 or PLMN4 (as appropriate).
2. Receive MT voice call.

*[Rejected case]:*

1. DUT is not CS or PS attached to PLMN3 or PLMN4.

Expected behaviour

2. DUT displays Limited Service information.

4. DUT has a suitable UI indication that neither CS nor PS services are available.

6. DUT has a suitable UI indication that neither CS nor PS services are available.

*[Accepted case]:*

8. DUT has a suitable UI indication that CS and PS services are both available.

9. MT call is successful.

*[Rejected case]:*

10. DUT has a suitable UI indication that neither CS nor PS services are available.

**Scenario C: NMO I - Combined Reject Scenario**

[To be defined]

### 56.1.2 Single Network Environment

Single Network Environment: This is a typical live network environment, for example, when the user is roaming in a rural location or deep indoors where no preferred visited networks are available. As testing is usually performed in cities where all networks of a country are available, such an environment is simulated by putting the preferred networks on the forbidden PLMN list on the SIM card. This excludes their selection during the network selection process.

Initial configuration

* Apply Initial Configuration for “Steering of Roaming / Rejected network not stored on Preferred PLMN list” above.
* Used SIM card: Roaming SIM Card (PLMN 5, different MCC)
* Automated mechanisms for optimised network selection purposes on the SIM/UICC which change the configuration of Elementary Fields (such as EF\_FPLMN, EF\_PLMN, etc.) at re-start of the SIM/UICC shall be deactivated.
* SIM Card preparation (using SIM R/W Tool):
  + PLMN1, PLMN2 and PLMN3 on forbidden PLMN list (EFFPLMN).
  + All entries in EFPLMNwAcT are filled up with PLMNs not available at the test location.
  + EFLOCI = PLMN5, LAI=1234, TMSI=12345678, Update Status= 00 (Updated)
* Managed Roaming System of PLMN5 (Roaming SIM) configured as follows:
  + PLMN1 = Preferred Network of the Managed Roaming System = PN
  + PLMN2, PLMN3, PLMN4 = Non-preferred Network of the Managed Roaming System = NPN

**Scenario A: NMO II - CS Reject Scenario**

Test procedure

Note: If LAU Request is Accepted during step 3 the test result is inconclusive and the test must be restarted from the beginning.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT.
3. DUT Starts LAU process on PLMN4.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Accept |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |

1. DUT is PS attached to PLMN4.
2. DUT must now start new LAU process on the already rejected network (PLMN4). During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 6. If it does not receive LAU Accept message, continue to step 8.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| RAU Request | RAU Reject cause #9 or RAU Accept |
| PS Attach | Attach Accept (dependent on step above) |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |

*[Accepted case]:*

1. DUT is CS and PS attached to PLMN4.
2. Receive MT voice call.

*[Rejected case]:*

1. DUT is PS attached to PLMN4.

Expected behaviour

1-

2. DUT displays Limited Service information.

4. DUT has a suitable UI indication that PS services are available but not CS services.

*[Accepted case]:*

6. DUT has a suitable UI indication that CS and PS services are both available.

7. MT call is successful.

*[Rejected case]:*

8. DUT has a suitable UI indication that PS services are available but not CS services.

**Scenario B: NMO II - CS+PS Reject Scenario**

Test procedure

Note: If LAU Request is Accepted during step 3 the test result is inconclusive and the test must be restarted from the beginning.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT.
3. DUT Starts LAU process on PLMN4.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| PS Attach | Attach Reject #17 or #111 |

Note 1: After the UE has received the fourth location update reject with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4) the DUT will start a new PLMN search according to 3GPP TS 24.008 section 4.2.1.2, last bullet point.

Note 2: Alternatively, the DUT may only start a new PLMN search after reaching the maximum attempt counter (=5) in the PS domain.

Both behaviours are compliant with the steering of roaming requirements.

Note 3: In response to the first Attach Reject #111, the DUT may set the maximum attempt counter (=5) in the PS domain.

1. DUT is not CS or PS attached to PLMN4.
2. DUT must now start new LAU process on the already rejected network (PLMN4). During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 6. If it does not receive LAU Accept message, continue to step 8.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |

Note: The DUT may perform:

- either the remaining ATTACH procedures to reach maximum of 5 attempts. The sequential Attach cycle will restart after T3302 expiry which has default value of 12 min.

- or it will completely restart the PS attach procedure.

Both behaviours are compliant with the steering of roaming requirements.

*[Accepted case]*

1. DUT is CS and PS attached to PLMN4.
2. Receive MT voice call.

*[Rejected case]*

1. DUT is not CS or PS attached to PLMN4.

Expected behaviour

2. DUT displays Limited Service information.

4. DUT has a suitable UI indication that neither CS nor PS services are available.

*[Accepted case]*

6. DUT has a suitable UI indication that CS and PS services are both available.

7. MT call is successful.

*[Rejected case]*

8. DUT has a suitable UI indication that neither CS nor PS services are available.

Upon reaching maximum number of registration attempts in CS and PS Domain as described above DUT shall start new registration procedures only after T3212 timer expiry in CS Domain (correspondingly T3302 timer expiry in PS Domain)

**Scenario C: NMO I - Combined Reject Scenario**

Test procedure

[To be defined]

### 56.1.3 Manual Network Selection

Manual Network Selection might be used when a user tries to select a non-preferred network manually because his preferred network was not chosen automatically. For testing purposes, the testing is carried out with the preferred network available, but this network is not used to test the Steering.

Initial configuration

* Apply Initial Configuration for “Steering of Roaming / Rejected network not stored on Preferred PLMN list” above.
* Used SIM card: Roaming SIM Card (PLMN 5, different MCC)
* Automated mechanisms for optimised network selection purposes on the SIM/UICC which change the configuration of Elementary Fields (such as EF\_FPLMN, EF\_PLMN, etc.) at re-start of the SIM/UICC shall be deactivated.
* SIM Card preparation (using SIM R/W Tool):
  + All entries in EFPLMNwAcT are filled up with PLMNs not available at the test location.
  + EFLOCI = PLMN1, LAI=1234, TMSI=12345678, Update Status= 00 (Updated)
* Managed Roaming System of PLMN5 (Roaming SIM) configured as follows:
  + PLMN1 = Preferred Network of the Managed Roaming System = PN
  + PLMN2, PLMN3, PLMN4 = Non-preferred Network of the Managed Roaming System = NPN

**Scenario A: NMO II - CS Reject Scenario**

Test procedure

Note: If LAU Request is Accepted during step 4 the test result is inconclusive and the test must be restarted from the beginning or the test environment needs to be checked for suitability.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT.
3. Perform network scan.
4. Manually select PLMN3. DUT Starts LAU process on PLMN3.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Accept |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |

1. DUT is PS attached to PLMN3.
2. Manually select PLMN3 again. DUT Starts LAU process on PLMN3. During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 7. If it does not receive LAU Accept message, continue to step 9.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |

*[Accepted case]*

1. DUT is CS and PS attached to PLMN3.
2. Receive MT voice call.

*[Rejected case]*

1. DUT is PS attached to PLMN3.

Expected behaviour

2. DUT is CS and PS attached to PLMN1.

5. DUT has a suitable UI indication that PS services are available but not CS services. No attempt is made by the DUT to change to another network.

*[Accepted case]*

7. DUT has a suitable UI indication that CS and PS services are both available.

8. MT call is successful.

*[Rejected case]*

9. DUT has a suitable UI indication that PS services are available but not CS services.

**Scenario B: NMO II - CS+PS Reject Scenario**

Test procedure

Note: If LAU Request is Accepted during step 4 the test result is inconclusive and the test must be restarted from the beginning or the test environment needs to be checked for suitability.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT.
3. Perform network scan.
4. Manually select PLMN3. DUT Starts LAU process on PLMN3.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| PS Attach | Attach Reject #17 or #111 |

Note 1: The 5th Attach attempt is optional. The DUT may stop after the 4th unsuccessful LAU procedure.

Note 2: In response to the first Attach Reject #111, the DUT may set the maximum attempt counter (=5) in the PS domain.

1. DUT is not CS or PS attached to PLMN3.
2. Manually select PLMN3 again. DUT Starts LAU process on PLMN3. During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 7. If it does not receive LAU Accept message, continue to step 9.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |

Note: The DUT may perform:

- either the remaining ATTACH procedures to reach maximum of 5 attempts. A new attach cycle will restart after T3302 expiry which has a default value of 12 min.

- or it will completely restart the PS attach procedure. The 5th Attach attempt is optional. The DUT may stop after the 4th unsuccessful LAU procedure.

Both behaviours are compliant with the steering of roaming requirements.

*[Accepted case]:*

1. DUT is CS and PS attached to PLMN3.
2. Receive MT voice call.

*[Rejected case]:*

1. DUT is not CS or PS attached to PLMN3.

Expected behaviour

2. DUT is CS and PS attached to PLMN1.

5. DUT has a suitable UI indication that neither CS nor PS services are available. No attempt is made by the DUT to change to another network.

*[Accepted case]:*

7. DUT has a suitable UI indication that CS and PS services are both available.

8. MT call is successful.

*[Rejected case]:*

9. DUT has a suitable UI indication that neither CS nor PS services are available.

**Scenario C: NMO I - Combined Reject Scenario**

Test procedure

[To be defined]

## 56.2 Steering of Roaming / Rejected network stored on Preferred PLMN list (EFPLMNwAcT)

The following items are common to all tests with regards to “Steering of Roaming / Rejected network stored on Preferred PLMN list (EFPLMNwAcT)” and will therefore not be mentioned again in the individual test case descriptions.

Description

The UE shall be able to perform automatic and manual network selection when Steering of Roaming is applied and when the rejected network is stored on Preferred PLMN list (EFPLMNwAcT) and return consistent display messages to the user.

Related 3GPP core specifications

TS 24.008, sub clause 4.2.1.2

Reason for test

To ensure that the DUT is performing a new PLMN search when Rejected network is stored on the Preferred PLMN list, and not waiting for T3212 to expire when Steering of Roaming is applied.

Initial configuration

* DUT switched off, with following configuration:
  + Automatic network selection mode
  + GPRS Attach at power on enabled
  + W-CDMA or GSM only Mode selected
  + PDP context activation at Power ON is disabled.
  + Backlight set to maximum setting (optional)
* Test to happen in live network
* Test to happen in Static test location
* Networks available:
  + PLMN1: Preferred network
  + PLMN2: Non-preferred network
  + PLMN3: Non-preferred network
  + PLMN4: Non-preferred network

### 56.2.1 Multi Network Environment

Multiple Network Environments: This is a typical live network environment, for example, when the user switches-on his device in places such as airports, where several mobile networks are available. One or more of them are preferred and a location update is immediately successful. One or more of the networks are not preferred and location update attempts on these networks will be rejected several times as described above.

Initial configuration

* Apply Initial Configuration for “Steering of Roaming / Rejected network stored on Preferred PLMN list” above.
* Used SIM card: Roaming SIM Card (PLMN 5, different MCC)
* Automated mechanisms for optimised network selection purposes on the SIM/UICC which change the configuration of Elementary Fields (such as EF\_FPLMN, EF\_PLMN, etc.) at re-start of the SIM/UICC shall be deactivated.
* SIM Card preparation (using SIM R/W Tool):
  + PLMN1 and PLMN2 on forbidden PLMN list (EFFPLMN)
  + PLMN3 is stored at highest priority of EFPLMNwAcT,
  + Remaining entries in EFPLMNwAcT are filled up with PLMNs not available at the test location.
  + EFLOCI = PLMN5, LAI=1234, TMSI=12345678, Update Status= 00 (Updated)
* Managed Roaming System of PLMN5 (Roaming SIM) configured as follows:
  + PLMN1 = Preferred Network of the Managed Roaming System = PN
  + PLMN2, PLMN3, PLMN4 = Non-preferred Network of the Managed Roaming System = NPN

**Scenario A: NMO II - CS Reject Scenario**

Test procedure

Note: If LAU Request is Accepted during step 3 or 5, the test result is inconclusive and the test must be restarted from the beginning.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT,
3. DUT Starts LAU process on PLMN3

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Accept |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |

1. DUT is PS attached to PLMN3.
2. DUT Starts LAU process on the other network PLMN4

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| RAU Request | RAU Reject cause #9 |
| PS Attach | Attach Accept |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |
| LAU Request | LAU Reject cause #17 |

1. DUT is PS attached to PLMN4.
2. DUT must now start new LAU process on an already rejected network (PLMN3 or PLMN4). During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 8. If it does not receive LAU Accept message, continue to step 10.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| RAU Request | RAU Reject cause #9 or RAU Accept |
| PS Attach | Attach Accept (dependent on step above) |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |

*[Accepted case]:*

1. DUT is CS and PS attached to PLMN3 or PLMN4 (as appropriate).
2. Receive MT voice call.

*[Rejected case]:*

1. DUT is PS attached to PLMN3 or PLMN4 (as appropriate).

Expected behaviour

2. DUT displays Limited Service information.

4. DUT has a suitable UI indication that PS services are available but not CS services.

6. DUT has a suitable UI indication that PS services are available but not CS services.

*[Accepted case]:*

8. DUT has a suitable UI indication that CS and PS services are both available.

9. MT call is successful.

*[Rejected case]:*

10. DUT has a suitable UI indication that PS services are available but not CS services.

**Scenario B: NMO II - CS+PS Reject Scenario**

Test procedure

Note: If LAU Request is Accepted during step 3 or 5, the test result is inconclusive and the test must be restarted from the beginning.

1. Prepare SIM, Test Environment and DUT as initial configuration above.
2. Switch on DUT,
3. DUT Starts LAU process on PLMN3

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| PS Attach | Attach Reject #17 or #111 |

Note 1: After the UE has received the fourth location update reject with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4) the DUT will start a new PLMN search according to 3GPP TS 24.008 section 4.2.1.2, last bullet point.

Note 2: Alternatively, the DUT may only start a new PLMN search after reaching the maximum attempt counter (=5) in the PS domain.

Both behaviours are compliant with the steering of roaming requirements

Note 3: In response to the first Attach Reject #111, the DUT may set the maximum attempt counter (=5) in the PS domain.

1. DUT is not CS or PS attached to PLMN3.
2. DUT Starts LAU process on the other network PLMN4

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| LAU Request | LAU Reject cause #17 |
| PS Attach | Attach Reject #17 or #111 |
| PS Attach | Attach Reject #17 or #111 |

Note 1: After the UE has received the fourth location update reject with Reject Cause #17 ‘Network Failure (i.e. attempt counter >=4) the DUT will start a new PLMN search according to 3GPP TS 24.008 section 4.2.1.2, last bullet point.

Note 2: Alternatively, the DUT may only start a new PLMN search after reaching the maximum attempt counter (=5) in the PS domain.

Both behaviours are compliant with the steering of roaming requirements

Note 3: In response to the first Attach Reject #111, the DUT may set the maximum attempt counter (=5) in the PS domain.

1. DUT is not CS or PS attached to PLMN4.
2. DUT must now start new LAU process on an already rejected network PLMN3 or PLMN4. During this process, the DUT can receive LAU Accept message at any point. If it does this, continue to step 8. If it does not receive LAU Accept message, continue to step 10.

| **REQUEST** | **RESPONSE** |
| --- | --- |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| LAU Request | LAU Reject cause #17 or LAU Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |
| PS Attach | Attach Reject #17 or #111 or Attach Accept |

Note: In case the DUT selects the same network that was rejected in step 5 the UE will perform:

- either the remaining ATTACH procedures to reach maximum of 5 attempts. The sequential Attach cycle will restart after T3302 expiry which has default value of 12 min.

- or it will completely restart the PS attach procedure.

Both behaviours are compliant with the steering of roaming requirements.

*[Accepted case]:*

1. DUT is CS and PS attached to PLMN3 or PLMN4 (as appropriate).
2. Receive MT voice call.

*[Rejected case]:*

1. DUT is not CS or PS attached to PLMN3 or PLMN4 (as appropriate).

Expected behaviour

2. DUT displays Limited Service information.

4. DUT has a suitable UI indication that neither CS nor PS services are available.

6. DUT has a suitable UI indication that neither CS nor PS services are available.

*[Accepted case]:*

8. DUT has a suitable UI indication that CS and PS services are both available.

9. MT call is successful.

*[Rejected case]:*

10. DUT has a suitable UI indication that neither CS nor PS services are available.

**Scenario C: NMO I - Combined Reject Scenario**

Test procedure

[To be defined]

# 57 UICC with SIM and USIM

The following definitions apply for the ME:

* An LTE ME is either a LTE single mode ME that only supports an LTE radio access network or a dual mode ME that supports 2G/LTE or 3G/LTE. It can also be an LTE/3G/2G multi mode ME that supports all three technologies. In above cases it can handle 3G AKA and 2G AKA and is able to interwork with either a USIM application on a UICC or a SIM. SIM will not give access to LTE radio access network. As a recommended option, the ME of Rel-5 and onwards may support a 2G SIM.
* A 3G ME is either a 3G single mode ME that only supports a 3G radio access network or a 2G/3G dual mode ME that supports both, a 2G radio access network (GSM) and a 3G radio access network, whichever is present. In either case it can handle 3G AKA or 2G AKA and is able to interwork with either a USIM application on a UICC or a SIM. As a recommended option, the ME of Rel-5 and onwards may support a 2G SIM.
* A 2G ME only supports a 2G radio access network (GSM).
  + If it is of R98 or earlier, it can only handle 2G AKA and is only able to interwork with either a SIM application on a UICC or a SIM. Then the card interface complies with 3GPPTS 11.11.
  + If it is of R99 or Rel-4, it can handle 2G AKA and is able to interwork with either a SIM application on a UICC or a SIM. Then the card interface complies to 3GPPTS 11.11 / 3GPP TS 51.011. Additionally, it may support 3G AKA and be capable to interwork with a USIM application on a UICC. In this optional mode, the card interface complies with 3GPP TS 31.101 and 3GPP TS 31.102.
  + If it is of Rel-5 or later, it can handle 2G AKA and 3G AKA (depending on the current network situation) and is capable to work with a USIM application on a UICC. On the card interface, it behaves just like a 3G ME, i.e. it complies to 3GPP TS 31.101 and 3GPP TS 31.102. As a recommended option, the ME of Rel-5 and onwards may support a 2G SIM.

## 57.1 General UICC with SIM and USIM test cases

### 57.1.1 PIN Handling

#### 57.1.1.1 PIN Handling - At Power ON

##### 57.1.1.1.1 PIN Handling - At Power ON - PIN Disabled

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.1.2 PIN Handling - At Power ON - PIN Enabled - Successful

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.1.3 IN Handling - At Power ON - PIN Enabled - Wrong PIN (3 digits)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.1.4 PIN Handling - At Power ON - PIN Enabled - Wrong PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

57.1.1.2 PIN Handling - Enable / Disable

##### 57.1.1.2.1 PIN Handling - Enable / Disable - Enable PIN - Success

Description

Procedure for enabling PIN with a valid correct PIN.

Related core specifications

3GPP TS 31.102

3GPP TS 11.11

Reason for test

To ensure that PIN can be enabled successfully with a valid correct PIN.

Initial configuration

PIN disabled.

PIN counter: Attempts remaining = 3

DUT in idle mode.

Test procedure

1. Attempt to enable PIN using the phone’s menu by entering a valid (correct) PIN.
2. Restart DUT.
3. Enter valid PIN.

Expected behaviour

1. PIN is enabled.
2. Confirm DUT restarts and prompts for PIN entry.
3. PIN is accepted and DUT is in Idle mode.

##### 57.1.1.2.2 PIN Handling - Enable / Disable - Enable PIN - Wrong PIN (3 digits)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.2.3 PIN Handling - Enable / Disable - Enable PIN - Wrong PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.2.4 PIN Handling - Enable / Disable - Disable PIN - Success

Description

Procedure for disabling PIN with a valid correct PIN.

Related core specifications

3GPP TS 31.102

3GPP TS 11.11

Reason for test

To ensure that PIN can be disabled successfully with a valid correct PIN.

Initial configuration

PIN enabled.

PIN counter: Attempts remaining = 3

DUT in idle mode.

Test procedure

1. Attempt to disable PIN using the phone’s menu by entering a valid (correct) PIN.
2. Restart DUT.

Expected behaviour

1. PIN is disabled.
2. Confirm DUT goes straight to idle mode without requesting for any PIN entry.

##### 57.1.1.2.5 PIN Handling - Enable / Disable - Disable PIN - Wrong PIN (3 digits)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.2.6 PIN Handling - Enable / Disable - Disable PIN - Wrong PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.1.3 PIN Handling - Change of PIN

##### 57.1.1.3.1 PIN Handling - Change of PIN - Successful

Description

Procedure for changing PIN with a valid correct OLD and NEW PIN.

Related core specifications

TS 22.030 sub clauses 6.6.2, TS 31.102, ETSI TS 102 221.

Reason for test

To ensure that PIN can be changed with a valid correct OLD and NEW PIN.

Initial configuration

PIN enabled.

PIN counter: Attempts remaining = 3

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN using one of the following methods  - MMI:  \*\*04\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN and NEW is the valid correct NEW PIN) to change PIN.  - Menu:  Enter the valid correct OLD PIN, followed by a valid correct NEW PIN  -  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN is successfully changed. |
| 2 | Restart DUT | Confirm DUT restarts and prompts for PIN entry |
| 3 | Enter NEW PIN | 1. PIN is accepted and DUT is in Idle mode. |

##### 57.1.1.3.2 PIN Handling - Change of PIN - Wrong Repeating of New PIN

Description

DUT shall reject the change of PIN if the NEW PIN is wrongly repeated during the PIN change process.

Related core specifications

3GPP TS 22.030 sub clauses 6.6.2, 3GPP TS 31.102, ETSI TS 102 221.

Reason for test

To ensure the DUT will reject the change of PIN if the NEW PIN is wrongly repeated during the PIN change process.

Initial configuration

PIN enabled.

PIN counter: Attempts remaining = 3

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN using one of the following methods  - MMI:  Dial the code \*\*04\*OLD\*NEW1\*NEW2# (where OLD is the valid correct OLD PIN and NEW1 and NEW2 are different new PINs) to change PIN  - Menu:  Enter the valid correct OLD PIN, followed by different NEW PINs  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN change is rejected. Depending on DUT implementation it may display a notification that the NEW PINS do not match and the user should try again |
| 2 | Check PIN attempt counter (If implemented to be displayed). | The PIN attempt counter should display 3 attempts remaining (If implemented to be displayed). |

##### 57.1.1.3.3 PIN Handling - Change of PIN - Wrong New PIN (3 digits)

Description

The DUT must reject a PIN change if the NEW PIN is invalid (shorter than 4 digits).

Related core specifications

3GPP TS 22.030 sub clause 6.6.2

Reason for test

To ensure DUT rejects a PIN change if the NEW PIN is invalid (shorter than 4 digits). The PIN attempt counter should not update when a short NEW PIN is entered.

Initial configuration

PIN enabled.

PIN counter: Attempts remaining = 3

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN using one of the following methods:  - MMI:  Dial the code \*\*04\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN and NEW is an invalid 3 digit NEW PIN) to change PIN.  - Menu:  Enter the valid correct OLD PIN, followed by an invalid 3 digit NEW PIN.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN change is rejected. Depending on DUT implementation it may display a notification that the NEW PIN was too short and the user should try again |
| 2 | Check PIN attempt counter (If implemented to be displayed). | The PIN attempt counter should display 3 attempts remaining (If implemented to be displayed). |

##### 57.1.1.3.4     PIN Handling - Change of PIN - Wrong Old PIN (3 digits)

Test case has been archived.  Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing [terminals@gsma.com](mailto:terminals@gsma.com)

##### 57.1.1.3.5 PIN Handling - Change of PIN - Wrong Old PIN

Description

DUT shall reject the change of PIN if the OLD PIN is valid but wrong during the PIN change process.

Related core specifications

3GPP TS 22.030 sub clause 6.6.2

Reason for test

To ensure DUT rejects a PIN change if the OLD PIN is valid but wrong. The PIN attempt counter should update when a wrong OLD PIN is entered.

Initial configuration

PIN enabled.

PIN counter: Attempts remaining = 3

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN using one of the following methods:  - MMI:  Dial the code \*\*04\*OLD\*NEW\*NEW# (where OLD is a valid wrong OLD PIN and NEW is a valid correct NEW PIN) to change PIN.  - Menu:  Enter a valid wrong OLD PIN, followed by a valid correct NEW PIN.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN change is rejected. Depending on DUT implementation it may display a notification that the OLD PIN was wrong and the user should try again. |
| 2 | Check PIN attempt counter (If implemented to be displayed). | The PIN attempt counter should display 2 attempts remaining (If implemented to be displayed). |

##### 57.1.1.3.6 PIN Handling - Change of PIN - PIN Blocked

Description

DUT shall not allow change of PIN if the PIN is blocked.

Related core specifications

3GPP TS 22.030 sub clause 6.6.3, 3GPP TS 31.102

Reason for test

To ensure that PIN cannot be changed when PIN is blocked.

Initial configuration

PIN enabled.

PIN blocked (enter 3 x wrong PIN when attempting to disable PIN)

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN using one of the following methods:  - MMI:  dial the code \*\*04\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN and NEW is a valid correct NEW PIN) to change PIN.  - Menu:  If DUT permits the user to access the change PIN menu when PIN is blocked, attempt to change the PIN using the DUT’s menu. Enter a valid correct OLD PIN, followed by a valid correct NEW PIN.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN cannot be changed. Depending on DUT implementation it may display a notification that the PIN cannot be changed when blocked. |

Note: DUT may not allow access to the change PIN menu in order to attempt to change the PIN. This implementation satisfies the test case because PIN cannot be changed when blocked.

##### 57.1.1.3.7 PIN Handling - Change of PIN - PIN Disabled

Description

DUT shall not allow change of PIN if the PIN is disabled.

Related core specifications

3GPP TS 22.030 sub clause 6.6.2, 3GPP TS 31.102, ETSI TS 102 221 sub clause 14.2.3 for UICC.

Reason for test

To ensure that PIN cannot be changed when PIN is disabled.

Initial configuration

PIN disabled.

DUT in idle mode.

Test procedure

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN using one of the following methods:  - MMI:  Dial the code \*\*04\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN and NEW is the valid correct NEW PIN) to change PIN.  - Menu:  If DUT permits the user to access the change PIN menu when PIN is disabled, attempt to change the PIN using the DUT’s menu. Enter a valid correct OLD PIN, followed by a valid correct NEW PIN  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN cannot be changed. Depending on DUT implementation it may display a notification that the PIN cannot be changed when blocked. |

Note: DUT may not allow access to the change PIN menu in order to attempt to change the PIN. This implementation satisfies the test case because PIN cannot be changed when disabled

#### 57.1.1.4 PIN Handling - Blocking of PIN

##### 57.1.1.4.1 PIN Handling – Blocking of PIN – At Power On

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.4.2 PIN Handling – Blocking of PIN – During Enable PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.4.3 PIN Handling – Blocking of PIN – During Disable PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.4.4 PIN Handling – Blocking of PIN – During Change of PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.1.5 PUK Handling - Unblocking of PIN

##### 57.1.1.5.1 PUK Handling - Unblocking of PIN - At Power ON

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.5.2 PUK Handling - Unblocking of PIN - Successful

Description

Procedure for unblocking PIN with a valid correct PUK.

Related core specifications

3GPP TS 22.030 sub clause 6.6.3, 3GPP TS 31.102, ETSI TS 102 221

Reason for test

To ensure that PIN unblocking procedure is performed correctly with a valid correct PUK.

Initial configuration

PIN enabled.

PIN blocked.

PUK code available.

PUK counter: Attempts remaining = 10.

DUT in powered on state.

Test procedure

**Scenario A: (Code)**

1. In dialler / Emergency dialler, dial the code \*\*05\*PUK\*NEW\*NEW# (where PUK is valid correct PUK and NEW is a valid correct NEW PIN) to unblock the PIN.
2. Restart DUT.
3. Enter PIN.

**Scenario B: (Menu)**

1. In DUT menu for changing the PIN or directly on the PUK entry screen (as per device implementation), enter a valid correct PUK, followed by a valid correct NEW PIN.
2. Restart DUT.
3. Enter PIN.

Expected behaviour

1. PUK is accepted and new PIN is setup. DUT is in Idle mode.
2. Confirm DUT restarts and prompts for PIN entry.
3. PIN is accepted and DUT is in Idle mode.

##### 57.1.1.5.3 PUK Handling - Unblocking of PIN - Wrong PUK (7 digits)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.1.5.4 PUK Handling - Unblocking of PIN - Wrong PUK

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.1.2 PIN2 handling

#### 57.1.2.1 PIN2 Handling - Change of PIN2

##### 57.1.2.1.1 PIN2 Handling - Change of PIN2 - Successful

Description

Procedure for changing PIN2 with a valid correct OLD and NEW PIN2.

Related core specifications

3GPP TS 22.030 sub clauses 6.6.2, 3GPP TS 31.102, ETSI TS 102 221.

Reason for test

To ensure that PIN2 can be changed with a valid correct OLD and NEW PIN2.

Initial configuration

PIN2 supported by ICC.

PIN2 counter: Attempts remaining = 3.

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN2 using one of the following methods  - MMI:  Dial the code \*\*042\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN2 and NEW is the valid correct NEW PIN2) to change PIN2.  - Menu:  Enter the valid correct OLD PIN2, followed by a valid correct NEW PIN2  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN2 is successfully changed. |
| 2 | Go to a data field which is protected by PIN2 on ICC, for example FDN and enter the new PIN2 | New PIN2 is accepted and access to data field is permitted. E.g. FDN is enabled |

##### 57.1.2.1.2 PIN2 Handling - Change of PIN2 - Wrong Repeating of New PIN2

Description

DUT shall reject the change of PIN2 if the NEW PIN2 is wrongly repeated during the PIN2 change process.

Related core specifications

3GPP TS 22.030 sub clauses 6.6.2, 3GPP TS 31.102, ETSI TS 102 221.

Reason for test

To ensure the DUT will reject the change of PIN2 if the NEW PIN2 is wrongly repeated during the PIN2 change process.

Initial configuration

PIN2 supported by ICC.

PIN2 counter: Attempts remaining = 3.

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN2 using one of the following methods  - MMI:  Dial the code \*\*042\*OLD\*NEW1\*NEW2# (where OLD is the valid correct OLD PIN2 and NEW1 and NEW2 are different new PIN2s) to change PIN2.  - Menu:  Enter the valid correct OLD PIN2, followed by different NEW PIN2s.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN2 change is rejected. Depending on DUT implementation it may display a notification that the NEW PIN2S do not match and the user should try again. |
| 2 | Check PIN2 attempt counter (If implemented to be displayed) | The PIN2 attempt counter should display 3 attempts remaining (If implemented on DUT UI). |

##### 57.1.2.1.3 PIN2 Handling - Change of PIN2 - Wrong New PIN2 (3 digits)

Description

The DUT must reject a PIN2 change if the NEW PIN2 is invalid (shorter than 4 digits).

Related core specifications

3GPP TS 22.030 sub clause 6.6.2

Reason for test

To ensure DUT rejects a PIN2 change if the NEW PIN2 is invalid (shorter than 4 digits). The PIN2 attempt counter should not update when a short NEW PIN2 is entered.

Initial configuration

PIN2 supported by ICC.

PIN2 counter: Attempts remaining = 3.

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN2 using one of the following methods  - MMI:  Dial the code \*\*042\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN2 and NEW is an invalid 3 digit NEW PIN2) to change PIN2.  - Menu:  Enter the valid correct OLD PIN2, followed by an invalid 3 digit NEW PIN2.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN2 change is rejected. Depending on DUT implementation it may display a notification that the NEW PIN2 was too short and the user should try again. |
| 2 | Check PIN2 attempt counter (If implemented to be displayed) | The PIN2 attempt counter should display 3 attempts remaining (If implemented on DUT UI). |

##### 57.1.2.1.4  PIN2 Handling - Change of PIN2 - Wrong Old PIN2 (3 digits)

Test case has been archived.  Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing [terminals@gsma.com](mailto:terminals@gsma.com)

##### 57.1.2.1.5 PIN2 Handling - Change of PIN2 - Wrong Old PIN2

Description

DUT shall reject the change of PIN2 if the OLD PIN2 is valid but wrong during the PIN2 change process.

Related core specifications

3GPP TS 22.030 sub clause 6.6.2

Reason for test

To ensure DUT rejects a PIN2 change if the OLD PIN2 is valid but wrong. The PIN2 attempt counter should update when a wrong OLD PIN2 is entered.

Initial configuration

PIN2 supported by ICC.

PIN2 counter: Attempts remaining = 3.

DUT in idle mode.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN2 using one of the following methods:  - MMI:  Dial the code \*\*042\*OLD\*NEW\*NEW# (where OLD is a valid wrong OLD PIN2 and NEW is a valid correct NEW PIN2) to change PIN2.  - Menu:  Enter a valid wrong OLD PIN2, followed by a valid correct NEW PIN2.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN2 change is rejected. Depending on DUT implementation it may display a notification that the OLD PIN2 was wrong and the user should try again. |
| 2 | Check PIN2 attempt counter (If implemented to be displayed) | The PIN2 attempt counter should display 2 attempts remaining (If implemented on DUT UI). |

##### 57.1.2.1.6 PIN2 Handling - Change of PIN2 - PIN2 Blocked

Description

DUT shall not allow change of PIN2 if the PIN2 is blocked.

Related core specifications

3GPP TS 22.030 sub clause 6.6.3, 3GPP TS 31.102

Reason for test

To ensure that PIN2 cannot be changed when PIN2 is blocked.

Initial configuration

PIN2 supported by ICC.

PIN2 blocked.

DUT in idle mode.

Test procedure

**Scenario A: (Code)**

1. Dial the code \*\*042\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN2 and NEW is a valid correct NEW PIN2) to change PIN2.

**Scenario B: (Menu)**

1. Attempt to change the PIN2 using the DUT’s menu. Enter the valid correct OLD PIN2, followed by a valid correct NEW PIN2.

Expected behaviour

1. PIN2 cannot be changed. Depending on DUT implementation it may display a notification that the PIN2 cannot be changed when blocked.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | Attempt to change the PIN2 using one of the following methods:  - MMI:  Dial the code \*\*042\*OLD\*NEW\*NEW# (where OLD is the valid correct OLD PIN2 and NEW is a valid correct NEW PIN2) to change PIN2.  - Menu:  Enter the valid correct OLD PIN2, followed by a valid correct NEW PIN2.  - AT Command  - Proprietary mechanism (API)  N.B. Other methods may be available. | PIN2 cannot be changed. Depending on DUT implementation it may display a notification that the PIN2 cannot be changed when blocked.  . |

#### 57.1.2.2 PIN2 Handling - Blocking of PIN2

##### 57.1.2.2.1 PIN2 Handling – Blocking of PIN2 – During Change of PIN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.2.3 PUK2 Handling - Unblocking of PIN2

##### 57.1.2.3.1 PUK2 Handling - Unblocking of PIN2 - Successful

Description

Procedure for unblocking PIN2 with a valid correct PUK2.

Related core specifications

3GPP TS 22.030 sub clause 6.6.3, 3GPP TS 31.102, ETSI TS 102 221

Reason for test

To ensure that PIN2 unblocking procedure is performed correctly with a valid correct PUK2.

Initial configuration

PIN2 supported by ICC.

PIN2 blocked.

PUK2 code available.

PUK2 counter: Attempts remaining = 10.

DUT in powered on state.

Test procedure

**Scenario A: (Code)**

1. Dial the code \*\*052\*PUK\*NEW\*NEW# (where PUK is valid correct PUK2 and NEW is a valid correct NEW PIN2) to unblock the PIN2.
2. Go to a data field which is protected by PIN2 on ICC, for example FDN and enter the new PIN2.

**Scenario B: (Menu)**

1. In DUT menu for changing the PIN2 or directly on the PUK2 entry screen (as per device implementation), enter a valid correct PUK2, followed by a valid correct NEW PIN2.
2. Go to a data field which is protected by PIN2 on ICC, for example FDN and enter the new PIN2.

Expected behaviour

1. PUK2 is accepted and new PIN2 is setup. DUT is in Idle mode.
2. New PIN2 is accepted and access to data field is permitted. E.g. FDN is enabled.

**…**

##### 57.1.2.3.2 PUK2 Handling - Unblocking of PIN2 - Wrong PUK2 (7 digits)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.2.3.3 PUK2 Handling - Unblocking of PIN2 - Wrong PUK2

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.1.3 Fixed Dialling Number (FDN)

#### 57.1.3.1 Fixed Dialling Number - EFFDN Handling

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.3.2 Fixed Dialling Number - Voice

Description

When FDN is enabled, the DUT should only allow voice calls to numbers included in the EFFDN list. All other voice calls shall be restricted.

Related core specifications

3GPP TS 22.030, 3GPP TS 31.102, 3GPP TS11.11, 3GPPTS 51.011, 3GPP TS02.07

Reason for test

To ensure DUT performs operation of Voice correctly when FDN is enabled/disabled.

Initial configuration

DUT is in idle mode.

PIN2 is supported by SIM card.

FDN is disabled.

Test procedure

1. Enable FDN.
2. Add Client 1 to FDN phonebook list.
3. Make MO Voice call to Client 1 and Client 2.
4. Remove Client 1 from FDN phonebook list.
5. Make MO Voice call to Client 1 and Client 2.
6. Disable FDN.
7. Make MO Voice call to Client 1 and Client 2.

Expected behaviour

1. FDN is enabled.
2. Client 1 is added to FDN phonebook list.
3. MO Voice call to Client 1 is successful.

MO Voice call to Client 2 is unsuccessful. DUT displays a notification that fixed dialling numbers are enabled (If supported by UI).

1. Client 1 is removed from FDN phonebook list.
2. MO Voice call to Client 1 is unsuccessful. DUT displays a notification that fixed dialling numbers are enabled (If supported by UI).

MO Voice call to Client 2 is unsuccessful. DUT displays a notification that fixed dialling numbers are enabled (If supported by UI).

1. FDN is disabled.
2. MO voice call to Client 1 is successful.

MO voice call to Client 2 is successful.

#### 57.1.3.3 Fixed Dialling Number - SMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.3.4 Fixed Dialling Number - Supplementary Services (SS)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.3.5 Fixed Dialling Number - PS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.3.6 Fixed Dialling Number – Wild Character

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.3.7 Fixed Dialling Number – Extension Numbers

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.3.8 Fixed Dialling Number - Pause

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.1.4 Removal and replace of SIM or UICC

#### 57.1.4.1 Remove SIM/UICC during a call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.4**.2 Remove/Replace SIM/UICC during idle mode**

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.1.5 Support of SMSP (Short Message Service Parameter)

#### 57.1.5.1 SMSP - Read

Description

To check DUT correctly reads SMSC stored on EFSMSP field of UICC/eUICC.

Related core specifications

3GPP TS 31.102, ETSI TS 102 221, 3GPP TS 51.011.

Reason for test

To ensure that DUT can read SMSC stored on EFSMSP field of UICC/eUICC.

Initial configuration

The correct SMSC value for the network operator is stored in EFSMSP field.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Via the DUT UI, check the Message Centre number is displayed correctly for the network operator. | DUT displays the correct Message Centre number. |
| 2 | Send MO SMS. | MO SMS is successful. |

#### 57.1.5.2 SMSP - Write

Description

To check DUT can correctly write to the EFSMSP field of UICC/eUICC.

Related core specifications

3GPP TS 31.102, ETSI TS 102 221, 3GPP TS 51.011.

Reason for test

To ensure that DUT can write to the EFSMSP field of UICC/eUICC.

Initial configuration

The correct SMSC value for the network operator is stored in EFSMSP field.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Via the DUT UI, check the Message Centre number is displayed correctly for the network operator. | DUT displays the correct Message Centre number. |
| 2 | Via the DUT UI, change the Message Centre number to an incorrect value. E.g. +1234567890. | The Message Centre number is successfully changed. |
| 3 | Restart DUT. | DUT is restarted. |
| 4 | Send MO SMS. | MO SMS is unsuccessful. |
| 5 | Via the DUT UI, change the Message Centre number to the correct value. | The Message Centre number is successfully changed. |
| 6 | Restart DUT. | DUT is restarted. |
| 7 | Send MO SMS. | MO SMS is successful. |

### 57.1.6 Phonebook

#### 57.1.6.1 Phonebook - ADN

Description

To check DUT handling of storing, reading, deleting and editing of ADN numbers on the UICC/eUICC phonebook.

Related core specifications

3GPP TS 31.102, 3GPP TS 51.011.

Reason for test

To ensure DUT’s handles correctly storing, reading, deleting and editing of ADN numbers on the UICC/eUICC phonebook.

Initial configuration

DUT phonebook is empty.

UICC/eUICC phonebook is empty.

**Scenario A:** DUT supports direct editing of contacts in SIM/USIM phonebook

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Using DUT UI, add below contacts to UICC/eUICC phonebook. (Name; ADN)  Contact 1: National number (e.g. 01XXXXXXX)  Contact 2: International number (e.g. +44XXXXXX) | Contacts are successfully added to UICC/eUICC phonebook. |
| 2 | Restart DUT. | DUT is restarted. |
| 3 | Check 2 contacts are available in UICC/eUICC phonebook. | 2 contacts are available in UICC/eUICC phonebook. |
| 4 | Delete Contact 1. | Contact 1 is successfully deleted. |
| 5 | Edit ADN of Contact 2 (e.g. +01XXXXXX). | Contact 2 is successfully edited. |
| 6 | Restart DUT. | DUT is restarted. |
| 7 | Check only Contact 2 is available and has the ADN as per step 5 above. | Contact 1 is not available.  The ADN of Contact 2 is displayed in edited form (e.g. +01XXXXXX). |

**Scenario B:** DUT supports Import/Export function to update contacts on SIM/USIM

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Add below contacts to DUT phonebook (Name; ADN)  Contact 1: National number (e.g. 01XXXXXXX)  Contact 2: International number (e.g. +44XXXXXX) | Contacts are successfully added to DUT phonebook. |
| 2 | Confirm the number of contacts is correct for DUT phonebook and UICC/eUICC phonebook respectively. | DUT phonebook has 2 contacts.  UICC/eUICC phonebook has 0 contacts. |
| 3 | Export DUT phonebook contacts to UICC/eUICC phonebook. | Contacts are successfully exported to UICC/eUICC phonebook. |
| 4 | Delete all contacts from DUT phonebook. | DUT phonebook entries are successfully deleted. |
| 5 | Restart DUT | DUT is restarted |
| 6 | Confirm the number of contacts are correct for DUT phonebook and UICC/eUICC phonebook respectively. | DUT phonebook has 0 contacts.  UICC/eUICC phonebook has 2 contacts. |
| 7 | Import contacts from UICC/eUICC to DUT phonebook. | Contacts are successfully imported to DUT phonebook. |
| 8 | Delete all contacts from UICC/eUICC phonebook. | UICC/eUICC phonebook entries are successfully deleted. |
| 9 | Restart DUT | DUT is restarted |
| 10 | Confirm the number of contacts is correct for DUT phonebook and UICC/eUICC phonebook respectively. | DUT phonebook has 2 contacts.  UICC/eUICC phonebook has 0 contacts. |

#### 57.1.6.2 Phonebook - ANR (Additional Numbers)

Description

To check DUT handling of storing, reading, deleting and editing of ANR numbers on the USIM phonebook.

Related core specifications

3GPP TS 31.102

Reason for test

To ensure DUT’s handles correctly storing, reading, deleting and editing of ANR numbers on the USIM phone book.

Initial configuration

DUT phonebook is empty.

UICC/eUICC phonebook is empty.

UICC/eUICC supports ANR field.

DUT supports direct editing of contacts in UICC/eUICC phonebook.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Add below contacts to UICC/eUICC phonebook. (Name; ADN; ANR)  Contact 1: ADN A and ANR A.  Contact 2: ADN B and ANR B  Contact 3: ADN C and ANR C | Contacts are successfully added to UICC/eUICC phonebook. |
| 2 | Restart DUT. | DUT is restarted. |
| 3 | Check 3 contacts are available in UICC/eUICC phonebook. | 3 contacts are available in UICC/eUICC phonebook. |
| 4 | Delete ANR of Contact 1 in UICC/eUICC phonebook. | ANR of Contact 1 is deleted in UICC/eUICC phonebook. |
| 5 | Edit ANR of Contact 2 in UICC/eUICC phonebook. | ANR of Contact 2 is edited in UICC/eUICC phonebook. |
| 6 | Delete Contact 3 in UICC/eUICC phonebook. | Contact 3 is deleted in UICC/eUICC phonebook. |
| 7 | Restart DUT. | DUT is restarted. |
| 8 | Check the following:  Contact 1 is available but has no assocaited ANR as per step 4 above.  Contact 2 is available and has the edited ANR as per step 5 above.  Contact 3 is not available. | UICC/eUICC phonebook contains correct contact entries:  Contact 1 has only Name and ADN available.  Contact 2 has Name, ADN and an ANR displayed in edited form.  Contact 3 is not available. |

#### 57.1.6.3 Phonebook - Email

Description

To check DUT handling of storing, reading, deleting and editing of Email on the USIM phonebook.

Related core specifications

3GPP TS 31.102

Reason for test

To ensure DUT’s handles correctly storing, reading, deleting and editing of Email on the USIM phonebook.

Initial configuration

DUT phonebook is empty.

UICC/eUICC phonebook is empty.

UICC/eUICC supports Email field.

DUT supports direct editing of contacts in UICC/eUICC phonebook.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Add below contacts to UICC/eUICC phonebook. (Name; ADN; Email)  Contact 1: ADN A and Email A.  Contact 2: ADN B and Email B  Contact 3: ADN C and Email C | Contacts are successfully added to UICC/eUICC phonebook. |
| 2 | Restart DUT. | DUT is restarted. |
| 3 | Check all 3 contacts are available in UICC/eUICC phonebook. | 3 contacts are available in UICC/eUICC phonebook. |
| 4 | Delete Email of Contact 1 in UICC/eUICC phonebook. | Email of Contact 1 is deleted in UICC/eUICC phonebook. |
| 5 | Edit Email of Contact 2 in UICC/eUICC phonebook. | Email of Contact 2 is edited in UICC/eUICC phonebook. |
| 6 | Delete Contact 3 in UICC/eUICC phonebook. | Contact 3 is deleted in UICC/eUICC phonebook. |
| 7 | Restart DUT. | DUT is restarted. |
| 8 | Check the following:  Contact 1 is available but has no assocaited Email as per step 4 above.  Contact 2 is available and has the edited Email as per step 5 above.  Contact 3 is not available. | UICC/eUICC phonebook contains correct contact entries:  Contact 1 has only Name and ADN available.  Contact 2 has Name, ADN and an Email displayed in edited form.  Contact 3 is not available. |

#### 57.1.6.4 Phonebook - SNE (Second name)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.6.5 Phonebook - Extension Field

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.6.6 Phonebook – UICC / eUICC PB Memory Full

Description

To check DUT’s performance when UICC/eUICC phonebook memory is full.

Related core specifications

3GPP TS 31.102.

Reason for test

To ensure DUT’s performs normally when UICC/eUICC phonebook memory is full.

Initial configuration

The maximum number of UICC/eUICC phonebook contacts is known.

The UICC/eUICC phonebook is full. This can be achieved in various ways such as:

- Using a SIM card writer/reader tool and S/W.

- Importing contacts from the DUT phonebook to the UICC/eUICC.

- Manually creating contacts on the UICC/eUICC until the memory is full.

N.B Other ways are acceptable as long as the UICC/eUICC phonebook memory is full.

Set the DUT settings options so that SIM (UICC/eUICC) contacts are displayed.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Using DUT UI, navigate around the phonebook menu, viewing several different contacts. | The DUT is not slow in accessing the UICC/eUICC contacts. |
| 2 | Attempt to add a new contact to the UICC/eUICC phonebook. | Depending on DUT implementation, it will either not allow the user to attempt to add a new SIM contact to the UICC/eUICC when its memory is full; or it will display a message such as “SIM phonebook memory full” when attempting to create a new SIM contact. In both cases, no phonebook entry is deleted or replaced. |
| 3 | Select all entries in the UICC/eUICC phonebook and delete them. | The DUT can delete all entries on the UICC/eUICC.  The process should be done in a reasonable time and no lagging on the DUT should happen during the process. |

#### 57.1.6.7 Phonebook - MSISDN saved on UICC/eUICC

Description

To check DUT can read the numbers stored on EFMSISDN field of UICC/eUICC.

Related core specifications

3GPP TS 31.102, 3GPP TS 51.011.

Reason for test

To ensure DUT’s handles numbers saved on EFMSISDN field of UICC/eICC correctly.

Initial configuration

The EFMSISDN field is supported by the UICC/eUICC and is populated E.g. +1234567890

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Using DUT UI, check the menu where the MSISDN from the EFMSISDN field of UICC/eICC is displayed. This is often known as “My Phone number”. | The phone number associated with the EFMSISDN field of UICC/eICC is correctly displayed. |

#### 57.1.6.8 Phonebook - Hidden Numbers

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.6.9 Phonebook - Change of Hidden key for Hidden Contacts

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.1.7 Storage of Data

#### 57.1.7.1 Storage of Data - General

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.7.2 MCC, MNC deleted from forbidden PLMN list

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.7.3 Storage of USIM/SIM Data after LU reject, IMSI unknown in HLR

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.7.4 Storage of USIM/SIM Data after LU reject, Authentication error

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.7.5 Storage of USIM/SIM Data after LU reject, PLMN not allowed

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.7.6 Storage of USIM/SIM Data after LUP reject, LA not allowed

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.7.7 Storage in forbidden PLMN list without loss of information in list

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.1.8 SIM Application Toolkit

In this section, it may be possible to combine several tests into one procedure, in that for instance proactive USIM/SIM commands may be triggered by USIM/SIM events. The precise range and order of tests to be carried out will depend on the features supported by the MS, and on the applications available in the USIM/SIM.

The detailed expected behaviour in each test depends on the exact features implemented in the USIM/SIM toolkit application. Therefore in most cases the detailed behaviour is specific in terms of what the USIM/SIM application is designed to do.

A lot of the problems with USIM/SIM Application Toolkit occur on multiple events and/or commands. Therefore USIM/SIM Toolkit Applications provided on the UICC/SIM card of the operators shall be used for field tests additionally to the tests outlined below.

#### 57.1.8.1 Terminal Profile Download

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.2 Proactive SIM Commands

##### 57.1.8.2.1 DISPLAY TEXT

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.2 GET INKEY

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.3 GET INPUT

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.4 PLAY TONE

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.5 SET-UP MENU

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.6 SELECT ITEM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.7 SEND SHORT MESSAGE

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.8 SEND SS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.9 SEND USSD

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.10 SET UP CALL

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.11 SET UP IDLE MODE TEXT

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.12 RUN AT COMMAND

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.13 SEND DTMF COMMAND

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.14 LANGUAGE NOTIFICATION

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.15 LAUNCH BROWSER

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.16 OPEN CHANNEL, CLOSE CHANNEL, RECEIVE DATA, SEND DATA

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.17 PROVIDE LOCAL INFORMATION

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.18 POLL INTERVAL/POLLING OFF

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.19 REFRESH

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.20 MORE TIME

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.2.21 TIMER MANAGEMENT

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.3 SIM Events

##### 57.1.8.3.1 MT call event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.2 Call connected event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.3 Call disconnected event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.4 Location status event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.5 User activity event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.6 Idle screen available event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.7 Card reader status event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.8 Language selection event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.9 Browser Termination event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.10 Data available event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.3.11 Channel status event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.4 Call Control by SIM

##### 57.1.8.4.1 MO Calls

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.4.2 Supplementary Services

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.4.3 USSD

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.4.4 Interaction with FDN

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.5 MO Short Message Control by SIM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.6 SMS Data Download

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.7 CB Data Download

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.8 Timer Expiration

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.1.8.9 (U)SAT Interworking with subscription

##### 57.1.8.9.1 Access (U)SAT menu after user’s subscription rejection

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.2 Access (U)SAT menu during a call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.3 Receive calls while using (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.4 Receive a second call while the DUT is engaged in a first voice call and in (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.5 Closing the call from subscriber while using (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.6 Closing the call from the other connected part while using (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.7 Receive short messages while using (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.8 Receive short messages while typing text in an input dialog screen (Get Input proactive command)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.9 Receive WAP Push while using (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.10 Receive WAP Push while typing text in an input dialog screen (Get Input proactive command)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.11 WAP session after sending a request from the (U)SAT menu

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.12 Notification display for filling area menus

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.13 Predictive Text Input to type text in an input dialog screen (Get Input proactive command)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.14 Use of special characters to type text in an input dialog screen (Get Input proactive command)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.15 Receiving a SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu) while handset application is running

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.16 Interaction between SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu) and incoming call

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.17 Interaction between SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu) and WAP Push

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.18 Interaction between SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu) and SMS

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.19 Opening/closing the DUT flip: interaction with SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.20 Accepting an incoming call between the (U)SAT request and the reception of SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.21 Rejecting an incoming call between the (U)SAT request and the reception of a SM Mobile Terminated with envelope command (display text / get input / menu selection / setup menu)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.22 Reception of an SMS Terminated from another DUT between the (U)SAT request and the reception of the SMS of replay from the network (SM Mobile Terminated with envelope command display text / get input / menu selection)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.1.8.9.23 Receiving a WAP Push between the (U)SAT request and the reception of the SM Mobile Terminated with envelope / setup menu (display text / get input / menu selection)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 57.2 ICC with SIM specific test cases

### 57.2.1 Mobile support of GPRS unaware SIM cards and GPRS aware SIM cards with GPRS Elementary Files

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.2.2 Language Preference (LP)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.2.3 E-UTRA terminals with UICC with SIM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

## 57.3 USIM specific test cases

### 57.3.1 Authentication / Ciphering

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.2 Preferred Languages (PL)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.3 Phonebook tests

**(Void)**

### 57.3.4 Support of Call Information (ICI, OCI)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.5 Support of Timers (ICT, OCT)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.6 Display of Service Provider Name (SPN)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.7 APN Control List (ACL)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.8 MMS provisioning

#### 57.3.8.1 MMS notification usage

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.8.2 MMS Issuer Connectivity Parameters usage

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.8.3 MMS User Preferences usage

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.8.4 Priority order of MMS Issuer User Connectivity Parameters over the MMS User Connectivity Parameters

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.9 Support of Mailbox Dialling Numbers and Mailbox Identifier

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.10 Support of Message Waiting Indicator Status

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.11 Support of Call Forwarding Indication Status

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.12 UICC Logical Channels Management

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.13 Security Mode (Integrity and Ciphering)

#### 57.3.13.1 End of Cipher and Integrity Key Lifetime

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.14 USIM Interoperability

#### 57.3.14.1 Memory Full Conditions (Phone Book)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.14.2 SDN saved on USIM

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.14.3 3G terminals with UICC with 2 or more USIM inside

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.14.4 3G terminals with UICC within 2 or more network access applications (SIM/USIM/R-UIM/ISIM)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.14.5 Support of more than one phonebook

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.15 USIM Application Toolkit (USAT)

#### 57.3.15.1 General USAT Function

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.15.2 PLAY TONE

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.15.3 REFRESH

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.15.4 PROVIDE LOCAL INFORMATION

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.15.5 SIM Events

##### 57.3.15.5.1 Access Technology Change Event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.3.15.5.2 Local Connection Event

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.15.6 Bearer Independent Protocol

Note: In order to perform these tests, the terminal device needs to support letter class ‘e’.

##### 57.3.15.6.1 Default Network Bearer

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.3.15.6.2 Local Link Bearer

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.3.15.6.3 Service Search

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.3.15.6.4 Get Service Information

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

##### 57.3.15.6.5 Declare Service

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.15.7 Multimedia Content Management

VOID

#### 57.3.15.8 USSD Data Download

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.16 ISIM Application

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.17 Client Provisioning (CP)

#### 57.3.17.1 SIM based CP

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

#### 57.3.17.2 UICC based CP

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.18 Bluetooth SIM Access Profile (SAP)

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

### 57.3.19 EAP-AKA

Test case has been archived. Please refer to TS.11 v22.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 58 Rich Communication Services Blackbird (RCS BB)

Note: The following test cases are based on Rich Communication Services 5.1 and associated reference documents (precisely: RCS 5.1 V4.x + Product Definition Document PDD v2). A copy can be obtained by contacting [terminals@gsma.com](mailto:terminals@gsma.com) .

All Test cases in this section have been archived. Please refer to TS.11 v25.0 for the full test procedure. A copy of which can be requested by emailing terminals@gsma.com

# 58-1 Rich Communication Services Crane Priority Release (RCS CPR)

Note: The following test cases are based on RCC.62 v3.0 Annex B (CPR) and associated referenced clauses (joyn Crane PDD), which can be found under

<http://www.gsma.com/network2020/rcs/specs-and-product-docs/>

Any reference document mentioned in this section can be found also under the same GSMA reference link as mentioned earlier.

### 58-1.3.2 Void

### 58-1.3.3 Void

### 58-1.3.4 Void

### 58-1.3.5 Enriched Calling-Share any file in a call

#### 58-1.3.5.1 Successful HTTP-based file transfer in active one-to-one chat

Description

File Transfer shall be possible during an on-going voice call while the call shall continue seamlessly on the same bearer. This includes the case where other in call services are also in progress.

Related core specifications

PDD Crane v2.0 section 12.4.4

Reason for test

As a user while in a voice call, I want to share any file from my in-call screen with the other participant of the call also during an active chat session.

Initial configuration

DUT and Reference 1 are online and in active one-to-one chat session.

Both users are RCS CPR clients and in an active voice call

Reference 1 has enough free storage space to receive file.

File size being transferred is less than the warning file size.

DUT and Reference 1 support HTTP-based File Transfer according to former capability exchange.

Test procedure

1. DUT selects to share any file (e.g. jpeg, gif, png) from his in-call screen
2. Reference 1 receives and accepts the file download notification if prompted.
3. Reference 1 opens the file.

Expected behaviour

During the file transfer the call shall continue seamlessly on the same bearer

1. DUT sees that file transfer option is available for the recipient from his in-call screen and is able to send the file.
2. The file is transferred. Delivery notification is received.
3. Display notification is received by DUT.

#### 58-1.3.5.2 Successful HTTP-based file transfer in new one-to-one chat

Description

File Transfer shall be possible during an on-going voice call while the call shall continue seamlessly on the same bearer.

Related core specifications

PDD Crane v2.0 section 12.4.4

Reason for test

As a user while in a voice call, I want to share any file from my in-call screen with the other participant of the call also when starting a new chat

Initial configuration

DUT has Reference 1 as RCS contact.

DUT and Reference 1 are online but not in active one-to-one chat session.

Both users are RCS CPR clients and in an active voice call

Reference 1 has enough free storage space to receive file.

File size being transferred is smaller than the warning file size.

DUT and Reference 1 support HTTP-based File Transfer according to capabilities exchange.

Test procedure

1. DUT selects to share any file (e.g. jpeg, gif, png) from his in-call screen
2. Reference 1 receives and accepts the file download notification if prompted.
3. Reference 1 opens the file.

Expected behaviour

During the file transfer the call shall continue seamlessly on the same bearer

1. DUT sees that file transfer option is available for the recipient from his in-call screen and is able to send the file.
2. A new one-to-one chat is opened. The file is transferred. Delivery notification is received.
3. Display notification is received by DUT.

#### 58-1.3.5.3 Successful HTTP-based file transfer in active one-to-one chat (resume file upload)

Description

An on-going File Transfer shall be completed even if the call was terminated. After completion a notification shall be displayed that the file is now accessible via the call logs.

Related core specifications

PDD Crane v2.0 section 12.4.4

Reason for test

As a user while in a voice call, I want to share any file from my in-call screen with the other participant of the call also during an active chat session.

Initial configuration

DUT and Reference 1 are online and in active one-to-one chat session.

Both users are RCS CPR clients and in an active voice call

Reference 1 has enough free storage space to receive file.

File size being transferred is less than the warning file size.

DUT and Reference 1 support HTTP-based File Transfer according to former capability exchange.

DUT and content server support HTTP-based file resume upload.

Test procedure

1. DUT selects to share any file (e.g. jpeg, gif, png) from his in-call screen
2. During file upload DUT gets out of coverage, e.g. switch to flight mode.
3. DUT resumes upload when returning to coverage (automatically). The client may need to be restarted. Reference 1 receives and accepts the file download notification if prompted.
4. Reference 1 opens the file.

Expected behaviour

1. DUT sees that file transfer option is available for the recipient from his in-call screen and is able to send the file
2. The upload of the file starts but stops before the transfer is completed.
3. When back in data coverage, the transfer proceeds until the file received by Reference. Delivery notification is received by DUT
4. Display notification is displayed by DUT.

#### 58-1.3.5.4 Successful HTTP-based file transfer in active one-to-one chat (resume file download)

Description

An on-going File Transfer shall be completed even if the call was terminated. After completion a notification shall be displayed that the file is now accessible via the call logs.

Related core specifications

PDD Crane v2.0 section 12.4.4

Reason for test

As a user while in a voice call, I want to share any file from my in-call screen with the other participant of the call also during an active chat session.

Initial configuration

DUT and Reference 1 are online and in active one-to-one chat session.

Both users are RCS CPR clients and in an active voice call

DUT has enough free storage space to receive file.

File size being transferred is less than the warning file size.

DUT and Reference 1 support HTTP-based File Transfer according to former capability exchange.

DUT and content server support HTTP-based file resume upload.

Test procedure

1. Reference 1 selects to share any file (e.g. jpeg, gif, png) from his in-call screen
2. DUT receives and accepts the file download notification if prompted.
3. During file download DUT gets out of coverage, e.g. switch to flight mode.
4. DUT resumes download when returning to coverage. The client may need to be restarted.
5. DUT opens the file.

Expected behaviour

1. –
2. DUT receives file transfer notification. The file transfer to DUT is started.
3. The download of the file starts but stops before the transfer is complete.
4. When back in data coverage, the transfer proceeds until the file received by DUT.
5. DUT can open the file.

#### 58-1.3.5.5 Void

#### 58-1.3.5.6 Void

#### 58-1.3.5.7 Unsuccessful HTTP-based file transfer (File upload fails)

Description

File Transfer failed: The expected outcome of the operation could not be confirmed by the network.

Related core specifications

PDD Crane v3.0 section 12.4.4

PDD Crane v3.0 section 7

Reason for test

US7-3 As a user, I want to see the status of any file I sent (including those which have not been delivered (yet)).

Initial configuration

DUT and Reference 1 are online

DUT and Reference 1 are RCS CPR clients

Reference 1 has enough free storage space to receive file.

File size being transferred is less than the warning file size

Both users support HTTP-based FT according to capabilities exchange.

DUT has a file in a language that is not recognisable by the server

Test procedure

1. DUT and Reference 1 are in an active voice call and in active 1-2-1 chat session.
2. DUT selects the file and selects file transfer to Reference 1.
3. During file upload DUT gets HTTP error response from content server.
4. Client automatically attempts the upload resume procedure (as per 3.5.4.8.3.1 RCS 5.1v2.0), 3 times

Expected behaviour

1. –
2. DUT sees that file transfer is available for Reference 1 from his in-call screen
3. The upload of the file starts but stops before the transfer is complete.
4. DUT is not able to upload file

### 58-1.3.6 Void

### 58-1.3.7 Void

### 58-1.3.8 Void

### 58-1.3.9 Enriched Calling-Call composer

#### 58-1.3.9.1 Initiating session: picture file sent prior to call initiation and downloaded by B before call started. Importance, location, subject set

Description

Adding a picture and subject into the call composer and receiving notification that pre-call added picture is received.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call composer functionalities “adding a picture and subject”.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT add a picture to the call composer.
3. On the DUT add a subject to the call composer.
4. On the DUT initiate the call to Reference 1.

Expected behaviour

1. –
2. DUT is able to upload a picture
3. DUT is able to add the subject to the call composer
4. After the call is initiated Reference 1 displays picture and subject before accepting the call. DUT receives picture delivery/display notification.

#### 58-1.3.9.2 Initiating session: picture file sent prior to call initiation but not finished upload when call started

**Description**

Adding a picture to the call composer and initiating the call before upload has finished.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT is able to complete sending a picture in a call composer also the actual call is already established

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT add a new picture to the call composer.
3. On the DUT initiate the call to Reference 1 right away before upload of the picture is completed.
4. Accept the call on Reference 1

Expected behaviour

1. –
2. DUT is able to add a picture
3. Reference 1 displays call composer available information (if any) by the time incoming call is received
4. Call is established and once the picture is uploaded SHALL be displayed on Reference 1. DUT receives picture delivery/display notification

#### 58-1.3.9.3 Receiving session with picture file: user still downloads the picture while incoming call

Note: Currently not applicable for TS.11

#### 58-1.3.9.4 Initiating session with picture, importance, location, subject. Change of picture, importance, location and subject before initiating the call

Description

Changing picture and subject in the call composer after intial selection before setting up a call.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports updating call composer functionalities before a call.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT add a picture to the call composer.
3. On the DUT add a subject to the call composer and wait for 60 seconds.
4. On the DUT change picture and subject in the call composer.
5. Initiate the call on DUT to Reference 1.

Expected behaviour

1. –
2. DUT is able to upload a picture
3. DUT is able to add the subject to the call composer
4. It is possible to update picture and subject in the call composer.
5. After the call is initiated Reference 1 displays the updated picture and subject before accepting the call. DUT receives picture delivery/display notification

#### 58-1.3.9.5 Initiating session with picture, connection (http and MSRP) interrupted during file upload

Note: Currently not applicable for TS.11

#### 58-1.3.9.6 Initiating session with picture >80KB

Description

Adding a picture into the call composer with a size of more than 80KB and receiving notification that pre-call added picture is received.

Related core specifications

PDD Crane v3.0 section 16.2

Reason for test

To ensure the DUT supports call composer functionalities “adding a picture”, with an image size of more than 80KB.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

DUT has an image ready with a size of more than 80 KB

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT add a picture to the call composer with a size of more than 80KB.
3. On the DUT initiate the call to Reference 1.

Expected behaviour

1. –
2. DUT is able to upload a picture with more than 80 KB, the picture will be resized in the call composer.
3. After the call is initiated Reference 1 displays the resized picture before accepting the call. DUT receives picture delivery/display notification.

#### 58-1.3.9.7 Changing call composer picture after previous picture upload is completed

Note: Currently not applicable for TS.11

#### 58-1.3.9.8 Changing call composer picture while previous picture is uploaded

Note: Currently not applicable for TS.11

#### 58-1.3.9.9 Initiating session: Entering call composer, adding picture, press call button after more than 10 minutes

Description

Making sure that after waiting 10min to initiate a call with the call composer, picture as well as importance, location and subject are still correctly forwarded and call is established.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call composer functionalities “adding a picture”, importance, location and subject after idle time.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT add a picture to the call composer.
3. On the DUT add importance, location and subject to the call composer.
4. Wait for 10 minutes
5. On the DUT initiate the call to Reference 1.

Expected behaviour

1. –
2. DUT is able to upload a picture
3. DUT is able to add importance, location and subject to the call composer
4. –
5. The call is initiated and Reference 1 displays picture, importance, location and subject before accepting the call. DUT receives picture delivery/display notification

#### 58-1.3.9.10 Initiating session: Starting call composer, but keep it open for a longer time than call composer timer idle

Note: Currently not applicable for TS.11

#### 58-1.3.9.11 Additional data to be sent (image URL)

Note: Currently not applicable for TS.11

#### 58-1.3.9.12 Use session for updating data (importance) after the call was set up but not answered yet

Description

Updating importance in the call composer while call is established.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports to update call composer functionality “importance”.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT set importance to “standard call” or something similar.
3. On the DUT initiate the call to Reference 1.
4. On Reference 1 don’t accept the call yet and check importance.
5. On the DUT change the importance to “important call” or something similar.

Expected behaviour

1. –
2. DUT is able to add importance
3. –
4. After the call is initiated Reference 1 displays importance as “standard call”
5. After updating Reference 1 displays importance as “important call”

#### 58-1.3.9.13 Re-establish session for updating data (importance) after the call was started

Note: Testcase was removed from IOT matrix

#### 58-1.3.9.14 Receiving call composer session with picture without matching call and subsequent call composer session

Description

Making sure that after waiting 10min to initiate a call with the call composer, picture as well as importance, location and subject are still correctly received and call is established.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT receives call composer functionalities “adding a picture”, importance, location and subject after idle time.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On Reference 1 start the call composer and select DUT without initiating the call yet.
2. On Reference 1 add a picture to the call composer.
3. On Reference 1 add importance, location and subject to the call composer.
4. Wait for 10 minutes
5. On Reference 1 initiate the call to DUT.

Expected behaviour

1. –
2. –
3. –
4. –
5. The call is initiated and DUT displays picture, importance, location and subject before accepting the call

#### 58-1.3.9.15 Receiving call composer session with picture without matching call and subsequent call composer session

Note: Testcase was removed from IOT matrix

#### 58-1.3.9.16 Initiating session: adding a picture and wait for display/delivery notification

Description

Adding a picture in the call composer and waiting for delivery notification before establishing the call.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT receives the delivery notification

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call Composer according to capability exchange.

Test procedure

1. On the DUT start the call composer and select Reference 1 without initiating the call yet.
2. On the DUT add a picture to the call composer

Expected behaviour

1. –
2. The picture is uploaded and DUT receives a delivery notification from the server.

#### 58-1.3.9.17 Void

### 58-1.3.10 Enriched Calling-Post Call

#### 58-1.3.10.1 Call unanswered: user leaves a note (reason)

Description

DUT sends a note to Reference 1 after an unanswered call.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call unanswered services – leaving a note.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call unanswered services.

Test procedure

1. On the DUT start the call composer, select Reference 1 and initiate the call.
2. On Reference 1 do not accept the call.
3. After the call is dropped or the DUT stops to initiate the call select to leave a note using the call unanswered service.

Expected behaviour

1. –
2. –
3. The note is displayed in the missed call log of Reference 1

#### 58-1.3.10.2 Call unanswered: user attempts to leave a note whereas MSRP session is terminated due to non receiving an MSRP SEND response

Description

DUT sends a note to Reference 1 after an unanswered call, while Reference 1 went offline.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call unanswered services – leaving a note, also Reference 1 went offline.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call unanswered services.

Test procedure

1. On the DUT start the call composer, select Reference 1 and initiate the call.
2. On Reference 1 do not accept the call.
3. After the call is dropped or the DUT stops to initiate the call switch off Reference 1
4. On DUT select to leave a note using the call unanswered service.
5. Switch on Reference 1

Expected behaviour

1. –
2. –
3. –
4. –
5. The note is displayed on Reference 1 as part of the message exchange with DUT and not in the missed call log

#### 58-1.3.10.3 Void

#### 58-1.3.10.4 Call unanswered: user attempts to leave a voice message whereas MSRP session is terminated due to non receiving an MSRP SEND response

Description

DUT sends a voice message to Reference 1 after an unanswered call, while Reference 1 went offline.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call unanswered services – leaving a voice call, also Reference 1 went offline.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call unanswered services.

Test procedure

1. On the DUT start the call composer, select Reference 1 and initiate the call.
2. On Reference 1 do not accept the call.
3. After the call is dropped or the DUT stops to initiate the call take out the battery of Reference 1
4. On DUT select to leave a note using the call unanswered service.
5. Switch on Reference 1

Expected behaviour

1. –
2. –
3. –
4. –
5. The note is displayed on Reference 1 as part of the message exchange with DUT and not in the missed call log

#### 58-1.3.10.5 Void

#### 58-1.3.10.6 Void

#### 58-1.3.10.7 User attempts to leave a note which is longer than 60 characters

Description

DUT should not be able to send a note with more than 60 characters as part of the call unanswered services.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call unanswered services – but does not allow sending a note with more than 60 characters as part of the call unanswered service.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT and Reference 1 are RCS registered

DUT and Reference 1 support Call unanswered services.

Test procedure

1. On the DUT start the call composer, select Reference 1 and initiate the call.
2. On Reference 1 do not accept the call.
3. On DUT select to send a note with more than 60 characters to Reference 1 using the call unanswered service.

Expected behaviour

1. –
2. –
3. It is not possible to send the note as part of the call unanswered services to Reference 1 with more than 60 characters.

#### 58-1.3.10.8 Legacy and offline support - reason

**Description**

DUT should be able to send a note as part of the call unanswered services also Reference 1 is not a RCS user.

Related core specifications

PDD Crane v3.0 section 12.2

Reason for test

To ensure the DUT supports call unanswered services – sending a note after an unanswered call to a non-RCS user.

Initial configuration

DUT and Reference 1 are under 3G, HSDPA or LTE

DUT and Reference 1 are RCS CPR clients

DUT is RCS registered, while Reference 1 is not RCS registered

DUT supports Call unanswered services.

Test procedure

1. On the DUT start the call composer, select Reference 1 and initiate the call.
2. On Reference 1 do not accept the call.
3. On DUT select to send a note using the call unanswered service.

Expected behaviour

1. –
2. –
3. Reference 1 receives the post-call note using the operator messaging system

# 58-2 Rich Communication Services Universal Profile 1.0 and 2.4 (RCS UP1.0 and UP2.4)

In this chapter, there are different states the DUT and/or Reference devices may be. An overview of each state can be found here:

|  |  |  |
| --- | --- | --- |
| - | State | Description |
| 1 | RCS Provisioned - Registered (Online) | RCS User.  User is registered for all RCS services. |
| 2 | RCS Provisioned - Registered (Not Reachable) | RCS User.  RCS client has performed ungraceful deregistration (battery pulled out).  Server still assumes user has RCS available. |
| 3 | RCS Provisoned - Not Registered (Offline) | RCS User.  RCS client has performed graceful deregistration (disabled data connection (Mobile data / Wi-Fi), turned their phone off, or has enabled flight mode).  Server knows user is not available for RCS. |
| 4 | RCS Not Provisioned | RCS Not Provisioned.  User has disabled RCS so they are not currently RCS registered (or have never been an RCS user).  They still have access to CS/PS/WiFi services. |

### 58-2.1 Applicability Table

*All testcases were rewritten and place into Section 58-2 or deleted.*

### 58-2.2 Capability Discover and Service Availability

#### 58-2.2.1 Capability Exchange - With non RCS Reference

Description

Capability update when adding a new user

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_2\_2\_2

Reason for test

Validate R3-3-3-1 the device updates the capability of a contact when the user enters a new contact into their address book on their device.

Initial configuration

Network allows capability discovery.

For Seamless Messaging, network does not support NFS (Network Fallback to SMS).

For intergated Messaging, device is able to indicate the messaging service (e.g. RCS Message vs. xMS) when the message is sent.

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Not Provisioned

Reference 1 is not stored in DUT’s address book

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT adds Reference 1 MSISDN to their address book. | Check in SIP protocol:  - DUT sends OPTIONS  - NW responds with 404 NOT FOUND |
| 2 | At DUT, open the messaging application and send an MO message to Reference 1. | Message is sent as SMS (not CHAT). |

#### 58-2.2.2 First time Registration over Cellular - Successful (Seamlessly)

Description

First time register on a 3GPP bearer in a RCS network.

Related core specifications

GSMA RCS - Advanced Communications: Services and Client Specification Version 5.1

jBBIG\_2\_16

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

This test aims to verify the first time registration will be done correctly on a 3GPP bearer.

Initial configuration

RCS services have not been previously configured on the DUT/SIM Card.

DUT has mobile data enabled so a data connection to a 3GPP bearer will be established when registered to the network.

DUT has Wi-Fi disabled so it will not register to any Wi-Fi hotspots when it is powered on.

DUT is powered off.

Test procedure

1. Power on DUT.
2. Confirm RCS services are available on DUT.

Expected behaviour

1. DUT camps to 3GPP bearer and a data connection is established.

DUT sends REGISTER message to the server which is rejected with 401 unauthorised.

DUT sends another REGISTER message to the server which is accepted with 200 OK.

This is done seamlessly to the user.

An optional welcome message may be displayed (which should be accepted).

1. RCS services are available (all functionalities are available).

| Step | Direction  DUT - SERVER | Protocol | Message | Comments |
| --- | --- | --- | --- | --- |
| 1 | 🡺 | HTTP | REQUEST | Without param |
| 2 | 🡸 | HTTP | 200 OK |  |
| 3 | 🡺 | HTTPS | REQUEST | With param |
| 4 | 🡸 | HTTPS | 200 OK | Contains XML config |
| 5 | 🡺 | SIP | REGISTER |  |
| 6 | 🡸 | SIP | SIP 401 Unauthorised |  |
| 7 | 🡺 | SIP | REGISTER |  |
| 8 | 🡸 | SIP | 200 OK | Registration successful |

#### 58-2.2.3 Configuration – change of default messaging service

Description

Change of default messaging application

Related core specifications

GSMA RCS - Advanced Communications: Services and Client Specification Version 5.1

GSMA joyn Blackbird Product Definition Document 2.3.5.1.1

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

This test aims to verify that it’s possible to change from RCS messaging to non RCS messaging and back again.

Initial configuration

RCS first time registration has already been done and have a working RCS messaging application.

DUT has mobile data enabled so a data connection to a 3GPP bearer will be established.

DUT has Wi-Fi disabled

Reference is RCS registered and have a working RCS messaging application.

Test procedure

1. User changes default messaging application to a non RCS messaging (SMS) application as default.
2. DUT sends a message to Reference
3. User changes default messaging application back to a RCS messaging application as default.
4. DUT sends a message to Reference

Expected behaviour

1. DUT changes default messaging application. Inspect HTTP/HTTPS request includes new GET parameters (rcs\_version, rcs\_profile, default\_sms\_app= 2)
2. Reference receives SMS
3. DUT changes to RCS messaging application. Inspect HTTP/HTTPS request includes new GET parameters (rcs\_version, rcs\_profile, default\_sms\_app= 1)
4. Reference receives an RCS chat message.

#### 58-2.2.4 First time Registration over Wi-Fi - Successful (Seamlessly)

Description

First time registration on a non-3GPP bearer in an BB/CPR network.

Related core specifications

GSMA RCS - Advanced Communications: Services and Client Specification Version 5.1

jBBIG\_2\_16

jBBIG\_2\_24

jBBIG\_2\_26

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

This test aims to verify the first time registration will be done correctly on a non-3GPP bearer.

Initial configuration

RCS services have not been previously configured on the DUT/SIM Card.

DUT can handle SMS messages with the OTP in the background.

DUT has mobile data disabled so no data connection to a 3GPP bearer can be established when registered to the network.

DUT has Wi-Fi enabled so it will register to a Wi-Fi hotspot when it is powered on.

SIM card used in DUT has MSISDN field populated with the correct MSISDN of the SIM.

DUT is powered off.

Test procedure

1. Power on DUT.
2. Confirm RCS services are available on DUT.

Expected behaviour

1. DUT camps to a 3GPP bearer but no data connection is established.

DUT connects to the Wi-Fi hotspot.

DUT sends HTTP REQUEST with MSISDN included to the server which is accepted with 200 OK.

Server sends SMS with OTP to the DUT which is handled seamlessly.

DUT sends REGISTER message to the server which is rejected with 401 unauthorised.

DUT sends another REGISTER message to the server which is accepted with 200 OK.

This is done seamlessly to the user.

An optional welcome message may be displayed (which should be accepted).

1. RCS services are available (all functionalities are available).

| Step | Direction  DUT - SERVER | Protocol | Message | Comments |
| --- | --- | --- | --- | --- |
| 1 | 🡺 | HTTPS | REQUEST | MSISDN included in message. |
| 2 | 🡸 | HTTP | 200 OK |  |
| 3 | 🡸 | SMS | OTP | OTP will happen Seamlessly |
| 4 | 🡺 | HTTPS | REQUEST [OTP] |  |
| 5 | 🡸 | HTTPS | 200 OK | Contains XML config |
| 6 | 🡺 | SIP | REGISTER |  |
| 7 | 🡸 | SIP | SIP 401 Unauthorised |  |
| 8 | 🡺 | SIP | REGISTER |  |
| 9 | 🡸 | SIP | 200 OK | Registration successful |

#### 58-2.2.5 First time Registration over Wi-Fi - Successful (Valid MSISDN entered manually)

*Note: Not applicable to devices that don't support msisdn entry.*

Description

A successful configuration is done with MSISDN because IMSI validation is not supported.

Related core specifications

GSMA RCS - Advanced Communications: Services and Client Specification Version 5.1

jBBIG\_2\_16

jBBIG\_2\_23

jBBIG\_2\_26

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

Verify that the User can be registered with the MSISDN whilst the IMSI cannot be validated by the network.

Initial configuration

RCS services have not been previously configured on the DUT/SIM Card.

DUT has mobile data disabled so no data connection to a 3GPP bearer can be established when registered to the network.

DUT has Wi-Fi enabled so it will register to a Wi-Fi hotspot when it is powered on.

SIM card used in DUT has MSISDN field empty.

IMSI provisioning is not available in the network.

DUT is powered off.

Test procedure

1. Power on DUT.
2. Enter a valid MSISDN.

Optionally enter the valid OTP if requested.

1. Confirm RCS services are available on DUT.

Expected behaviour

1. DUT camps to a 3GPP bearer but no data connection is established.

DUT connects to the Wi-Fi hotspot.

DUT sends HTTP Request to the server which is rejected with 403 Forbidden because the MSISDN cannot be verified.

A popup is displayed on DUT requesting to enter the MSISDN manually.

Valid MSISDN is entered.

1. DUT sends HTTP REQUEST with MSISDN included to the server which is accepted with 200 OK.

Server sends SMS with OTP to the DUT which is either handled seamlessly or may request the user to enter the OTP manually. This is dependent on the DUT supporting OTP in the background or not.

DUT sends REGISTER message to the server which is rejected with 401 unauthorised.

DUT sends another REGISTER message to the server which is accepted with 200 OK.

1. An optional welcome message may be displayed (which should be accepted).

RCS services are available (all functionalities are available).

| **Step** | **Direction**  **DUT - SERVER** | **Protocol** | **Message** | **Comments** |
| --- | --- | --- | --- | --- |
| 1 | 🡺 | HTTPS | REQUEST | MSISDN not included in message. |
| 2 | 🡸 | HTTPS | 403 Forbidden |  |
| User enters valid MSISDN manually | | | | |
| 3 | 🡺 | HTTPS | REQUEST | MSISDN included in message. |
| 4 | 🡸 | HTTPS | 200 OK |  |
| 5 | 🡸 | SMS | OTP | User may be prompted to enter OTP manually or OTP will happen Seamlessly |
| 6 | 🡺 | HTTPS | REQUEST [OTP] |  |
| 7 | 🡸 | HTTPS | 200 OK | Contains XML config |
| 8 | 🡺 | SIP | REGISTER |  |
| 9 | 🡸 | SIP | SIP 401 Unauthorised |  |
| 10 | 🡺 | SIP | REGISTER |  |
| 11 | 🡸 | SIP | 200 OK | Registration successful |

#### 58-2.2.6 Registration after SIM swap - Successful (With RCS Provisioned SIM)

Description

Swapping an RCS provisioned SIM card with another RCS provisioned SIM card and then re-introducing the original RCS provisioned SIM card back into the device.

Related core specifications

GSMA RCS - Advanced Communications: Services and Client Specification Version 5.1

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

To ensure that if a SIM swap takes place where SIM 1 is replaced by SIM 2, a First time Registration will take place with SIM card 2. However, when SIM card 1 is re-introduced, the initial RCS configuration is restored (and no First time registration takes place).

**Initial configuration**

SIM card 1 is available and provisioned for RCS services.

SIM card 2 is available and provisioned for RCS services.

DUT is powered on with SIM card 1 and it is successfully registered for RCS services.

Test procedure

1. Power off DUT.
2. Remove SIM card 1 and insert SIM card 2 into DUT.
3. Power on DUT.
4. Power off DUT.
5. Remove SIM card 2 and re-insert SIM card 1 into DUT.
6. Power on DUT.

Expected behaviour

1. DUT de-registers from RCS and is powered off. During the procedure, the client shall securely backup the RCS configuration with SIM card 1 along with the associated IMSI.
2. SIM card 2 is inserted.
3. DUT is powered on with SIM card 2 and it successfully performs a First time registration for RCS services.
4. DUT de-registers from RCS and is powered off. During the procedure, the client shall securely backup the RCS configuration with SIM card 2 along with the associated IMSI.
5. SIM card 1 is re-inserted.
6. DUT is powered on with SIM card 1 and it successfully performs a registration with the initial RCS configuration from previously (no First time registration takes place).

The RCS UX and services remain in the same condition as in the initial configuration above.

Note: Depending on the UI implementation it may be possible to access the chat history and other data for the previous SIM card.

#### 58-2.2.7 First-time unsuccessful configuration over Cellular: server not responding

Description

Errors should be handled during the configuration/provisioning process. (First-time unsuccessful configuration over Cellular: server not responding).

Related core specifications

GSMA RCC.71 UP1.0: US2-11 and RCC.71 UP2.4: US2-11

Reason for test

To validate RCC.71 UP1.0 and UP2.4 US2-11 subsequent requirements.

Initial configuration

1. ACS ready to fulfil the requirements described in RCC.14
2. ACS configured according to test purpose: Not responding to first config request.
3. SIM card is enabled to use RCS UP
4. RCS services have not been previously configured on the phone/SIM pair
5. DUT in cellular coverage
6. DUT is powered off
7. This testing can be carried out under the simulator.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT is powered on and contacts ACS. The ACS does not respond (request timeout). | Configuration does not take place and RCS not enabled as the configuration is not successful. |
| 2 | Reboot DUT. | Following a reboot DUT retries the configuration. Configuration successfully takes place. |

#### 58-2.2.8 First-time unsuccessful configuration: subscriber unauthorized

Description

Errors should be handled during the configuration/provisioning process. (First-time unsuccessful configuration over Cellular: subscriber unauthorized.)

Related core specifications

GSMA RCC.71 UP1.0: US2-11 and RCC.71 UP2.4: US2-11

Reason for test

To validate RCC.71 UP1.0 and UP2.4 US2-11 subsequent requirements.

Initial configuration

1. ACS ready to fulfil the requirements described in RCC.14
2. ACS/Backend configured according to test purpose
3. SIM card is enabled to use RCS UP
4. RCS services have not been previously configured on the phone/SIM pair
5. DUT in cellular coverage
6. DUT is powered off
7. This testing can be carried out under the simulator.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT is powered on and contacts ACS.  The ACS generates a 403 response (to the HTTP transaction). | RCS on DUT not enabled as the configuration is not successful  . |
| 2 | Following a reboot DUT retries the configuration. | Configuration takes places seamlessly to the user. |

#### 58-2.2.9 First-time unsuccessful configuration over Wi-Fi: invalid MSISDN

Description

Errors should be handled during the configuration/provisioning process. (First-time unsuccessful configuration over Wi-Fi:invalid MSISDN.)

Related core specifications

GSMA RCC.71 UP1.0 US2-11 and RCC.71 UP2.4 US2-11

Reason for test

To validate UP1.0 andUP2.4 US2-11 subsequent requirements.

Initial configuration

1. ACS ready to fulfil the requirements described in RCC.14
2. ACS setup according to Test procedure
3. SIM card is enabled to use RCS UP
4. IMSI validation is not supported by the network
5. RCS services have not been previously configured on the phone/SIM
6. DUT is under WiFi
7. DUT is powered off
8. This testing can be carried out under the simulator.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT is powered on and contacts ACS. | The user is prompted to provide a MSISDN for the current device. |
| 2 | An invalid MSISDN (too many or too few digits) is entered. | DUT should inform the user of the problem and may offer to retry with a different MSISDN l |
| 3 | Enter the correct MSISDN on DUT. | DUT retries the configuration. RCS is enabled. |

#### 58-2.2.10 First-time unsuccessful configuration over Wi-Fi: subscriber unauthorized

Description

Errors should be handled during the configuration/provisioning process. (First-time unsuccessful configuration over Wi-Fi: subscriber unauthorized.)

Related core specifications

GSMA RCC.71 UP1.0 US2-11 and RCC.71 UP2.4 US2-11

Reason for test

To validate RCC.71 UP1.0 and UP2.4 US2-11 subsequent requirements.

Initial configuration

1. ACS ready to fulfil the requirements described in RCC.14
2. SIM card is enabled to use RCS UP
3. RCS services have not been previously configured on the phone/SIM
4. DUT is under WiFi
5. This testing can be carried out under the simulator.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT is powered on and contacts ACS. | The user is prompted to provide a MSISDN for the current device. |
| 2 | When prompted an MSISDN belonging to different MNO is entered. ACS validates the SIM/phone based on MSISDN provided and generates a 403 response. | RCS is not enabled on DUT. User can use other default message services. |

#### 58-2.2.11 First-time unsuccessful configuration over Wi-Fi:OTP invalid

Description

Errors should be handled during the configuration/provisioning process. (First-time unsuccessful configuration over Wi-Fi: OTP invalid.)

Related core specifications

GSMA RCC.71 UP1.0 US2-11 and RCC.71 UP2.4 US2-11

Reason for test

To validate RCC.71 UP1.0 and UP 2.4 US2-11 and subsequent requirements.

Initial configuration

1. ACS ready to fulfil the requirements described in RCC.14
2. SIM card is enabled to use RCS UP
3. RCS services have not been previously configured on the phone/SIM
4. DUT is under WiFi
5. DUT cannot handle the SMS with the OTP silently in the background
6. This testing can be carried out under the simulator.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT is powered on and contacts ACS. | Configuration takes place seamlessly to the user or the user is prompted to provide a MSISDN for the current device. |
| 2 | DUT’s user enters correct MSISDN. | DUT’s User is prompted to provide the OTP received through SMS |
| 3 | DUT’s user enters an incorrect OTP. | RCS is not enabled on DUT, as the configuration is not successful. |

### 58-2.3 1-to-1 Messaging

This section tests the different types of 1-to-1 messaging.

The DUT may use an integrated messaging whereby different message types are proposed to the end user, threaded together in a conversation and can be changed by the user. In this experience the message type used to deliver a message is indicated to the user.

The network may support seamless messaging whereby the user does not have to choose the messaging technology used but the device / network determines which messaging technology is used.

The DUT may also use Standalone messaging where the RCS application is Standalone.

#### 58-2.3.1 MO 1-to-1 Chat (Integrated Messaging) - Simultaneous Conversations (With Reference RCS Provisioned - Registered (Online) and Reference Not Provisioned)

Description

1-to-1 Chat can use intergrated messaging where the user can configure the message type (Chat/SMS/MMS). These are handled within the same intergrated applicaton.

The DUT can send Chat and SMS messages simultaneously depending on the status of the reference device.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_2

Reason for test

The test confirms DUT has integrated messaging implemented correctly. Chat will be used with RCS references and SMS/MMS will be used with non RCS clients.

UP-1.0 and UP2.4. Reference section US5.2 - Integrated Messaging (and subsequent requirements)

Initial configuration

DUT and Reference 1’s RCS Service Provider supports Integrated Messaging.

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Not Provisioned

DUT and Reference 1 already exchanged RCS messages before.

DUT and Reference 2 already exchanged SMS messages before.

On DUT the user setting for the proposed messaging service (R18-12-1) is set to default "Propose Messaging Service"

The proposed messaging service is not latched to SMS (see R5-2-4-6).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT select the conversation history with Reference 1 and open the input field for creating a new message. | The suggested messaging service is Chat. |
| 2 | Send a message to Reference 1. | The message is sent as Chat.  DUT and Reference 1 are aware that the message was sent over Chat. |
| 3 | Change the proposed messaging service on DUT from Chat to SMS and then back to Chat. | The proposed messaging service can be changed manually to SMS and back to Chat. |
| 4 | On DUT select the conversation history with Reference 2. Open the input field for creating a new message. | The suggested messaging service is SMS/MMS. |
| 5 | Send a message to Reference 2. | The message is sent as SMS.  DUT and Reference 2 are aware that the message was sent over SMS. |
| 6 | On DUT try and change the messaging service to Chat. | It shall not be possible to change the proposed messaging service to Chat because Reference 2 is RCS Not Provisioned. |

#### 58-2.3.2 MO 1-to-1 Chat (Integrated Messaging) - Reference RCS Provisoned - Not Registered (Offline) - Client Fallback to SMS

Description

1-to-1 Chat can use intergrated messaging where the user can configure the message type (Chat/SMS/MMS). These are handled within the same intergrated applicaton.

Network supporting Client Fallback to SMS (CFS)

If a message is not delivered after the CFS timer has expired, the user shall be prompted to send it as an SMS.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_3

Reason for test

This test confirms the DUT can use CFS correctly when a message cannot be delivered by Chat.

UP-1.0 and UP2.4. Reference section R5-2-2-1-2. CFS

Initial configuration

DUT and Reference 1’s operator(s) support Integrated Messaging.

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisoned - Not Registered (Offline)

DUT and Reference 1 already exchanged RCS messages before.

Network supports Client Fallback to SMS (CFS).

The CFS Timer is set to 5 minutes (no user setting).

The user setting (as described in US18-13 / R5-2-4-4) "re-send as SMS" is set to "always ask".

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT enter the conversation with Reference 1. Create and send a message on the DUT as Chat. | The status of the message is 'sent' and remains ‘sent’ (and does not change to 'delivered'). |
| 2 | Wait for more than 5 minutes. | After 5 Minutes, the DUT informs the user that the message could not be delivered and offers to re-send the message as SMS. |
| 3 | Select to re-send as SMS on DUT. | The message is re-sent as SMS. On the DUT there is no indication that the original RCS 1-to-1 Message has been sent to Reference 1. The original Chat message is removed from the conversation history. In the conversation history an SMS message is indicated to be sent. |
| 4 | Send three more messages on the DUT in the messaging screen to Reference 1. | The messaging service is latched to SMS. The DUT is not asked again to re-send as SMS for future messages. The DUT stays in ‘SMS mode’ as long as the availability of Reference 1 for Chat Messaging has not been re-confirmed. |
| 5 | Go online on Reference 1’s device (e.g. by enabling cellular data or WiFi). | Reference 1 is RCS Provisioned - Registered (Online) |
| 6 | DUT leaves the conversation with the Reference 1. | DUT is back on home screen. |
| 7 | DUT re-enters the conversation with Reference 1 again and sends another message. | The proposed messaging service on DUT changes to Chat. The message is sent as a Chat Message. Reference 1 receives the Chat Message from DUT. |

#### 58-2.3.3 MO 1-to-1 Chat (Integrated Messaging) - DUT RCS Provisioned – Not Registered (Offline) - Sent when back online

Description

1-to-1 Chat can use intergrated messaging where the user can configure the message type (Chat/SMS/MMS). These are handled within the same intergrated applicaton.

If a message is sent when DUT has no cellular connection, it should send the message when it is back online.

Related core specifications

This test confirms that a message will be sent over Chat when brought back online.

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_4

Reason for test

UP-1.0 and UP2.4. Reference section R5-2-2-1-2. CFS

Initial configuration

DUT and Reference 1’s operator(s) support Integrated Messaging.

DUT is RCS Provisoned – Not Registered (Offline) – Flight mode enabled.

Reference 1 is RCS Provisioned - Registered (Online)

DUT and Reference 1 already exchanged RCS messages before.

DUT 1 is not latched to SMS in communication with Reference 1.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, create an MO message and send to Reference 1. | Messages shall be created as Chat Message. |
| 2 | At DUT, disable Flight Mode so DUT is in the state RCS Provisioned - Registered (Online) | Message is sent as Chat when DUT is online again. |

#### 58-2.3.4 MO 1-to-1 Chat (Integrated Messaging) - DUT RCS Provisoned - Not Registered (Offline) - Sent as SMS

Description

1-to-1 Chat can use intergrated messaging where the user can configure the message type (Chat/SMS/MMS). These are handled within the same intergrated applicaton.

If the DUT doesn’t have an active data connection, it shall automatically send all messages via SMS.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_5

Reason for test

This test confirms the DUT can send SMS messages to an RCS reference when the DUT has no data connection.

UP-1.0 and UP2.4. Reference section R5-2-2-2-4. CFS

Initial configuration

DUT and Reference 1’s operator(s) support Integrated Messaging.

DUT is RCS Provisoned - Not Registered (Offline) – no data connection.

Reference 1 is RCS Provisioned - Registered (Online)

DUT and Reference 1 already exchanged RCS messages before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT re-enters the conversation with Reference 1 again and creates a message. | The proposed messaging service is SMS before and during the process of creating a new message. |
| 2 | DUT sends the message. | The message is sent as SMS.  DUT and Reference 1 are aware that the message was sent over SMS. |

#### 58-2.3.5 MO 1-to-1 Chat (Integrated Messaging) - Reference RCS Provisoned - Not Registered (Offline) - Network Fallback to SMS

Description

1-to-1 Chat can use intergrated messaging where the user can configure the message type (Chat/SMS/MMS). These are handled within the same intergrated applicaton.

Network supporting Network Fallback to SMS (NFS)

If a message cannot be delivered as Chat then the network will deliver it as an SMS.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_6

Reason for test

This test confirms that is a DUT sends a Chat message to a Reference that is not currently RCS registered, the network will deliver the message as an SMS.

UP-1.0 and UP2.4. Reference section R5-2-3. NFS

Initial configuration

DUT and Reference 1’s operator(s) support Integrated Messaging.

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisoned - Not Registered (Offline)

DUT and Reference 1 already exchanged RCS messages before.

Reference 1 network supports Network Fallback to SMS (NFS).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT enters 1-to-1 Messaging with Reference 1 and creates a new message. | The proposed messaging service is Chat. |
| 2 | DUT sends the message. | Message is sent and indicated as Chat. Reference 1 receives the message as SMS.  DUT displays an indication that message was sent via SMS. |

#### 58-2.3.6 MO 1-to-1 Chat (Seamless Messaging) - Simultaneous Conversations (Messages and Files)

Description

1-to-1 Chat can use seamless messaging where the network will decide on the best way to deliver the message (Chat/SMS/MMS).

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_7

Reason for test

This test verifies the DUT can send to different Reference devices, each with a different RCS status.

UP-1.0 and UP2.4. Reference section R5-3-1, R5-3-2, R5-3-3, R5-3-7, Seamless Messaging

Initial configuration

DUT, Reference 1, 2, 3 and 4’s operator support Seamless Messaging.

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Not Reachable

Reference 3 is RCS Provisoned - Not Registered (Offline)

Reference 4 is RCS Not Provisoned

All parties are stored in each other’s contact lists.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a message containing text to Reference 1. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 2 | DUT sends a file to Reference 1. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 3 | Reference 1 sends a message containing text to DUT. | The message is received successfully on DUT.  User does not know the type of message being received (Chat/xMS). |
| 4 | Reference 1 sends a file to DUT. | The message is received successfully on DUT.  User does not know the type of message being received (Chat/xMS). |
| 5 | DUT sends a message containing text to Reference 2. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 2 and DUT presents a “delivered” Message-Status Notification. |
| 6 | DUT sends a file to Reference 2. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 2 and DUT presents a “delivered” Message-Status Notification. |
| 7 | DUT sends a message containing text to Reference 3. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 3 and DUT presents a “delivered” Message-Status Notification. |
| 8 | DUT sends a file to Reference 3. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  Delivery Status remains as “Sent” |
| 9 | DUT sends a message containing text to Reference 4. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  Delivery Status remains as “Sent” |
| 10 | DUT sends a file to Reference 4. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  Delivery Status remains as “Sent” |

#### 58-2.3.7 MO 1-to-1 Chat (Seamless Messaging) - DUT RCS Provisoned - Not Registered (Offline) - File Transfer queued

Description

1-to-1 Chat can use seamless messaging where the network will decide on the best way to deliver the message (Chat/SMS/MMS).

If the DUT doesn’t have an active data connection, the network shall deliver the message as via xMS.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_9

Reason for test

This test confirms if the DUT does not have a data connection, then the message is delivered over xMS. In this case, because a file is being sent, the network cannot deliver it and the file sending is queued.

UP-1.0 and UP2.4. Reference section R5-3-5, Seamless Messaging

Initial configuration

DUT and Reference 1’s operator support Seamless Messaging and MMS.

DUT is RCS Provisoned - Not Registered (Offline) – No data connection.

Reference 1 is RCS Provisioned - Registered (Online)

All parties are stored in each other’s contact lists.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT enters the messaging application.  DUT sends a message to Reference 1. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 2 | DUT sends a file to Reference 1. | The file shall be queued for delivery on DUT and the user is informed about the queuing of files. |
| 3 | At DUT, enable mobile data. | DUT is RCS Provisioned - Registered (Online).  The file is successfully received on Reference 1 and DUT presents a “delivered” File Transfer Status Notification.  (The message was delivered via Chat or MMS without the user knowing the way the network delivered it). |

#### 58-2.3.8 MO 1-to-1 Chat (Seamless Messaging) - DUT RCS Not Provisioned - File Transfer via MMS

Description

1-to-1 Chat can use seamless messaging where the network will decide on the best way to deliver the message (Chat/SMS/MMS).

If the DUT doesn’t have an active RCS registration, the network shall deliver the message as via xMS.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_10

Reason for test

UP-1.0 and UP2.4. Reference section R5-3-6, Seamless Messaging

Initial configuration

DUT and Reference 1’s operator support Seamless Messaging and MMS.

DUT is RCS Not Provisioned – RCS disabled.

Reference 1 is RCS Provisioned - Registered (Online)

All parties are stored in each other’s contact lists.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT enters the messaging application.  DUT sends a message to Reference 1. | User does not know the type of message being sent (Chat/xMS).  The message is successfully sent.  The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 2 | DUT sends a file to Reference 1. | The file is successfully received on Reference 1 and DUT presents a “delivered” File Transfer Status Notification.  (The message was delivered via MMS without the user knowing the way the network delivered it). |

#### 58-2.3.9 MO 1-to-1 Chat - DUT RCS Provisioned - Registered (Online) - Emoji

Description

In 1-to-1 Chat, the user shall be able to send Emoji regardless of integrated or seamless messaging being used by the network.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_11

Reason for test

This test confirms that simleys can be sent via RCS Chat. It also checks for typing notifications.

UP-1.0 and UP2.4. Reference sections US5-4 (sending messages); US5-5 (Sent Message States) ; US5-6 (Emoji); US5-7 (Is Typing Notification) and subsequent requirements.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT has Reference 1 stored as contact in his address-book.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT selects Reference 1 from his contact list and sends a new message with a random selection ofiEmoji. | Emoji are represented appropriately.  Message is sent successfully via Chat.  On DUT the sent message states are presented: 'pending', 'sent', 'delivered'. |
| 2 | On DUT select “create a message”, enter Reference 2’s MSISDN and then create a message (including a random selection of Emoji) and send message. | While entering Reference 2’s MSISDN, the RCS capability is detected in the background without any user information or interaction. The proposed messaging service is Chat.  Emoji are represented appropriately.  Message is sent successfully via Chat.  On DUT the sent message states are presented: 'pending', 'sent', 'delivered'. |
| 3 | Open the received messages on Reference 1 and 2. | The sent message state on DUT change to 'displayed' in the conversations with Reference 1 and 2 |
| 4 | On DUT start typing another message to Reference 1, while the conversation history is open on Reference 1 | An “Is-Typing”-Notification is shown on Reference 1's device (if supported by the network). |

#### 58-2.3.10 MT 1-to-1 Chat - DUT RCS Provisioned - Registered (Online) - Visual and Audio notifications

Description

Receiving Messages while messaging application is closed and device in Stand-by-mode.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_12

Reason for test

UP-1.0 and UP2.4. Reference sections US5-9, US5-10, US5-11, US5-12, US5-13 (and subsequent requirements): Receiving messages.

Initial configuration

DUT is RCS Provisoned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

DUT has audio notifications enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 1 sends a Message to DUT. | DUT is notified appropriately when a new message arrives.  - Audible notifications (as applicable for a new message)  - Visual notifications (as applicable for a new message) |
| 2 | AT Reference 1, disable RCS. | Reference is RCS Not Provisioned. |
| 3 | Reference 1 sends a Message to DUT. | DUT is notified appropriately when a new message arrives.  - Audible notifications (as applicable for a new message)  - Visual notifications (as applicable for a new message) |
| 4 | DUT selects the notification to open the messages. | Visual notifications are removed whenever DUT has accessed these in the Conversation History.  Messages are displayed in the order they were received, with correct time stamp. |

#### 58-2.3.11 Void

#### 58-2.3.12 1-to-1 Chat - Backup & Restore server

Description

Some servers may offer a Backup & Restore option for restoring a users messages when they change or reset the phone.

Related core specifications

This test confirms a user can successfully restore messages.

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_15

Reason for test

UP-1.0 US5-21, US5-22 and UP2.4. Reference section US5-19, US5-20 (Backup & Restore) and subsequent requirements

Initial configuration

DUT is RCS Provisioned - Registered (Online)

DUT has multiple existing messaging conversations with different References in message history.

DUT’s RCS Service Provider supports backup & restore

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Delete 3 messages or files from DUT (in different conversations). | Messages are deleted on DUT. |
| 2 | Reset DUT to factory settings and Re-Boot. | DUT is reset to factory settings and reboots. |
| 3 | Open the messaging application on DUT. | The messaging application is wiped, no existing conversations SHALL exist. |
| 4 | Select “restore conversation from RCS service provider storage” on DUT. | All messaging conversations and all content from each conversation shall be restored except:   * Those messages and files which have been deleted by the service provider in the cloud storage because of capacity limits. * The 3 previously deleted messages/files shall not be restored. |

#### 58-2.3.13 Void

#### 58-2.3.14 Void

#### 58-2.3.15 MO Standalone Messaging - Simultaneous Conversations (Short and Long messages)

Description

Sending short and long messages.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_7

Reason for test

UP-1.0 and UP2.4. Reference section R5-3-1, R5-3-2, R5-3-3, R5-3-7, Seamless Messaging

Initial configuration

DUT, Reference 1, 2, 3 and 4’s operator support Seamless Messaging.

DUT, Reference 1, 2, 3 and 4 are registered RCS users.

DUT and Reference 1 are online (connected via HSPA, LTE, 5G or Wi-Fi) .

Reference 2 is not online but connected to cellular (CS and data).

Reference 3 is offline but connected to CS (no cellular data connection).

Reference 4 is offline and not connected to cellular

All parties are stored in each other’s contact lists.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a short text (less than 1300 bytes (650 UCS-2 characters)) to Reference 1. | The message is received successfully on Reference 1 and on DUT the message is presented with a “delivered” Message-Status. |
| 2 | DUT sends a long text (more than 1300 characters1300 bytes (650 UCS-2 characters)) to Reference 1. | The message is received successfully on Reference 1 and on DUT the message is presented with a “delivered” Message-Status. |
| 3 | Reference 1 sends a short text (less than 1300 bytes (650 UCS-2 characters)) to DUT. | The message is received successfully on DUT. |
| 4 | Reference 1 sends a long text (more than 1300 characters1300 bytes (650 UCS-2 characters)) to DUT. | The message is received successfully on DUT. |
| 5 | DUT sends a short text (less than 1300 bytes (650 UCS-2 characters)) to Reference 2. | The message is received successfully on Reference 2 and on DUT the message is presented with a “delivered” Message-Status. |
| 6 | DUT sends a long text (more than 1300 characters1300 bytes (650 UCS-2 characters)) to Reference 2. | The message is received successfully on Reference 2 and on DUT the message is presented with a “delivered” Message-Status. |
| 7 | DUT sends a short text (less than 1300 bytes (650 UCS-2 characters)) to Reference 3. | The message is received successfully on Reference 3 and on DUT the message is presented with a “delivered” Message-Status. |
| 8 | DUT sends a long text (more than 1300 characters1300 bytes (650 UCS-2 characters)) to Reference 3. | The message is successfully sent from DUT. |
| 9 | DUT sends a short text (less than 1300 bytes (650 UCS-2 characters)) to Reference 4. | The message is successfully sent from DUT. |
| 10 | DUT sends a long text (more than 1300 characters1300 bytes (650 UCS-2 characters)) to Reference 4. | The message is successfully sent from DUT. |

#### 58-2.3.16 MO Standalone Messaging - To RCS Reference (DUT only attached to CS network - File Transfer queued)

Description

Sending RCS message and file when DUT is in CS service (no cellular data)

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_9

Reason for test

UP-1.0 and UP2.4. Reference section R5-3-5, Seamless Messaging

Initial configuration

DUT and Reference 1’s operator support Seamless Messaging.

DUT and Reference 1 are registered RCS users.

DUT is offline but connected to cellular CS service (no cellular data).

Reference 1 is online.

All parties are stored in each other’s contact lists.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a short text (less than 1300 bytes (650 UCS-2 characters)) to Reference 1.characters) to Reference 1. | The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 2 | DUT sends a file to Reference 1. | The file shall be queued for delivery on DUT and the user is informed about the queuing of files. |

#### 58-2.3.17 MO Standalone Messaging - To RCS Reference (DUT Online but without RCS Registration - File Transfer via MMS)

Description

Sending RCS messages and a file when DUT is in cellular data

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_10

Reason for test

UP-1.0 and UP2.4. Reference section R5-3-6, Seamless Messaging

Initial configuration

DUT and Reference 1’s operator support Seamless Messaging and MMS.

DUT and Reference 1 are registered RCS users.

DUT is offline but connected to cellular data.

Reference 1 is online.

All parties are stored in each other’s contact lists.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a short text (less than 1300 characters) to Reference 1. | The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 2 | DUT sends a long text (more than 1300 characters) to Reference 1. | The message is received successfully on Reference 1 and DUT presents a “delivered” Message-Status Notification. |
| 3 | DUT sends a file to Reference 1. | The file is successfully received on Reference 1 and DUT presents a “delivered” File Transfer Status Notification. |

#### 58-2.3.18 MO Standalone Messaging - To RCS Reference (Emoji)

Description

Sending RCS messages including Emoji

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_11

Reason for test

UP-1.0 and UP 2.4. Reference sections US5-4 (sending messages); US5-5 (Sent Message States) ; US5-6 (Emoji); US5-7 (Is Typing Notification) and subsequent requirements.

Initial configuration

DUT, Reference 1 and 2 are online (connected via HSPA, LTE, 5G or Wi-Fi) .

DUT, Reference 1 and 2 are registered RCS users.

DUT has Reference 1 stored as contact in his address-book but not Reference 2.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT selects Reference 1 from his contact list and sends him a new message with a random selection of Emoji. | Message is sent as an RCS 1-to-1 Message. On DUT the sent message states are presented: 'pending', 'sent', 'delivered'. Emoji are represented appropriately. |
| 2 | On DUT select “create a message”, enter Reference 2’s MSISDN and then create a message (including a random selection of Emoji) and send message. | While entering Reference 2’s MSISDN, the RCS capability is detected in the background without any user information or interaction. The proposed messaging service is RCS 1-to-1 Messaging. The Sent Message States on DUT are presented: 'pending', 'sent', 'delivered'. Emoji are represented appropriately. |
| 3 | Check received messages on Reference 1 and 2. | The sent message state on DUT change to 'displayed' in the conversations with Reference 1 and 2 |
| 4 | On DUT send another message to Reference 1, while the conversation history is open on Reference 1 | An “Is-Typing”-Notification is shown on Reference 1's device (if supported by the network). |

#### 58-2.3.19 MT Standalone Messaging - Visual and Audio notification of new messages

Description

Receiving Messages while messaging application is closed and device in Stand-by-mode.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_12

Reason for test

UP-1.0 and UP2.4. Reference sections US5-9, US5-10, US5-11, US5-12, US5-13 (and subsequent requirements): Receiving messages.

Initial configuration

DUT and Reference 1 are online (connected via HSPA, LTE, 5G or Wi-Fi) .

DUT and Reference 1 are registered RCS users and known to be RCS capable.

DUT has closed the messaging application and screen is in stand-by-mode.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 1 sends a 1-to-1 Message to DUT. | DUT is notified appropriately when a new message arrives. Audible notifications are subject to "silent" and "vibration" mode of the device. |
| 2 | Reference 1 sends a SMS Message to DUT. | The message is received on DUT in the conversation history with Reference 1. |
| 3 | DUT selects the notification to open the messages. | Visual notifications are removed whenever DUT has accessed these in the Conversation History.  All the different operator messages are lined up in the same conversation history with Reference 1 on DUT. Messages are displayed in the order they were received, with correct time stamp. |

#### 58-2.3.20 Void

#### 58-2.3.21 Standalone Messaging - Successful handling of Simultaneous Conversations (Concurrently)

Description

Verifying that a new conversation with another use can be established during a concurrent conversation

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_14

Reason for test

UP-1.0 and UP2.4. Reference section US5-17 (Messaging conversation as Service Access Point for sharing) and US5-18 (Maintain multiple conversations in parallel) and subsequent requirements.

Initial configuration

DUT’s device is online

Reference 1’s device is online and known to be RCS capable to DUT’s device.

Reference 2’s device is online and known to be RCS capable to DUT’s device.

DUT’s device has existing 1-to-1 Messaging conversations with Reference 1 and Reference 2.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Access Conversation with Reference 1 on DUT's device.Send a message on the DUT device as RCS 1-to-1 Messaging to Reference 1. | Service entry points to add a photo, video, audio message, any selected file or geolocation shall be available. |
| 2 | Switch to the conversation with Reference 2 and send a message on the DUT device as RCS 1-to-1 Messaging to Reference 2. | DUT is able to switch between conversations and maintain conversations successively. |
| 3 | Switch back to the conversation with Reference 1 and send a message to Reference 1. | DUT is able to switch between conversations and maintain conversations successively. |

#### 58-2.3.22 Standalone Messaging - Backup & Restore server

Description

Backup & Restore from messages.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_15

Reason for test

UP-1.0 US5-21, US5-22 and UP2.4. Reference section US5-19, US5-20(Backup & Restore) and subsequent requirements

Initial configuration

DUT is online (connected via HSPA, LTE,5G or Wi-Fi) .

DUT is a registered RCS user with existing messaging conversations

DUT’s RCS Service Provider supports backup & restore

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Delete 3 messages or files from DUT (in different conversations). | Messages are deleted on DUT. |
| 2 | Reset DUT to factory settings and Re-Boot. | DUT is reset to factory settings and reboots. |
| 3 | Open the messaging application on DUT. | The messaging application is wiped, no existing conversations SHALL exist. |
| 4 | Select “restore conversation from RCS service provider storage” on DUT. | All messaging conversations and all content from each conversation shall be restored except:   * Those messages and files which have been deleted by the service provider in the cloud storage because of capacity limits. * The 3 previously deleted messages/files shall not be restored. |

#### 58-2.3.23 Standalone Messaging - During Voice Call

Description

1-to-1 messaging during incoming call.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_1\_16

Reason for test

UP-1.0 US5-23 and UP2.4. Reference section US5-21 (Voice & Messaging in parallel) and subsequent requirements

Initial configuration

DUT, Reference 1 and 2 are online (connected via HSPA, LTE, 5G or Wi-Fi) .

DUT and Reference 1 are registered RCS users and in an ongoing RCS 1-to-1 Messaging conversation.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 2 calls DUT. | DUT is able to return to the messaging conversation with Reference 1 at any time during the call. |
| 2 | DUT accepts the call. | DUT is able to return to the messaging conversation with Reference 1 at any time during the call. |
| 3 | Reference 2 terminates the call. | If DUT did not switch back to messaging conversation with Reference 1, automatically returns to the messaging conversation after Referebce 2 terminated the call. |

#### 58-2.3.24 Standalone Messaging - Display Status (Display Setting)

Description

Verifying Display notification for RCS messages.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_8

Reason for test

UP-1.0 and UP2.4. Reference section US18-7 and subsequent requirements.

Display notification

Initial configuration

DUT’s & Reference 1’s devices are online.

The send ‘display’ notification setting on-Reference 1’s device is set to “send display notification”.

DUT’s and Reference 1’s MNO(s) support display notification feature.

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | DUT sends a message to Reference 1. | The message is received on Reference 1’s device. |
| 2 | Reference 1 opens the message. | The message is displayed on Reference 1’s device . On DUT’s device, the message is notified as “displayed” in the conversation with Reference 1. |
| 3 | On Reference 1’s device, the send ‘display notification’ setting is set to ‘do not send display notification’. | Feedback of display notification is disabled. |
| 4 | DUT sends a message to Reference 1. | The message is received on Reference 1’s device. |
| 5 | Reference 1 opens the message. | The message is displayed on Reference 1’s device. On DUT’s device, the message stays as “delivered” in the conversation with Reference 1. |

#### 58-2.3.25 1-to-1 Chat - Successful handling of Simultaneous Chats (Concurrently)

Description

Verifying that a new chat session with another use can be established during a concurrent chat session

Related core specifications

GSMA RCS 5.1- Advanced Communications: Services and Client Specification v4.0 3.3

Joyn Blackbird Product Definition Document v4.0 5.1

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

A new chat while in another chat.

UP-1.0 and UP-2.4

Initial configuration

DUT, Reference 1 and Reference 2 are RCS provisioned and registered online.

DUT and Reference 1 are in a chat session and have exchanged several messages.

Test Procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At Reference 2, establish a chat with DUT by sending a chat invite. | The chat from Reference 2 is received and displayed as a notification in DUT. |
| 2 | At DUT, do not open the message from Reference 2. | DUT remains in chat conversation with Reference 1.  Reference 2 indicates the message to DUT is delivered but has not been displayed. |
| 3 | At Reference 2, send a 2nd chat message to DUT. | The chat from Reference 2 is received and displayed as a notification in DUT. |
| 4 | At DUT, do not open the message from Reference 2. | DUT remains in chat conversation with Reference 1.  Reference 2 indicates the message to DUT is delivered but has not been displayed. |
| 5 | At DUT, open the chat conversation with Reference 2. | The messages can be opened and read successfully at DUT. Reference 2 indicates the messages to DUT have been displayed. |

#### 58-2.3.26 1-to-1 Chat - Successful Display Status (Display Setting Enabled)

Description

Verifying different notifications for chat messages

Related core specifications

GSMA RCS 5.1- Advanced Communications: Services and Client Specification v4.0 3.3.3

Joyn Blackbird Product Definition Document v4.0 5.1.3

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

Check Delivery and Displayed notification

UP-1.0 and UP-2.4

Initial configuration

Both DUT and Reference 1 are registered RCS users

DUT and Reference 1 have display settings for chat messages enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, send MO chat message to Reference 1. | Chat message is received at Reference 1 and DUT displays a delivered notification to indicate the message has been delivered successfully. |
| 2 | At Reference 1, open and read the message. | DUT displays a notification to indicate the message has been read on Reference 1. |
| 3 | At Reference 1, send MO chat message to DUT. | Chat message is received at DUT and Reference 1 displays a delivered notification to indicate the message has been delivered successfully. |
| 4 | At DUT, open and read the message. | Reference 1 displays a notification to indicate the message has been read on DUT. |

#### 58-2.3.27 MO 1-to-1 Chat (Seamless Messaging)-DUT is not connected to cellular

Description

In 1-to-1 Chat if the DUT doesn’t have an active network connection, the user shall be notified that messages are queued for delivery when sending text.

Related core specifications

GSMA RCC.71 UP1.0 and RCC.71 UP2.4: US-5-3-4

GSMA RCC.17, ID\_RCS\_F\_3\_1\_8

Reason for test

To validate RCC.71 UP1.0 and UP 2.4. Reference section R5-3-4, Seamless Messaging

Initial configuration

DUT’s operator network(s) support Seamless Messaging.

DUT is RCS provisoned but not registered (Offline) and not connected to cellular.

DUT and Reference 1 are known RCS contacts.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a short text (less than 1300 characters) to Reference 1. | On DUT, the message shall be queued for delivery and the user is informed about the queuing of messages. |
| 2 | DUT sends a long text (more than 1300 characters) to Reference 1. | On DUT, the message shall be queued for delivery and the user is informed about the queuing of messages. |

#### 58-2.3.28 MT 1-to 1 Chat-the unread messages notification display

Description

In 1-to-1 Chat, conversations which contain unread messages to be differentiated from conversations that contain messages that users have read.

Related core specifications

GSMA RCC.71 UP1.0 and UP2.4: US5-14, US5-15, US5-16

GSMA RCC.17, ID\_RCS\_F\_3\_1\_13

Reason for test

To validate RCC.71 UP1.0 and UP2.4. Reference section US5-14, US5-15, US5-16 (and subsequent requirements) Receiving messages.

Initial configuration

DUT is RCS registered (Online).

Reference 1 is RCS registered (Online) and known to be RCS capable to DUT.

Reference 1 has closed the messaging application and screen is in stand-by mode.

DUT is not in reference 1's contact list.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Send a Message from DUT to reference 1. Message length should be >4000 characters. | Reference 1's device displays a new incoming event notification on reception of a new message.  The sender of the message is indicated with MSISDN. |
| 2 | Open the Messaging application on Reference 1's device and display the list of conversations. | In the list of messaging conversation on reference 1, the conversation that contains the message from DUT is visually differentiated and easy to find and access. |
| 3 | Select the conversation with the new message from DUT to display the message. | All characters of the sent message are displayed. The sender of the message is indicated with its MSISDN. |

#### 58-2.3.29 1-to-1 Chat-Control multiple conversations in parallel

Description

In 1-to-1 Chat, exchange multi-media content in conversation and control multiple conversations in parallel.

Related core specifications

GSMA RCC.71 UP1.0 and UP2.4: US5-17, US5-18

GSMA RCC.17, ID\_RCS\_F\_3\_1\_14

Reason for test

To validate RCC.71 UP1.0 and UP2.4. Reference section US5-17 (Messaging conversation as Service Access Point for sharing) and US5-18 (Maintain multiple conversations in parallel) and subsequent requirements.

Initial configuration

DUT is RCS registered (Online).

Reference 1 is RCS registered (Online) and known to be RCS capable to DUT.

Reference 2 is RCS registered (Online) and known to be RCS capable to DUT.

DUT has existing 1-to-1 Messaging conversations with reference 1 and reference 2.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT, accesses conversation with reference 1. | DUT enters the conversation interface. |
| 2 | DUT sends a message as RCS 1-to-1 Messaging to reference 1. | It is availble to add a photo or video or audio message or any selected file or geolocation. |
| 3 | DUT switches to the conversation with reference 2 and sends a message as RCS 1-to-1 Messaging to reference 2. | DUT is able to switch between conversations and maintain conversations successively. |
| 4 | DUT switches back to the conversation with reference 1 and sends a message to reference 1. | DUT is able to switch between conversations and maintain conversations successively. |

#### 58-2.3.30 1-to-1 Chat: share location and tag locations with text field

Description

In 1-to-1 Chat, user can share position and tag the positions or locations with a text field.

Related core specifications

GSMA RCC.71 UP1.0: US5-24, US5-26 and GSMA RCC.17 UP2.4: US5-22, US5-24,

GSMA RCC.17, ID\_RCS\_F\_3\_1\_17

Reason for test

To validate RCC.71 UP1.0 Reference section US5-24, US5-26 (and subsequent requirements). Geolocation push.

And RCC.71 UP 2.4 Reference section US5-22, US5-24 (and subsequent requirements). Geolocation push.

Initial configuration

DUT is RCS registered (Online).

Reference 1 is RCS registered (Online).

DUT’s and reference 1’s RCS Service Providers support Geolocation Push.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT displays a message conversation with reference 1. | DUT enters the conversation interface. |
| 2 | DUT selects to share a location. | DUT is offered current location as default. |
| 3 | DUT selects a location and tags it. DUT sends the location to reference 1. | In DUT's messaging thread, it’s indicated that a location was shared. Reference 1 receives the shared location and can see the tag. |

#### 58-2.3.31 1-to-1 Chat: Manually change the location and legacy user can receive the location through a link or a map image.

Description

In 1-to-1 Chat, users can view the current location on map,the current location is automatically detected.

DUT have the ability to change this location manually before sending it.

The legacy user can receive the location through a link or a map image.

Related core specifications

GSMA RCC.71 UP1.0: US5-25, US5-27 and RCC.71 UP2.4: US5-23, US5-25

GSMA RCC.17, ID\_RCS\_F\_3\_1\_18

Reason for test

To validate RCC.71 UP1.0 Reference section US5-25, US5-27 (and subsequent requirements). Geolocation push and RCC.71 UP 2.4 Reference section US5-23, US5-25 (and subsequent requirements). Geolocation push.

Initial configuration

DUT is RCS registered (Online).

Reference 1 is a legacy device (not RCS provisioned or an RCS version that does not support Geolocation Push) .

DUT’s RCS Service Providers support Geolocation Push.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT, opens 'location share' from the messaging thread with reference 1. | DUT sees a map application and the current position is selected. |
| 2 | DUT selects a location different than the current position and selects "Send". | DUT is able to change the proposed position and select a new location. The selected new location can be sent.  On DUT, the Geolocation Push activity creates a thumbnail in the conversation with reference 1. The thumbnail can be extended in a map application at any time.  Reference 1 receives the selected location either as SMS link to a map application, or a picture of the selected location. |

#### 58-2.3.32 1-to-1 Message with multiple recipients

Description

In 1-to-1 Chat, DUT can send message by selecting multiple recipients. The distribution list name can be edited.

Related core specifications

GSMA RCC.71 UP1.0: US5-28 and RCC.71 UP2.4: US5-26

GSMA RCC.17, ID\_RCS\_F\_3\_1\_19

Reason for test

To validate RCC.71 UP1.0. Reference section US5-28 (and subsequent requirements). Multiple 1-to-1 messages and RCC.71 UP 2.4. Reference section US5-26 (and subsequent requirements). Multiple 1-to-1 messages.

Initial configuration

DUT is RCS registered (Online).

Reference 1, reference 2, reference 3 and reference 5 are RCS registered (Online). The reference 4 is not RCS provisioned.

Reference 1 and reference 2 already exchanged RCS messages with DUT before.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT creates a 'multiple 1-to-1 distribution list with the 4 recipients: reference 1, reference 2, reference 3 and reference 4. | DUT is made aware that this is about a multiple 1-to-1 conversation and not a Group Chat. A distribution list with 4 recipients is created. |
| 2 | DUT selects the distribution list as recipient and send message to that list. The message contains emoji | DUT creates 4 1-to-1 messages in 1-to-1 messaging conversations with reference 1, 2, 3 and 4.  Reference 1, 2, 3 receive an RCS 1-to-1 Messaging message and emoji are correctly represented on these devices. Reference 4 receives an SMS and only a subset of emoji may be represented correctly. |
| 3 | Add a 5th recipient: reference 5 into the distribution list. | The distribution list can be edited / extended. |
| 4 | Edit the name of the distribution list | The name of the distribution list can be edited (e.g. football team). |

#### 58-2.3.33 1-to-1 Chat multiple recipient maximum number control

Description

In 1-to-1 Chat, DUT can inform user when extending the distribution list more than allowed by the RCS Service Provider.

Related core specifications

GSMA RCC.71 UP1.0: US5-29 and RCC.71 UP2.4: US5-27

GSMA RCC.17, ID\_RCS\_F\_3\_1\_20

Reason for test

To validate RCC.71 UP1.0. Reference section US5-29 (and subsequent requirements). Multiple 1-to-1 messages.

And RCC.71 UP2.4. Reference section US5-27 (and subsequent requirements). Multiple 1-to-1 messages.

Initial configuration

DUT is RCS registered (Online). Network limit for maximum number of participants for multiple 1-to-1 messaging is set. The contact list on DUT is filled with many contacts.

Reference 1 and reference 2 are RCS registered (Online) .

The reference 3 is RCS enabled and online.

The reference 4 is not RCS provisioned.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT creates a 'multiple 1-to-1 distribution list with the 4 recipients: reference 1, reference 2, reference 3 and reference 4. | DUT is made aware that this is about a multiple 1-to-1 conversation and not a Group Chat. A distribution list with 4 recipients is created. |
| 3 | Extend the distribution list with an attempt to enter more contacts than allowed by the RCS Service Provider. | Once the maximum number of particpants have been selected, it shall not be possible to add more participants to the distribution list. DUT shall inform the user friendly about the upper limit. The recipients already added in that attempt are not lost. |

#### 58-2.3.34 1-to-1 message: Select and flag messages as important

Description

Verifying that the user can select and flag messages in 1-to-1 chat as important.

Related core specifications

GSMA RCC.71 UP 2.4: US5-28

Reason for test

To validate RCC.71 UP2.4 US5-28 and subsequent requirements: easily and quickly find messages in 1-to-1 conversations that are important to users.

Initial configuration

1.Both DUT and Reference 1 are RCS online.

2.There is at least one 1-to-1 chat between DUT and Reference 1, including all of the following types of messages: text, picture, audio, video, vCard, file, geolocation.

3.There are other conversations between DUT and Reference 1.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, user opens one 1-to-1 chat with Reference 1, then selects and flags at least seven messages as important, including all of the following types of messages: text, picture, audio, video, vCard, file, geolocation. | At DUT, the messages which are flagged as “important” in step 1 is visible. |
| 2 | At DUT, user selects the feature “show important messages only”. | At DUT, only important messages are displayed. At reference 1, all the messages are displayed. |
| 3 | At DUT, user deselects three messages that have been flagged as important before. | At DUT, the three messages selected in step 3 are not displayed as important. |
| 4 | At DUT, user selects the feature “show important messages only”. | At DUT, the three messages that are deselected in step 3 are not displayed, only important messages are displayed. At reference 1, all the messages are displayed. |
| 5 | At DUT, user deletes one message that has been flagged as important in step 1. | At DUT, the UI implementation shows a confirmation prompt that the message to be deleted is flagged as important. |
| 6 | At DUT, user deletes the chat with reference 1. This chat includes some important messages. | At DUT, the UI implementation shows a confirmation prompt that the chat to be deleted contains messages which are flagged as important. |

#### 58-2.3.35 1-to-1 messaging: Select a conversation to pin it to the top of the list

Description

Verifying that the user can select a 1-to-1 conversation to pin it to the top of the list.

Related core specifications

GSMA RCC.71 UP2.4: US5-29

Reason for test

To validate RCC.71 UP2.4 US5-29 and subsequent requirements: be able to select a 1-to-1 conversation to pin it to the top of the list of conversations

Initial configuration

1. DUT, Reference 1, Reference 2 and Reference 3 are RCS online.

2. DUT has existing 1-to-1 Messaging conversations with reference 1, reference 2 and reference 3.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, user selects the 1-to-1 chat with reference 1 and pin it to the top of the list. | At DUT, the conversation with reference 1 is displayed at the top of the list. |
| 2 | Reference 2 sends one 1-to-1 message to DUT.  Reference 3 sends one 1-to-1 message to DUT. | DUT receives the message from reference 2 and reference 3. On DUT, the conversation with reference 1 is still displayed at the top of the list. On DUT, the conversations with reference 2 and reference 3 are still listed under the conversation with reference 1. |

### 58-2.4 Group Chat

Initial configuration

The following applies to all Group Chat tests:

* DUT has Reference 1, 2, 3, and 4 in its contact list.
* Reference 1 has DUT, Reference 2 and 4 in its contact list.
* Reference 2 has DUT in its contact list.
* Reference 4 has DUT and Reference 2 it its contact list.

#### 58-2.4.1 MO Group Chat - New Group Chat

Description

It shall only be possible to add RCS users to a Group Chat.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_1

Reason for test

This test checks you can only add RCS users to a Group Chat.

UP-1.0 and UP2.4. Reference section US6.1: Create a Group Chat Conversation with a selection of contacts – Contact offline, non RCS contact.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisoned - Not Registered (Offline)

Reference 3 is RCS Not Provisioned

Reference 1, Reference 2 and Reference 3 are stored in DUT phonebook.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT select Reference 1, Reference 2 and Reference 3.  Try to start a Group Chat. | Ensure the option to start a Group Chat is not available. |
| 2 | At DUT deselect Reference 3. (or only select Reference 1 and Reference 2) | Ensure Group Chat option is available. |

#### 58-2.4.2 MO Group Chat - DUT RCS Provisoned - Not Registered (Offline) - Existing Chat available

Description

Sending message to a Group Chat when the device is not RCS registered.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_3

Reason for test

This test confirms if you send a message to a Group Chat when user is not RCS registered, it will locally queue the message until user is RCS registered again.

UP-1.0 and UP2.4. Reference section US6.1: Create a Group Chat Conversation with a selection of contacts – Same 'Subject' and participants as other Group chat.

Initial configuration

DUT is RCS Provisoned - Not Registered (Offline) – Flight mode enabled

Reference 1 is RCS Provisoned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 have already exchanged RCS messages in a group chat with the subject “test1”.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, open Group Chat “test1” and send a new message | The messages shall be queued locally on the device and sent out once DUT is online again |
| 2 | At DUT disable flight mode. | DUT is RCS Provisioned - Registered (Online).  Queued message is successfully sent and received at Reference 1 and Reference 2. |

#### 58-2.4.3 MO Group Chat - Subject Editing

Description

Editing Group Chat Subject

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_4

Reason for test

This test confirms that when you edit a Group Chat subject, it only changes the subject locally.

UP-1.0 and UP 2.4. Reference section US6.2: Add a subject title and Group Chat Picture to any Group Chat Conversation – No initial 'Subject'.

Initial configuration

DUT 1 is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisoned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT select Reference 1 and Reference 2. | “Create Group Chat” is disabled (f.e. greyed out) until two or more contacts are selected. |
| 2 | Create the Group without typing any text in the 'Subject' field. | A Group Chat conversation appears on DUT, Reference 1 and 2 with a generic “Subject” |
| 3 | DUT sends text messages, emoticons and files to the Group. | Reference 1 and 2 receive the text, emoticons and files. |
| 4 | DUT, Reference 1 and 2 change the Subject of the Group Chat (each one a different subject) | DUT, Reference 1 and 2 each see their own “Subject” to identify the Group Chat. |

#### 58-2.4.4 MT Group Chat - New Group Chat

Description

Adding and joining a Group Chat.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_5

Reason for test

The test confirms DUT can be added to a Group Chat when it is coming back online after having no cellular data.

UP-1.0 and UP2.4. Reference section US6.3: Add a contact from contact list to an existing Group Chat Conversation – Added contact is offline; attempt to add a non RCS contact.

Initial configuration

DUT is RCS Provisoned - Not Registered (Offline) – Flight mode enabled

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

Reference 1, Reference 2 and Reference 3 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Select 'Add participant' on Reference 1 and add DUT from contacts. | DUT appears as new participant in the Group Chat on Reference 1, 2 and 3. |
| 2 | Disable Flight Mode on DUT.  If the network is not configured for auto-accept Group Chat participation, manually accept to join the Group Chat. | DUT is RCS Provisioned - Registered (Online)  DUT sees the new Group Chat on his device. |
| 3 | From DUT send text messages, emoticons and files to the Group Chat. | Reference 1, 2 and 3 receive the text messages, emoticons and files. |

#### 58-2.4.5 Void

#### 58-2.4.6 MO Group Chat - Message size exceeded

Description

Sending long messages over size limit

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_12

Reason for test

This test checks DUT has a limiter to prevent sending longer messages than is supported.

UP-1.0 and UP2.4. Reference section US6.10: Group Chat Message size limits.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisoned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

DUT and Reference 1 are configured to handle chat messages up to 8192 bytes long.

Reference 2 is configured to handle chat messages up to 4096 bytes long.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a text message in the Group Chat of length near 8192 characters (at least 1100 words). | Reference 1 receives and displays the message in the Group Chat as sent by DUT.  Reference 2 receives the first 4096 characters of the message. |
| 2 | DUT sends a text message in the Group Chat longer than 8192 characters (for example, more than 1700 words). | DUT is informed that the whole message cannot be sent. Only the first 8192 characters are displayed in DUT's conversation and sent.  Reference 1 receives the first 8192 characters of the message.  Reference 2 receives the first 4096 characters of the message. |

#### 58-2.4.7 MT Group Chat - Message size exceeded

Description

Receiving long messages over size limit

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_12

Reason for test

This test confirms that user is notified when they receive a message longer than is supported.

UP-1.0 and UP2.4. Reference section US6.10: Group Chat Message size limits.

Initial configuration

DUT is RCS Provisoned - Registered (Online)

Reference 1 is RCS Provisoned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

Reference 1 and 2 are configured to handle chat messages up to 8192 bytes long.

DUT is configured to handle chat messages up to 4096 bytes long.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 1 sends a text message in the Group Chat of length near 8192 characters (at least 1100 words). | DUT displays in the Group Chat conversation the first 4096 characters of the message that was sent by Reference 1 and shall be informed that the original message has been cut. |

#### 58-2.4.8 MT Group Chat - Visual notification of new messages

Description

Incoming message notification

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_15

Reason for test

This test confirms the user is notified on a new Group Chat message.

UP-1.0 and UP2.4. Reference section US6.13: Notification at any time a device receives a new Group Chat Message.

Initial configuration

DUT is RCS Provisoned - Registered (Online)

Reference 1 is RCS Provisoned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Put DUT on mute and send a message to the Group Chat from Reference 1. | DUT shows some kind of visual indication that a message has arrived but remains silent. |
| 2 | Unmute DUT and enable device audio notifications for incoming messages. Send a message to the Group Chat from Reference 1. | DUT notifies incoming messages with visual and audible notifications. |

#### 58-2.4.9 MT Group Chat - Visual and Audio notification of new messages

Description

Receiving simultaneously messages with Audio Notifications on.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_16

Reason for test

UP-1.0 and UP2.4. Reference section US6.14: notifications of rapidly sequenced incoming Group Chat Messages intelligibly aggregated and counted.

Initial configuration

DUT is RCS Provisoned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

DUT has enabled audio notifications for incoming new messages.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On Reference 1, rapidly send 10 messages to the Group Chat.  At the same time on Reference 2, also rapidly send 10 messages to the Group Chat. | Rapid sequence of incoming Group Chat Messages in one Group Chat Conversation shall be consolidated into one audible notification per Group Chat Conversation. Consolidation of visual notifications is not affected. |

#### 58-2.4.10 MT Group Chat - Unread messages

Description

Overview of Group Chats Unread messages.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_18

Reason for test

UP-1.0 and UP2.4. Reference section US6.16: Conversations which contain unread messages to be differentiated from conversations that contain messages which have been seen.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

DUT, Reference 1 and Reference 3 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At Reference 2, send a message to the Group Chat.  (Do not open on DUT) | Message is received on DUT but has not yet been opened. |
| 2 | At Reference 3, send a message to the Group Chat.  (Do not open on DUT) | Message is received on DUT but has not yet been opened. |
| 3 | DUT opens the messaging application to see the list of conversations. | Both Group Chat conversations are highlighted to inform the user of new, unread messages. |
| 4 | DUT opens the Group Chat conversation with Reference 1 and Reference 2. | All messages are displayed. |
| 5 | DUT closes the Group Chat conversation window and goes back to the messaging application to see the list of conversations. | The Group Chat conversation with Reference 1 and 2 is no longer highlighted (no unread messages anymore).  The Group Chat conversation with Reference 1 and 3 is still highlighted (still unread messages). |

#### 58-2.4.11 MO Group Chat - Reference joins and leaves Existing Group Chat

Description

Sending Messages while a member is added and leaves a group

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_19

Reason for test

UP-1.0 and UP2.4. Reference section US6.17: Receive Group Chat Messages from any of the contacts participating in a Group Chat Conversation – no handshake required; only those messages interchanged while taking part in the Group chat.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT adds Reference 3 to the existing Group Chat with Reference 1 and 2. | DUT, Reference 1 and 2 are notified that Reference 3 joined the Group Chat. |
| 2 | Reference 1 sends a message to the Group Chat. | DUT, Reference 2 and 3 receive the messages (no acceptance or confirmation required) |
| 3 | Reference 3 leaves the Group Chat. | DUT, Reference 1 and 2 are notified that Reference 3 left the Group Chat. |
| 4 | DUT sends a message to the Group Chat. | Reference 1 and 2 receive the message. Reference 3 does not receive the message. |

#### 58-2.4.12 MT Group Chat - DUT joins and leaves Existing Group Chat

Description

Receiving Messages while joining and leaving a group

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_19

Reason for test

UP-1.0 and UP2.4. Reference section US6.17: Receive Group Chat Messages from any of the contacts participating in a Group Chat Conversation – no handshake required; only those messages interchanged while taking part in the Group chat.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

Reference 1, Reference 2 and Reference 3 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 1 adds DUT to the existing Group Chat with Reference 2 and 3. | DUT is informed that they joined the Group Chat with Reference 1, 2 and 3. |
| 2 | Reference 1 sends a message to the Group Chat. | DUT, Reference 2 and 3 receive the messages |
| 3 | DUT leaves the Group Chat. | Reference 1, 2 and 3 are notified that DUT left the Group Chat. |
| 4 | Refrence 1 sends a message to the Group Chat. | DUT does not receive the message. |

#### 58-2.4.13 Group Chat - DUT Forwards a received File to another Existing Group Chat

Description

Receiving and forwarding an image in a Group Chat.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_20

Reason for test

UP-1.0 and UP2.4. Reference section US6.18: Exchange multi-media content (e.g., but not limited to: take an instant picture from camera and send from within the chat) in Group Chat Conversations

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

DUT, Reference 1 and Reference 3 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 2 takes a picture with the device camera and sends it to the Group Chat with DUT and Reference 1. | DUT receives the image and can display it. |
| 2 | DUT selects the image received from Reference 2 and posts it in the Group Chat with Reference 1 and 3. | DUT is able to send the image and Reference 1 and 3 receive it in the Group Chat. |

#### 58-2.4.14 Group Chat - Messages ordered by Timestamp

Description

Messages in a time-based order

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_21

Reason for test

UP-1.0 and UP2.4. Reference section US6.19: view sent and received Group Chat Messages in a time-based order.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, and Reference 2 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a message in the Group Chat with Reference 1 and 2 | - |
| 2 | As soon as the message from step 1 was received send a new message from Reference 1 to the Group. | - |
| 3 | As soon as the message from step 2 was received send a new message from Reference 2 to the Group. | The same sequence of messages (from steps 1, 2 and 3) is displayed in the Group Chat conversations on DUT. |

#### 58-2.4.15 Group Chat - Messages ordered by Timestamp (Reference in different time zone)

Description

Messages in a time-based order with one device with different time set.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_22

Reason for test

UP-1.0 and UP2.4. Reference section US6.20: see the timestamp associated with each of the sent and received messages.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT Reference 1 and Reference 2 are in an active Group Chat.

Set local time on Reference 2 to 00h 00m.

DUT, and Reference 1 are synchronised to the UTC aligned with the selected device time zone.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT sends a message in the Group Chat with Reference 1 and 2 | - |
| 2 | As soon as the message from step 1 was received send a new message from Reference 1 to the Group. | - |
| 3 | As soon as the message from step 2 was received send a new message from Reference 2 to the Group. | The same sequence of messages (from steps 1, 2 and 3) is displayed in the Group Chat conversations on DUT. |

#### 58-2.4.16 Group Chat - Delete individual messages

Description

Deleting messages in a group chat.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_24

Reason for test

UP-1.0 and UP2.4. Reference section US6.23: User is able to leave a Group Chat Conversation at any point in time – Deleting messages

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT deletes a few randomly selected Group Chat messages from the Group Chat. | Selected messages are removed from the Group Chat on DUT. |
| 2 | Reference 1 deletes a few randomly selected Group Chat messages from the Group Chat. | DUT is not aware of this. On DUT these messages remain part of the Group Chat conversation. |
| 3 | Send a message from Reference 2. | DUT and Reference 1 receive the Group Chat message as sent by Reference 2. |
| 4 | Send a message from DUT. | Reference 1 and 2 receive the Group Chat message as sent by DUT. |

#### 58-2.4.17 Group Chat - Delete Group Chat (Reference re-invites DUT to re-join after deletion)

Description

Deleting a group chat and rejoining.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_2\_25

Reason for test

UP-1.0 and UP2.4 Reference section US6.23: User is able to leave a Group Chat Conversation at any point in time – Deleting the conversation.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

DUT, Reference 1, Reference 2 and Reference 3 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT deletes the entire Group Chat conversation with Reference 1, 2 and 3. (If necessary please confirm deletion&leaving of the group on DUT.) | The entire conversation is deleted on DUT and Reference 1, 2 and 3 are informed that DUT left the group chat. |
| 2 | Reference 1 sends a message to the Group Chat. | DUT is not aware of this. |
| 3 | Reference 2 adds DUT to the Group Chat with Reference 1 and 3. | DUT joins the group chat but does not see any of the old messages. |
| 4 | Send a message from Reference 2. | DUT receives the Group Chat message as sent by Reference 2. |

#### 58-2.4.18 Void

#### 58-2.4.19 Void

#### 58-2.4.20 Group Chat - MO Group Chat (New group chat - 1-2-1 --> Group chat)

Description

Testing the capabilities with RCS UP clients.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 ID\_RCS\_F\_3\_2\_2

Reason for test

UP-1.0 and UP- 2.4 Reference section US 6.1: The test cases aims to verify the capability of RCS UP client will be correctly displayed when changing from 1 to 1 Chat to Group Chat.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, establish a chat conversation with Reference 1. | Reference 1 receives the chat from DUT and a conversation is established. |
| 2 | At DUT, within the current chat with Reference 1, select ‘Add User’ and invite Reference 2 to join the chat. | Confirm a new chat screen is opened with DUT, Reference 1 and Reference 2.  Confirm the previous chat history with Reference 1 is not displayed.  Confirm Reference 1 and Reference 2 display a notification that they have been invited to join a group chat. If auto accept for chat is supported then they are automatically added to the chat otherwise they have to manually accept the invite. |
| 3 | At DUT send MO chat to the group to establish a new chat session. | At Reference 1 and Reference 2, confirm chat is successfully received from DUT within the group chat conversation. |

#### 58-2.4.21 Group Chat - MO Group Chat (Reference Leaves Group Chat - DUT invites Reference to Re-join)

Description

Testing the capabilities with RCS UP clients.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

UP-1.0 and UP-2.4 Reference section US 6-23: The test cases aims to verify the capability of RCS BB/CPR will be correctly displayed when a device leaves a Group Chat and then re-joins.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, Reference 1 and Reference 2 are in an active Group Chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 2 leaves the chat after a while. | Reference 2 leaves the chat and DUT and Reference 1 continue in a Chat. |
| 2 | DUT sends an invitation message to Reference 2 to join the Group Chat again. | Reference 2 is able to re-join after invitation. |
| 3 | After a while, Reference 2 decides to join to the Group Chat and send a message to DUT and Reference 1. | DUT receives the message sent by Reference 2. |

#### 58-2.4.22 Group Chat (Store and Forward) - MO Group Chat (DUT re-joins Group Chat after temporary disconnection)

Description

Testing the capabilities with RCS clients.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 ID\_RCS\_F\_3\_2\_10

Reason for test

UP-1.0 and UP-2.4 Reference section US 6.8: The test cases aims to verify the capability of RCS client will be correctly displayed when a User comes online in an active session.

Initial configuration

DUT, reference1 and reference 2 are RCS provisioned and registered online.

DUT, Reference 1 and Reference 2 have established a Group Chat session between them

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT goes offline (losses coverage, enters flight mode or the device is shut down due, for example, to the empty battery). | - |
| 2 | Reference 1 and Reference 2 keep exchanging messages in the Group Chat. | Reference 1 and Reference 2 do not get delivery notifications from DUT |
| 3 | DUT gets back online before the Group Chat session expires. | Once online, the DUT gets the messages (notification bar) from Reference 1 and Reference 2.  Reference 1 and Reference 2 get the delivery notifications from DUT. |

#### 58-2.4.23 Group Chat - MO Group Chat (Typing notifications)

Description

Testing the capabilities with RCS UP clients.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 ID\_RCS\_F\_3\_2\_14

Reason for test

UP-1.0 and UP-2.4 Reference section US 6.12: The test cases aim to verify the capability of RCS UP clients will be correctly displayed when typing text occurs and when notifications are received.

Initial configuration

DUT, reference1 and reference 2 are RCS provisioned and registered online.

DUT, Reference 1 and Reference 2 are in a group chat and several chat messages have been exchanged.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, start typing a message to the group. | Confirm Reference 1 and Reference 2 display "DUT is typing" or similar notification. Wait until notification disappears. |
| 2 | At Reference 1, start typing a message to the group. | Confirm DUT and Reference 2 display "Reference 1 is typing" or similar notification. Wait until notification disappears. |
| 3 | At Reference 2, start typing a message to the group. | Confirm DUT and Reference 1 display "Reference 2 is typing" or similar notification. Wait until notification disappears. |
| 4 | At Reference 1 and Reference 2, start typing a message to the group simultaneously. | Confirm DUT displays "2 people typing" or similar notification. Wait until notification disappears. |

#### 58-2.4.24 Group Chat – MT Group Chat (DUT Leaves Group Chat)

Description

Testing the capabilities with RCS clients.

Related core specifications

GSMA RCS 5.1 - Advanced Communications: Services and Client Specification v4.0: 3.4 – Group Chat

Joyn Blackbird Product Definition Document v4.0: 6 – Group Chat

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

The test cases aims to verify the capability of RCS UP will be correctly displayed when a member of a Group Chat, other than the initiator, leaves the Group Chat and closes the application.

UP-1.0 and UP-2.4

Initial configuration

DUT, reference1 and reference 2 are RCS provisioned and registered online.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT, Reference 1 (initiator) and Reference 2 have established a Group Chat session between them. | Group Chat is established between DUT, Reference 1 and Reference 2. |
| 2 | DUT decides to leave the Group Chat and closes the IM/chat application. DUT then tries to rejoin the group chat. | DUTs IM session is closed and DUT shall not be able to send more messages to the group chat. Depending on UI, conversation history is locked or deleted for DUT. |

#### 58-2.4.25 Group Chat - Unknown participant; Alias handling

Description

Knowing who is participating in a Group Chat Conversation at any point in time – Unknown participant; Alias handling.

Related core specifications

GSMA RCC.71 UP1.0: US6-4 and RCC.71 UP2.4: US6-4

GSMA RCC.17 ID\_RCS\_F\_3\_2\_6

Reason for test

This test verifies RCC.71 UP1.0 and UP 2.4 US6.4: Aliase can be display correctly in the group chat Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 3 is RCS Provisioned - Registered (Online)

Reference 1 and reference 2 have set RCS Alias names, reference 3 has not set RCS Alias name.

Reference 1 and reference 3 are not contacts on DUT’s contact list and reference 2 is on DUT’s contact list.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT opens the group chat with reference 1, reference 2 and reference 3. | DUT can see reference 1, 2, and 3 as participants in the Group, identified as: reference 1 shows the RCS Alias plus MSISDN, reference 2 shows the contact name as in DUT's contact list, reference 3 shows the MSISDN. |
| 2 | Reference 1 left the group chat. | DUT and reference 2, 3 are notified that reference 1 has left the group chat. |

#### 58-2.4.26 Group Chat - no need to deal with Group Chat invites and acceptances

Description

If an RCS client disabled Group Chat auto-accept, the user can accept the invitation manually to participate in a Group Chat.

Related core specifications

GSMA RCC.71 UP1.0: US6-5 and RCC.71 UP2.4: US6-5

GSMA RCC.17 ID\_RCS\_F\_3\_2\_7

Reason for test

This test verifies RCC.71 UP1.0 and UP2.4 US6-5: No need to deal with Group Chat invites and acceptances.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

Reference 1 and reference 2 are existing Group Chat enabled contacts known to DUT.

Reference 2 has disabled the Group Chat auto-accept function.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT select reference 1 and reference 2 from the contact list to create a group chat. | A Group Chat conversation appears on DUT and reference 1. The participants have DUT and reference1.  An invitation for that Group Chat appears on reference 2's device. |
| 2 | Reference 2 accepts the invitation to be part of the Group Chat. | A Group Chat conversation appears on Reference 2. DUT and reference1 are notified that reference 2 has joined the Group Chat. |

#### 58-2.4.27 Group Chat- Status of sent Group Chat Messages

Description

The users can see the status of the sent messages and files in Group Chat.

Related core specifications

GSMA RCC.71 UP2.4: US6-11

GSMA RCC.17 ID\_RCS\_F\_3\_2\_13

Reason for test

This test verifies RCC.71 UP2.4 US6-11: The users can see the status of the sent messages and files in Group Chat.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, reference 1 and reference 2 are in an active Group Chat.

DUT, reference 1 and reference 2 have turned on the option to notify the feedback that the message or file shall be displayed.

Reference 2 is set to File Transfer auto-download.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Set DUT and reference 1 to 'Flight Mode'. DUT open the group chat and send one file. | DUT is informed that the file cannot be sent. Message is in ‘Pending' state on DUT. |
| 2 | Disable ‘Flight Mode’ on DUT. | DUT is RCS online and the file is start to be sent to the group chat. On DUT the message shows the file transfer statues ‘In Progress’. |
| 3 | Cancel the File Transfer on DUT during the File Transfer ‘In Progress’. | The file transfer can be cancelled on DUT. The file transfer is stopped and the file cannot be sent to the group chat. |
| 4 | Send another file again to the group on DUT. | Message is in ‘sent’ statue on DUT. |
| 5 | Reference 2 receives Group Chat messages sent by DUT. Open the new file in the Group Chat conversation on reference 2. | The new file on reference 2 can be opened. |
| 6 | Disable ‘Flight Mode’ on reference 1. | Reference 1 is RCS online. |
| 7 | Open the Group Chat conversation on reference 1 when the message from DUT comes in. | Reference 1 receives the file sent by DUT to the Group. On DUT the message statues changes to ‘delivered’. (Note: RCS provider’s networks may not support message or file ‘Delivered’ statues notification in Group Chat. In this case, this test step may be ignored.) |
| 9 | Reference 1 opens the new file. | On DUT the message indicates ‘displayed' for all Group Chat participants. |

NOTE: aggregation of sent message status notification is up to the implementation; representation of steps 5 and 9 may vary depending on the implementation*.*

#### 58-2.4.28 Group Chat-Administrator roll features

Description

The user can manage the administrator role.

Related core specifications

GSMA RCC.71 UP2.4: R 6-30

GSMA RCC.07 section 3.2.4.7

Reason for test

This test verifies RCC.71 UP 2.4 R 6-30: move of the administrator role to another participant.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 2 is RCS Provisioned - Registered (Online)

DUT, reference 1 and reference 2 are in an active Group Chat. DUT is the group chat administrator (This group chat is established by DUT).

The RCS messaging Server shall set the "user role assignment policy" to "single administrator".

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT choose to leave the Group Chat. | DUT asks the user to move the administrator role to another participant. User can set the administrator role on DUT. |
| 2 | DUT selects reference 1 to become the "administrator". | The request to move administrator role is finished. DUT and reference 2 are notified that the group chat administrator role has been moved to reference 1.  Reference 1 and reference 2 are notified that DUT leaves the group chat. |

#### 58-2.4.29 Group chat: Select and flag messages as important

Description

Verifying that the user can select and flag messages in group chat conversations as important.

Related core specifications

GSMA RCC.71 UP2.4 US6-28

Reason for test

To validate RCC.71 UP2.4 US6-28 and subsequent requirements: easily and quickly find messages in group chat conversations that are important to users

Initial configuration

1.DUT, Reference 1 and Reference 2 are RCS online.

2.There is at least one group chat among DUT, Reference 1 and Reference 2, including all the following types of messages: text, picture, audio, video, vCard, file, geolocation.

3.There are other conversations among DUT、Reference 1 and Reference 2.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, user opens one group chat with Reference 1 and Reference 2, then selects and flags at least seven messages as important, including all of the following types of messages: text, picture, audio, video, vCard, file, geolocation. | At DUT, the messages which are flagged as “important” in step 1 is visible. |
| 2 | At DUT, user selects the feature “show important messages only”. | At DUT, only important messages are displayed. At reference 1 and reference 2, all the messages are displayed. |
| 3 | At DUT, user deselects three messages that have been flagged as important before. | At DUT, the three messages in step 3 are not displayed as important. |
| 4 | At DUT, user selects the feature “show important messages only”. | At DUT, the three messages that are deselected in step 3 are not displayed, only important messages are displayed. At reference 1 and reference 2, all the messages are displayed. |
| 5 | At DUT, user deletes one message that has been flagged as important in step 1. | At DUT, the UI implementation shows a confirmation prompt that the message to be deleted is flagged as important. |
| 6 | At DUT, user deletes the group chat with reference 1 and reference 2. This chat includes some important messages. | At DUT, the UI implementation shows a confirmation prompt that the chat to be deleted contains messages which are flagged as important. |

#### 58-2.4.30 Group chat: Select a conversation to pin it to the top of the list

Description

Verifying that the user can select a group chat conversation to pin it to the top of the list.

Related core specifications

GSMA RCC.71 UP2.4 US6-29

Reason for test

To validate RCC.71 UP2.4 US6-29 and subsequent requirements: be able to select group chat conversation to pin it to the top of the list of conversations.

Initial configuration

1. DUT, Reference 1, Reference 2, Reference 3 and Reference 4 are RCS online.

2. DUT has existing group chat 1 with reference 1 and reference 2. DUT has existing group chat 2 with reference 3 and reference 4.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, user selects group chat 1 and pin it to the top of the list. | On DUT, group chat 1 is displayed at the top of the list. |
| 2 | Reference 3 sends one message in group chat 2. | DUT receives the message from group chat 2. On DUT, the group chat 1 is still displayed at the top of the list and group chat 2 that has latest activities in step 2 is still displayed under group chat 1. |
| 3 | At DUT, user selects group chat 2 and pin it to the top of the list. | On DUT, both group chat 1 and group chat 2 are displayed at the top of the list. |
| 4 | Reference 3 sends one messages in group chat 2. | DUT receives the message from group chat 2. On DUT, group chat 2 that has latest activities in step 4 is displayed at the top of the list. |

### 58-2.5 File Transfer

#### 58-2.5.1 MO File Transfer - Reference RCS Provisioned - Registered (Online)

Description

Sending files.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_3\_1

Reason for test

To validate UP-1.0 and UP-2.4 Reference section R7-1-2 to R7-1-6 and US 7-17.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisioned - Registered (Online)

Reference 1 is stored as a contact on DUT.

On DUT there are images available as .jpg, .gif and .png, as well as video file in format mpeg4,an audio file in .mp3, document file in pdf format and contact card in vcf format.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT send an image in format .jpg, .gif and .png to Reference 1 using the RCS application. | Reference 1 receives the images that were sent from DUT. The files can be opened successfully. |
| 2 | On DUT send a video in format .mpeg4 to Reference 1 using the RCS application. | Reference 1 receives the video that was sent from DUT. The file can be played successfully. |
| 3 | On DUT send an audio file in format .mp3 to Reference 1 using the RCS application. | Reference 1 receives the audio file that was sent from DUT. The file can be played successfully. |
| 4 | On DUT send 5 contact cards to Reference 1 using the RCS application. | On DUT the 5 contact cards are displayed in a single vcf-format file.  Reference 1 receives the contacts in one vcf-format file. Reference 1 is able to permit the user to select one or more of them to check details, edit, store, forward, delete or perform other operations. |
| 5 | On DUT send a document in format .pdf to Reference 1 using the RCS application. | Reference 1 receives the pdf document file that was sent from DUT. The files can be opened successfully. |

#### 58-2.5.2 MO File Transfer - Reference RCS Not Provisioned (SMS with a link)

Description

Sending files to a legacy device.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_3\_2

Reason for test

To validate UP-1.0 and UP-2.4 Reference section R7-1-7 and subsequent requirement R7-1-7-1

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Not Provisioned (RCS disabled)

Reference 1 is stored as contact on DUT

DUT’s Operator has configured RCS clients to send files to RCS Not Provisioneds as “SMS with a link”. This setting is still set to default value.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT open the messaging application and send a message to Reference 1. | - |
| 2 | On DUT in the conversation with Reference 1 select a random picture (existing or new picture from camera) and send. | On DUT the user sees the picture thumbnail that was sent using SMS. On Reference 1 the user sees a “short link” which is identifiable to be sent from an operator.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS. |

#### 58-2.5.3 MO File Transfer – Reference RCS Not Provisioned (MMS)

Description

Sending files to Legacy Device with MNO setting “MMS”

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_3\_3

Reason for test

To validate UP-1.0 and UP2.4 Reference section R7-1-7 and subsequent requirement R7-1-7-2

**Initial configuration**

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Not Provisioned (RCS disabled)

Reference 1 is stored as contact on DUT

DUT’s Operator has configured RCS clients to send files to RCS Not Provisioneds as “MMS”. This setting is still set to default value.

Reference 1 is configured to auto-download MMS

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT open the messaging application. | - |
| 2 | On DUT in the conversation with Reference 1 select a random picture (existing or new picture from camera) and send. | On DUT the user sees the picture thumbnail that was sent using MMS.  On Reference 1 the user sees an incoming MMS. |

#### 58-2.5.4 Void

#### 58-2.5.5 MO File Transfer – RCS Provisioned - Not Registered (Offline) – Client Fallback to SMS

Description

Sending file to an offline user.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_3\_5

Reason for test

To validate UP-1.0 and UP-2.4 Reference section US7-2 and subsequent requirements.

In itial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisoned - Not Registered (Offline) – Flight mode enabled.

Network supports Client Fallback to SMS (CFS).

The CFS Timer is set to 5 minutes (no user setting).

The user setting (as described in US18-13 / R5-2-4-4) "re-send as SMS" is set to "always ask".

Reference 1 is stored as contact on DUT and known to be RCS enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT send an image to Reference 1 and wait for 5 minutes. | On DUT the file remains in “sent” status.  DUT asks to re-send the file as SMS with link after 5 minutes. |
| 2 | At DUT select to “send the file as SMS with link” (on request by DUT). | On DUT the file transfer is shown as “sent”. |
| 3 | On DUT send a second image to Reference 1. | On DUT the file transfer is shown as “sent”. |
| 4 | At Reference 1, disable Flight Mode. | Reference 1 is RCS Provisioned - Registered (Online)  The first 2 messages are received as SMS with link.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS.  DUT shows the file transfer as “delivered” for both files. |
| 5 | On DUT send a third image to Reference 1 | The file transfer is received on Reference 1 as RCS File Transfer. On DUT the file transfer is shown as “delivered” or “displayed” (after the thumbnail icon is represented on the active messaging screen on Reference 1). |

#### 58-2.5.6 MO File Transfer - Reference RCS Provisioned – Not Registered (Offline) – Client Fallback to SMS

Description

Sending file to an offline user with CS connectivity.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_3\_6

Reason for test

To validate UP-1.0 and UP-2.4 Reference section US7-2 and subsequent requirements.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is RCS Provisoned - Not Registered (Offline)

Network supports Client Fallback to SMS (CFS).

The CFS Timer is set to 5 minutes (no user setting).

The user setting (as described in US18-13 / R5-2-4-4) "re-send as SMS" is set to "always ask".

Reference 1 is stored as contact on DUT and known to be RCS enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT send an image to Reference 1 and wait for 5 minutes. | On DUT the file remains in “sent” status.  DUT asks to re-send the file as SMS with link after 5 minutes. |
| 2 | At DUT select to “send the file as SMS with link” (on request by DUT). | On Reference 1 SMS with link is received.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS.  On DUT the file transfer is shown as “delivered”. |
| 3 | On DUT send a second image to Reference 1. | On Reference 1 the second picture is received as SMS with link.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS.  On DUT the file transfer is shown as “delivered”. |
| 4 | At Reference 1, enable data connection (Mobile data / WiFi) | Reference 1 is RCS Provisioned - Registered (Online) |
| 5 | On DUT send a third image to Reference 1 | The file transfer is received on Reference 1 as RCS File Transfer. On DUT the file transfer is shown as “delivered” or “displayed” (after the thumbnail icon is represented on the active messaging screen on Reference 1). |

#### 58-2.5.7 MO File Transfer - Legacy Reference RCS Provisoned - Not Registered (Offline) - Client Fallback to SMS

Description

Sending file to an offline CPR user

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_3\_7

Reason for test

To validate UP-1.0 and UP-2.4 Reference section US7-2 and subsequent requirements.

Initial configuration

DUT is RCS Provisioned - Registered (Online)

Reference 1 is pre-UP user (e.g. CPR)

Reference 1 is RCS Provisoned - Not Registered (Offline) – no data connection.

Network supports Client Fallback to SMS (CFS).

The CFS Timer is set to 5 minutes (no user setting).

The user setting (as described in US18-13 / R5-2-4-4) "re-send as SMS" is set to "always ask".

Reference 1 is stored as contact on DUT and known to be RCS enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT send an image to Reference 1 and wait for 5 minutes. | On DUT the file remains in “sent” status.  DUT asks to re-send the file as SMS with link after 5 minutes.  Select the option to “always” send as SMS |
| 2 | At DUT select to “send the file as SMS with link” (on request by DUT). | On Reference 1 SMS with link is received.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS.  On DUT the file transfer is shown as “sent”. |

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT send an image to Reference 1 and wait for 5 minutes. | On DUT the file remains in “sent” status.  DUT asks to re-send the file as SMS with link after 5 minutes.  Select the option to “always” send as SMS |
| 2 | At DUT select to “send the file as SMS with link” (on request by DUT). | On Reference 1 SMS with link is received.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS.  On DUT the file transfer is shown as “delivered”. |
| 3 | On DUT send a second image to Reference 1. | On Reference 1 the second picture is received as SMS with link.  N.B. some operators transcode the SMS with link into an MMS and deliver it directly to the Reference as an MMS.  On DUT the file transfer is shown as “delivered”. |
| 4 | At Reference 1, enable data connection (Mobile data / WiFi) | Reference 1 is RCS Provisioned - Registered (Online) |
| 5 | On DUT send a third image to Reference 1 | The file transfer is received on Reference 1 as RCS File Transfer. On DUT the file transfer is shown as “delivered” or “displayed” (after the thumbnail icon is represented on the active messaging screen on Reference 1). |

#### 58-2.5.8 Void

#### 58-2.5.9 Void

#### 58-2.5.10 During 1-to-1 chat - Successful HTTP-based file File Transfer in Active Chat

Description

File transfer during the chat 1-to-1 on HTTP.

Related core specifications

GSMA RCS 5.1 - Advanced Communications: Services and Client Specification Version 4.0: 3.5 File Transfer

Joyn Blackbird Product Definition Document v4.0: 7 File Transfer, 4.1.7 Sending Files (Integrated Messaging)

GSMA RCC.71 UP-SDD, GSMA RCC.17

Reason for test

This test verifies that a file can be transferred and notification will be received.

UP-1.0 and UP-2.4

Initial configuration

Both DUT and Reference 1 are registered RCS users

Both DUT and Reference 1 coverage are 2G, 3G, HSPA, LTE, 5G or Wi-Fi

File size being transferred is less than the warning file size.

DUT and Reference 1 are in an active chat session and several chats have been exchanged.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, select a file from local storage and send to Reference 1 | File is successfully sent. |
| 2 | Confirm file is successfully received at Reference 1. | File is successfully received. |
| 3 | At Reference 1, select a file from local storage and send to DUT. | File is successfully sent. |
| 4 | Confirm file is successfully received at DUT. | File is successfully received. |

#### 58-2.5.11 File transfer- user cannot perceive a restriction in file sizes

Description

When a user attempts to transfer a file larger than the file transfer server size limit, auto-acceptance is not possible.

Related core specifications

GSMA RCC.71 UP1.0: US7-7 and UP2.4: US7-7

GSMA RCC.17, ID\_RCS\_F\_3\_3\_10

Reason for test

To validate UP1.0 and UP2.4 Reference section US7-7

Initial configuration

DUT and reference 1 are RCS Provisioned - Registered (Online) by cellular network

DUT is set to File Transfer auto-download

Reference 1 and DUT’s Network (no user setting) have set a file transfer warn size limit.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On Reference 1 send a file to DUT with file size bigger than the reference 1’s Warn Size setting. | On Reference 1 the file is sent. On DUT, the user is notified about a file transfer that is over the warning limit. For the UI display, the file on DUT can be represented by a thumbnail. |
| 2 | Confirm the file download on DUT. | After clicking the thumbnail, the file start to be downloaded to DUT. |

#### 58-2.5.12 File transfer-Administrate File Transfers in Chat and Group Chat Conversations intuitively

Description

Deleting the File Transfer events from the conversation thread does not automatically delete any files from this repository.

Related core specifications

GSMA RCC.71 UP1.0 and GSMA RCC.71 UP2.4: US-7-20

Reason for test

To validate UP1.0 and UP2.4 Reference section US7-20

Initial configuration

DUT and reference 1 are RCS Provisioned - Registered (Online)

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On Reference 1 send a file (e.g. the picture) to DUT. | DUT receives the file that was sent from Reference 1. |
| 2 | Store the file on on DUT or online repository (e.g. an RCS gallery on the device picture gallery) | The file is stored on DUT or online repository. |
| 3 | DUT or reference 1 delete the File Transfer event from the conversation thread. | The file is still stored on DUT or online repositor. |

### 58-2.6 Audio Messaging

#### 58-2.6.1 MO Audio Message - 1-to-1 Chat

Description

Recording and sending an audio message.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_4\_1

Reason for test

UP 1.0. Reference section US8-1 (and subsequent requirements R8-1-1 to R8-1-12). Record and send Audio Message.

Initial configuration

DUT and Reference 1 are online (connected via HSPA, LTE, or WiFI).

DUT and Reference 1 are RCS users and in an active 1-to-1 chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT enters the 1-to-1 conversation with Reference 1. | In the conversation DUT presents a 1-click UI option to record an Audio Message. |
| 2 | DUT records an Audio Message. | DUT records the Audio Message. After recording, DUT is offered to listen to the recorded Audio Message or send directly to Reference 1. |
| 3 | DUT sends the Audio Message to Reference 1. | Once DUT has selected “Send”, DUT shall have the option to cancel the sending before the file transfer of the Audio Message has been completed.  After the Audio Message was sent, both conversation histories shall represent the Audio Message with a clickable icon that illustrates the audio character of the message.  On selection of the icon, the Audio Message shall be played back. Media settings of the device (e.g. volume, speaker, etc.) shall apply. On DUT the file transfer progress (pending, sending, sent, delivered, ‘displayed’ (if ‘displayed’ feedback is allowed in Reference 1’s device settings)) shall be visible. |

#### 58-2.6.2 MO Audio Message - Group Chat

Description

Recording and sending an audio message in a Group Chat.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_4\_2

Reason for test

UP 1.0. Reference section US8-1 (and subsequent requirements R8-1-1 and R8-1-13 and R8-3-4-1). Record and send Audio Message.

Initial configuration

DUT, Reference 1 and 2 are online (connected via HSPA, LTE, or WiFI).

DUT, Reference 1 and 2 are RCS users and in an active Group chat.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT enters the Group Chat conversation with Reference 1 and 2. | In the conversation DUT presents a 1-click UI option to record an Audio Message. |
| 2 | DUT records an Audio Message but the recording shall not be stopped manually. | DUT records the Audio Message. After recording, DUT is offered to listen to the recorded Audio Message or send directly to Reference 1. |
| 3 | After the recording stopped automatically DUT sends the Audio Message to the Group Chat. | Once DUT has selected “Send”, DUT shall have the option to cancel the sending before the file transfer of the Audio Message has been completed.  After the Audio Message was sent, all conversation histories shall represent the Audio Message with a clickable icon that illustrates the audio character of the message.  On selection of the icon, the Audio Message shall be played back. Media settings of the device (e.g. volume, speaker, etc.) shall apply.  The user shall be presented with playback, stop and forward / rewind options to operate the audio player (R8-3-4-1). On DUT the file transfer progress (pending, sending, sent, delivered, ‘displayed’ (if ‘displayed’ feedback is allowed in Reference 1’s and Reference 2’s device settings)) shall be visible. |

#### 58-2.6.3 MT Audio Message - 1-to-1 Chat

Description

Receiving Audio Message in 1-to-1 Chat when device is in idle mode.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_4\_3

Reason for test

UP 1.0. Reference section US8-2 (and subsequent requirements). Receiving Audio Messages.

**Initial configuration**

DUT and Reference 1 are online (connected via HSPA, LTE, or WiFI).

DUT and Reference 1 are RCS users and exchanged messages in a 1-to-1 chat before.

DUT is in idle mode (screen black)

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On Reference 1 enter the 1-to-1 conversation with DUT, record an Audio message and send it. | Once DUT has received the Audio Message, a visual notification shall be provided allowing the user to easily identify the incoming message as an Audio Message. An audible notification shall be provided (DUT’s device settings for notification sounds apply). |
| 2 | On DUT select the notification of the Audio Message. | The Audio Message shall be played back using the active audio speaker. |

#### 58-2.6.4 MO Audio Message - 1-to-1 Chat (Timestamp)

Description

Checking Time and Date stamps for

Audio Recordings in 1-to-1 Chat.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_4\_4

Reason for test

UP 1.0. Reference section US8-3 (and subsequent requirements). Audio Messaging features.

Initial configuration

DUT and Reference 1 are online (connected via HSPA, LTE, or WiFI).

DUT and Reference 1 are RCS users and exchanged messages and audio messages in a 1-to-1 chat before.

Reference 1 is in idle mode (screen black)

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT enter the 1-to-1 conversation with Reference 1, record an Audio message and send it. | Audio Message is sent. |
| 2 | Delete an old Audio Message from the conversation history. | The deleted Audio Messages disappears from the conversation history. |
| 3 | Record another audio message and send it on DUT. | The Audio Message is send and “Time and Date”-stamps are correct on DUT and Reference 1. |

### 58-2.7 RCS Settings

#### 58-2.7.1 RCS Settings - Service Switch (Enable / Disable)

Description

Enable Master Switch

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_1

Reason for test

UP 1.0. Reference section US18-1 and subsequent requirements. RCS (de) activation.

Initial configuration

DUT has an activated UP 1.0 RCS native client.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT set Master Switch for RCS functionality to ‘off’ | Verify RCS functionalities are disabled. All locations / entry points of the (Master) switch are synced to “off”. |
| 2 | On DUT Set Master Switch for RCS functionality to ‘on’ | Verify RCS functionalities are enabled. All locations / entry points of the (Master) switch are synced to “on”. |

#### 58-2.7.2 Void

#### 58-2.7.3 RCS Settings - Delivery Notifications

Description

Enable SMS Delivery Notifications

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_3

Reason for test

UP 1.0. Reference section US18-4 and subsequent requirements. SMS delivery notification

Initial configuration

DUT and Reference are configured for Integrated Messaging.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT, make sure the option to automatically send a Delivery Notification for SMS is selected. | - |
| 2 | DUT sends an SMS to Reference. | Reference receives SMS, DUT presents ‘sent’ and then ‘delivered’ Message Status Notification. |
| 3 | On DUT, deselect the option to automatically send a Delivery Notification for SMS. | - |
| 4 | DUT sends an SMS towards Reference | Reference device receives SMS, DUT presents “sent” as Message Status Notification (does not change to ‘delivered’). |

#### 58-2.7.4 Void

#### 58-2.7.5 RCS Settings - Personalisation of RCS settings

Description

Personalization

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_7

Reason for test

UP 1.0. Reference section US18-6-3 and subsequent requirements. Personalization

Initial configuration

DUT is RCS enabled.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Check whether following personalization features are present within the client:  Notification sounds for incoming messages (e.g. xMS, 1-to -1 Messaging Group Chat Messages, File Transfers)  Notification preferences  Customised ringtones (for Voice calls or IP Video)  Visual customisation for chat (for example fonts, bubble styles, backgrounds etc.) | DUT should be able to set the above features according to their own preferences. |

#### 58-2.7.6 RCS Settings - Resend as SMS (Always)

Description

CFS preference set to Always Resend

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_13

Reason for test

UP 1.0. Reference section US18-13, US18-14 (and subsequent requirements). Selection of Client Fallback SMS (CFS) preferences

Initial configuration

DUT’s and Reference’s MNO(s) support Integrated Messaging

DUT is online

Reference is offline but available for CS

Reference’s RCS Service Provider supports CFS

- The CFS Timer is set to 5 minutes (no user setting).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Go to settings on the DUT and set the option ‘Always resend undelivered RCS messages as SMS (and don’t ask)’/’ Always resend undelivered RCS Files as SMS link (and don’t ask)’ | The DUT is set to ‘Always resend undelivered RCS messages as SMS (and don’t ask)’/’ Always resend undelivered RCS Files as SMS link (and don’t ask)’. |
| 2 | Send an RCS 1-to-1 Message on DUT to Reference. | On DUT, the message state is ‘sent’ but does not show ‘delivered’ for about 5 minutes. On Reference, the message will not arrive. |
| 3 | Wait for 5 minutes after ‘sent’ was confirmed by the network on DUT. | After 5 minutes, the original RCS 1-to-1 message is removed and a new message appears sent as SMS. The new message is indicated as ‘sent’ until the message arrives at Reference and the ‘delivered’ notification is presented on DUT. |

#### 58-2.7.7 RCS Settings - Resend as SMS (Never)

Description

CFS preference set to Never Resend

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_14

Reason for test

UP 1.0. Reference section US18-13, US18-14 (and subsequent requirements). Selection of Client Fallback SMS (CFS) preferences

Initial configuration

DUT’s and Reference’s MNO(s) support Integrated Messaging

DUT is online

Reference is offline but available for CS

Reference’s RCS Service Provider supports CFS

- The CFS Timer is set to 5 minutes (no user setting).

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Go to settings on the DUT and set the option ‘Never resend undelivered RCS messages as SMS (and don’t ask)’/’ Never resend undelivered RCS Files as SMS link (and don’t ask)’ | The DUT is set to ‘Never resend undelivered RCS messages as SMS (and don’t ask)’/’ Never resend undelivered RCS Files as SMS link (and don’t ask)’. |
| 2 | Send an RCS 1-to-1 Message on DUT to Reference. | On DUT, the message state is ‘sent’ but does not show ‘delivered’. On Reference, the message will not arrive. |
| 3 | Wait for 6 minutes after ‘sent’ was confirmed by the network on DUT. | No change. |
| 4 | Go online with Reference. | The message arrives at Reference. On DUT, the Message Status changes to ‘delivered’. |

#### 58-2.7.8 RCS Settings - Communication Blocking (Messaging / File Transfer)

Description

Blocking Contacts

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_15

Reason for test

UP 1.0. Reference section US18-15 (and subsequent requirements). Blocking contacts

Initial configuration

DUT is online and known to be RCS capable

Reference 1 is online and known to be RCS capable

On Reference 1, there is a 1-to-1 Messaging conversation with DUT, and a Group Chat that has DUT as a participant.

DUT has blocked incoming communication from Reference1 on the device.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Send a 1-to-1 message from Reference 1 to DUT. | The DUT device entirely ignores the message from Reference. The Reference user is not notified about the status of being blocked. The Reference device indicates the message in “sent” state and shall not indicate “displayed”. |
| 2 | Send a file on the Reference device to DUT | The DUT device entirely ignores the file from Reference. The Reference user is not notified about the status of being blocked. The Reference device indicates the file in “delivered” state and shall not indicate “displayed”. |
| 3 | Send a Group Chat message from Reference to the group that has DUT as a participant. | The DUT device alerts the DUT user that there is an incoming Group Chat message from Reference and the message can be accessed in the Group Chat thread. |

#### 58-2.7.9 RCS Settings - Dual SIM (SIM1 RCS / SIM2 RCS)

Description

Dual SIM

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_16

Reason for test

UP 1.0. Reference section US18-16 (and subsequent requirements). Dual SIM

Initial configuration

DUT is a Dual SIM device

DUT is online on SIM 1 and SIM2 is from an operator known to be RCS capable

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Go to settings on the DUT and select SIM2 that is RCS capable | The DUT user is able to select the SIM2 as the active RCS SIM. |

#### 58-2.7.10 RCS Settings - Dual SIM (SIM1 RCS / SIM2 non RCS)

Description

Dual SIM

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17, ID\_RCS\_F\_3\_5\_17

Reason for test

UP 1.0. Reference section US18-16 (and subsequent requirements). Dual SIM

Initial configuration

DUT is a Dual SIM device

DUT is online on SIM1, SIM2 is from an operator not known to support RCS.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Go to settings on the DUT and try to select SIM2 for RCS services. | The DUT does not offer to change the active SIM for RCS services. |

### 58-2.8 Enriched Calling

Initial configuration

For all test cases in the Enriched Calling section the following applies:

* On DUT the supplementary service CLIR (Calling Line Identifier Restriction) is disabled (see R12-4-) and is configured to Variant A (as per R3-3-1-1) by DUT’s operator.
* If not otherwise specified all devices participating in the tests are Enabled for Enriched Calling

#### 58-2.8.1 Void

#### 58-2.8.2 Void

#### 58-2.8.3 Void

#### 58-2.8.4 Void

#### 58-2.8.5 Void

#### 58-2.8.6 Void

#### 58-2.8.7 Void

#### 58-2.8.8 MT Enriched Calling – In-Call – Invites while call-screen in background

Description

Putting the call screen in background and receiving invites to file transfer and a message.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0 ID\_RCS\_F\_4\_2\_4

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-6: Enriched In-Call experience.

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular, or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Establish an enriched call from DUT to Reference 1 and put the call screen on DUT in the background. | Call is established. |
| 2 | Put the call screen on DUT in the back ground and from Reference 1 share a file with DUT. | The call screen with the file transfer invite is displayed on the DUT. |
| 3 | Put the call screen on DUT in the back ground and from Reference 1 send a message (Chat or SMS) to DUT. | The call screen on the DUT notifies the user about the message. |

#### 58-2.8.9 Void

#### 58-2.8.10 MO Enriched Calling – In-Call – Image Share while call is ended

Description

Share a picture during a call and end the call before the picture is uploaded.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0 ID\_RCS\_F\_4\_2\_8

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-6: Enriched In-Call experience.

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Establish an enriched call from DUT to Reference 1 and share a picture from the call screen. | DUT starts uploading the picture. |
| 2 | End the call before the upload process of the picture on DUT’s device has ended. | On Reference 1 the picture is received irrespectively of the fact that the call has ended and displayed on request. |

#### 58-2.8.11 MO Enriched Calling – In-Call – Image Share with different file formats

Description

Share a picture during a call - three different file types (jpg, png and gif).

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0 ID\_RCS\_F\_4\_2\_9

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-6: Enriched In-Call experience.

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Establish an enriched call from DUT to Reference 1 and share a picture in .jpg format from the call screen. | Picture is received and displayed on request in the call screen of Reference 1. |
| 2 | From DUT to Reference 1 share a picture in .png format from the call screen. | Picture is received and displayed on request in the call screen of Reference 1. |
| 3 | From DUT to Reference 1 share a picture in .gif format from the call screen. | Picture is received and displayed on request in the call screen of Reference 1. |

#### 58-2.8.12 MO Enriched Calling – In-Call – Picture Share from Device Gallery

Description

Share a picture during a call from Device Gallery.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0 ID\_RCS\_F\_4\_2\_10

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-6: Enriched In-Call experience.

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Establish an enriched call from DUT to Reference 1 and select “share file”-function. | DUT is presented with options to select a picture from gallery or camera. |
| 2 | Select to share a picture from the device gallery of DUT, select a picture and send it in the default size to Reference 1. | The selected picture is sent in the default size. |
| 3 | Select to share a picture from the device gallery of DUT, select a picture and choose to send it in the original size (rather than the default size, resized format) and send it to Reference 1. | The selected picture is sent in the original size. |

#### 58-2.8.13 MT Enriched Calling – In-Call – Exchange messages from call screen

Description

Exchange messages from call screen during call.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0 ID\_RCS\_F\_4\_2\_11

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-6: Enriched In-Call experience.

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Establish an enriched call from DUT to Reference 1 and on Reference 1 select to send a message from the call screen and send. | On DUT’s in-call screen, there is a service entry point to 1-to-1 Messaging with the contact on the call. |
| 2 | On DUT’s device answer on the reception of the message. | On DUT’s device, there is an option to see the incoming message in the call screen and the possibility to select to answer to that message. |

#### 58-2.8.14 Void

#### 58-2.8.15 MO Enriched Calling – Post-Call – Call unanswered, sending note

Description

Check options after call cancellation and send a post-call note.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0, ID\_RCS\_F\_4\_3\_2 and ID\_RCS\_F\_4\_3\_5

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-10: Enriched Post-Call experience.

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Call Reference 1 from DUT. | Reference 1’s device rings. |
| 2 | Do not answer the call on Reference 1’s device (no voicemail) and cancel call setup on DUT. | After call cancellation, DUT is offered to leave a post-call note or post-call audio message. |
| 3 | Send a post-call note from DUT’s device. | DUT gets a confirmation that post-call note was sent. Reference 1 receives the post-call note as 1-to-1 Messaging (RCS message or SMS). |

#### 58-2.8.16 MO Enriched Calling – Logs – Established Call with Media

Description

Check logs after an established call with different media.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0, ID\_RCS\_F\_4\_4\_1

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-12: Enriched Call Logs

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT selects Reference 1 as a contact to call. | Pre-call media are selected for the call on DUT. |
| 2 | In Call Composer, DUT sets the call as important, selects a subject, shares location, shares a picture and calls Reference 1.. | On Reference 1 Pre-Call media elements are displayed while ringing. |
| 3 | Reference 1 accepts the call. | On Reference 1 the shared media elements are displayed or accessible. |
| 4 | DUT shares another picture and sends a message before the user ends the call. | * In both Call Logs, Pre-Call location, important flag and call subject are accessible. Pre-Call picture and any In-Call media content MAY be accessible from Call Logs. * In the messaging conversations on both devices call subject may be accessible. Pre-Call picture and any In-Call media content are accessible in both messaging conversations. |

#### 58-2.8.17 MT Enriched Calling – Logs – Cancelled Call before ringing

Description

Check logs after call is cancelled before ringing.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0, ID\_RCS\_F\_4\_4\_2

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-12: Enriched Call Logs

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 1 selects DUT as a contact to call. | Pre-call media are selected for the call on Reference 1. |
| 2 | In Call Composer, Reference 1 sets the call as important, selects a subject, shares location, shares a picture and calls DUT. | - |
| 3 | Reference 1 cancels the call before DUT starts ringing. | No call was established, neither did DUT’s device alert. No missed call notification visible on DUT. |
| 4 | Check logs on DUT. | No call log of the cancelled call are in DUT’s call logs. |

#### 58-2.8.18 Void

#### 58-2.8.19 MT Enriched Calling – Logs – Cancelled Call during ringing with Audio Message

Description

Check logs after call is cancelled and a Post-Call Audio Message was sent.

Related core specifications

GSMA RCC.71 UP-SDD, GSMA RCC.17 v3.0, ID\_RCS\_F\_4\_4\_4

Reason for test

To validate UP 1.0 and UP 2.5. Reference section 12-12: Enriched Call Logs

Initial configuration

DUT is known to be RCS capable and Online (Cellular or Wi-Fi).

Reference 1 is known to be RCS capable and online (Cellular or Wi-Fi).

Reference 1 is a known contact of DUT and exchanged calls before.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Reference 1 selects DUT as a contact to call. | Pre-call media are selected for the call on Reference 1. |
| 2 | In Call Composer, Reference 1 sets the call as important, selects a subject, shares location, shares a picture and calls DUT. | DUT is ringing. |
| 3 | Reference 1 cancels the call and sends a Post Call Audio Message. | No call was established. A missed call notification is visible on DUT’s device and the Post Call Audio Message was received. |
| 4 | Check logs on both devices. | Both call logs contain important indicator, call subject, shared location and the post-call audio message. Both call logs may contain pre-call picture. |

### 58-2.9 Configuration

#### 58-2.9.1 Network initiated- Enable RCS

Description

A successful network-initiated configuration is done on DUT which was RCS-disabled and becomes RCS-enabled.

This case can be performed on condition that RCS platform can be triggered to start network-initiated configuration through self-service mechanisms like customer-care hotlines or SMS commands. Otherwise, this case can be omitted.

Related core specifications

GSMA RCC.14

Reason for test

Verify that DUT’s RCS functionality can be re-enabled under remote control from the network.

Initial configuration

DUT’s RCS functionality has been disabled. For example, the last configuration document included a RCS DISABLED STATE configuration parameter set to -1.

DUT can handle device configuration SMS commands with UDH headers as per RCC.14 in the background.

DUT has data connection to a 3GPP bearer with which to register to the RCS network.

The DUT-related user has not been provisioned on network yet. But, the RCS platform is ready to provision the user at any time.

DUT is powered on.

Test procedure

|  |  |  |
| --- | --- | --- |
| Steps | **Test procedure** | Expected behaviour |
| 1 | Check RCS availablity on DUT. | RCS is not available on DUT |
| 2 | The user is provisioned on network-side and after finishing that, the platform sends an SMS to DUT, triggering device configuration procedure. | DUT fulfills configuration sucessfully and seamlessly. Optionally, an RCS-related welcome message is displayed, requiring manual confirmation. |
| 3 | Check RCS availablity on DUT. | RCS is available on DUT. |

#### 58-2.9.2 Network initiated- Disable RCS

Description

A successful network-initiated configuration is done on DUT which was RCS-enabled and becomes RCS-disabled.

This case can be performed on condition that RCS platform can be triggered to start network-initiated configuration through self-service mechanisms like customer-care hotlines or SMS commands. Otherwise, this case can be omitted.

Related core specifications

GSMA RCC.14.

Reason for test

Verify that DUT’s RCS functionality can be disabled under remote control from the network.

Initial configuration

DUT’s RCS functionality has been enabled.

DUT can handle device configuration SMS commands with UDH headers as per RCC.14 in the background.

DUT has data connection to a 3GPP bearer with which to register to the RCS network.

RCS service for DUT’s user is active on the network, but the RCS platform is ready to de-provision the user at any time.

DUT is powered on.

Test procedure

|  |  |  |
| --- | --- | --- |
| Steps | **Test procedure** | Expected behaviour |
| 1 | Check RCS availablity on DUT. | RCS is available on DUT. |
| 2 | The user is de-provisioned on network-side, and after finishing that theplaform sends an SMS to DUT, triggering device configuration procedure. | DUT fulfills configuration sucessfully and seamlessly. No mandatory manual involvement is required on DUT. |
| 3 | Check RCS availablity on DUT | RCS is not available on DUT |

## 58-2.10 Chatbot

Chatbot and MaaP service are new features that are defined in RCS UP2.x and were modified gradually in the next few releases. It provides message services for industry customers. Message types include text, audio, video, pictures, vCard, geographic location and rich media card messages (Rich Card). The message can also contain suggested actions and suggested replies. Chatbot and MaaP service also support individual users to actively send messages, reply messages and search Chatbot to the industry customers. This chapter provides the test cases for Chatbot scenarios.

**Terms and Abbreviations**

|  |  |
| --- | --- |
| **Term** | **Description (contains technical and functional terms)** |
| Chatbot | An RCS based service provided to users whose output is presented in a conversational form and which provides some kind of value to the users. Often a piece of software interfacing with one or more users aiming to simulate intelligent human conversation. |
| CPIM | Common Profile for Instant Messaging |
| MSRP | Message Session Relay Protocol |
| MSISDN | Mobile Subscriber Integrated Services Digital Number, i.e., mobile phone number. |
| MaaP | Message as a Platform, A system that provides a mechanism for Chatbot developers to create and register Chatbots, which can then be exposed to the users connected to the platform through a messaging system. |
| MNO | Mobile Network Operator |
| RCS | Rich Communication Services |
| UP | Universal Profile |
| URI | Uniform Resource Identifier |
| URL | Uniform Resource Locator |
| JSON | JavaScript Object Notation |

### 58-2.10.1 Capability Discovery towards Chatbot

#### 58-2.10.1.1 RCS Capability Discovery towards Chatbot by Tel-Number

Description

Contacting a Chatbot by Tel-Number in order to start conversation.

Related core specifications

GSMA RCC.07v12 2.5.4.1

RCC.71 v2.5 R15-4-8

Reason for test

It has to be verified that the DUT is able to contact a Chatbot for RCS by Tel-number .

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot have not interacted previously

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT opens a chat 1-to-1 window with a Chatbot through its Tel number. | DUT shows that Chatbot service can be established. As a result, a capability exchange takes place and the right capabilities/services available are displayed. |
| 2 | Send a message from DUT to the Chatbot. | A message is sent from DUT to Chatbot. User can check the Chatbot information on DUT. |

#### 58-2.10.1.2 RCS Capability Discovery towards Chatbot by SIP URI

Description

Contacting a Chatbot by SIP URI in order to start conversation.

Related core specifications

GSMA RCC.07v12 2.5.4.1, Table 8 of 2.6.1.3, 3.6.2.4

RCC.71 v2.5 R15-4-8

Reason for test

It has to be verified that the DUT is able to contact a Chatbot on RCS by SIP URI.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot have not interacted previously

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT opens a chat 1-to-1 window with a Chatbot through its SIP URI. | DUT shows that Chatbot service can be established. As a result, a capability exchange takes place and the right capabilities/services available are displayed. |
| 2 | Send a message from DUT to the Chatbot. | A message is sent from DUT to Chatbot. User can check the Chatbot information on DUT. |

#### 58-2.10.1.3 RCS Capability Discovery towards Chatbot by Deeplink-a Link from the Webpage

Description

Contacting a Chatbot by a deep link from the webpage.

Related core specifications

GSMA RCC.71 UP2.5 R15-4-11 and R15-4-15

GSMA RCC.07 v12.0 3.6.3.4

Reason for test

It has to be verified that a Chatbot conversation shall be able to be invoked from a deep link. The deep link is embedded in links from webpage

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Four unknown Chatbot deep links have been constructed. DUT and Chatbot have not interacted previously. The deep links are embedded in links from webpage:

The webpage link A contains the SIP URI but without suggestion list

The webpage link B contains the SIP URI and suggestion list

The webpage link C contains the SMS port number but without SIP URI

The webpage link D contains the SMS port number and the SIP URI with suggestion list

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Click the link A from the webpage on DUT. | DUT obtains the Chatbot information. On the introduction page, a button for sending an initial message is displayed. |
| 2 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established. |
| 3 | Click the link B from the webpage on DUT. | DUT obtains the Chatbot information and a button for sending an initial message is displayed. |
| 4 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established and suggestion list is displayed on DUT. |
| 5 | Click the link C from the webpage on DUT. | DUT obtains the Chatbot information and a button for sending an initial message is displayed. |
| 6 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established. |
| 7 | Click the link D from the webpage on DUT. | DUT obtains the Chatbot information and a button for sending an initial message is displayed. |
| 8 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established and suggestion list is displayed on DUT. |

#### 58-2.10.1.4 RCS Capability Discovery towards Chatbot by Deeplink-QR Code

Description

Contacting a Chatbot by scanning QR code in order to start conversation.

Related core specifications

GSMA RCC.71 UP2.5 R15-4-11 and R15-4-15

GSMA RCC.07 v12 3.6.3.4

Reason for test

It has to be verified that a Chatbot conversation shall be able to be invoked from a deeplink: QR code.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Four unknown Chatbot deep links have been constructed. DUT and Chatbot have not interacted previously. The deep links are embedded in QR codes:
4. The deep link of QR code A contains the SIP URI but without suggestion list
5. The deep link of QR code B contains the SIP URI and suggestion list
6. The deep link of QR code C contains the SMS port number but without SIP URI
7. The deeplink of QR code D contains the SMS port number and the SIP URI with suggestion list

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT scans the QR code A. | DUT obtains the Chatbot information. On the introduction page, a button for sending an initial message is displayed. |
| 2 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established. |
| 3 | DUT scans the QR code B. | DUT obtains the Chatbot information. On the introduction page, a button for sending an initial message is displayed. |
| 4 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established and the suggestion list is displayed on DUT. |
| 5 | DUT scans the QR code C. | DUT obtains the Chatbot information. On the introduction page, a button for sending an initial message is displayed. |
| 6 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established. |
| 7 | DUT scans the QR code D. | DUT obtains the Chatbot information. On the introduction page, a button for sending an initial message is displayed. |
| 8 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established and the suggestion list is displayed on DUT. |

Note: If there is more than one QR code within the scan screen, the DUT should use arrows or other obvious instructions to prompt the user that there are several QR codes, please select one QR code for identification.

#### 58-2.10.1.5 RCS Capability Discovery towards Chatbot by Deeplink- APP

Description

Contacting a Chatbot by APP in order to start conversation.

Related core specifications

GSMA RCC.71 UP2.5 R15-4-11 and R15-4-15

GSMA RCC.07 v12 3.6.3.4

Reason for test

It has to be verified that a Chatbot conversation shall be able to be invoked from a Deeplink: other APPs on DUT.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Four unknown Chatbot deep links have been constructed. DUT and Chatbot have not interacted previously. The deep links are embedded in other APPs:

The deep link A contains the SIP URI but without suggestion list

The deep link B contains the SIP URI and suggestion list

The deep link C contains the SMS port number but without SIP URI

The deep link D contains the SMS port number and the SIP URI with suggestion list

Test procedure

Please take reference to 58-2.10.1.3 and 58-2.10.1.4

#### 58-2.10.1.6 RCS Discovery 1-to-1 Chatbot by Chatbot Identifier in TO field

Description

DUT is trying to contact an already known Chatbot using a Chatbot Short Code or a Chatbot Service ID in the TO field.

Related core specifications

RCS RCC.71 UP 2.0 R15-3-13 and RCC.71 UP 2.5 R15-4-13

Reason for test

It has to be verified that the DUT is able to start communication with a Chatbot by entering the Chatbot short code or Chatbot Service ID into the TO-field

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are not in an active session

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Introduce the Chatbot short code in the "to" field of the chat composer. | On DUT, it can initiate a conversation with the Chatbot. After entering the short code on the message composer, the number should be replaced by the Chatbot service name. |
| 2 | Introduce the Chatbot service ID in the "to" field of the chat composer. | On DUT, it can initiate a conversation with the Chatbot. After entering the service ID on the message composer, the number should be replaced by the Chatbot service name. |

#### 58-2.10.1.7 RCS Discovery 1-to-1 Chatbot by Searching a Key Word

Description

Initiating a 1-to-1 Chatbot conversation request by using the search function

Related core specifications

RCC.07v12 3.6, 2.5.4.1, 2.6 and RCC.71 UP2.5 R15-4-13-1

Reason for test

It has to be verified that the DUT is able to start communication with a Chatbot by using the search function

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and the “RCSTestBot” Chatbot have not interacted previously

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Search for a Chatbot by a keyword “RCSTestBot” on DUT. | Only the Chatbots with the keyword on the title should be displayed in the search results. |
| 2 | DUT choose the chatbot “RCSTestBot”. | DUT obtains the Chatbot information. On the introduction page, a button for sending an initial message is displayed. |
| 3 | Tap the button and send an initial message from DUT to the Chatbot. | The message can be sent to the Chatbot. The 1-to-1 chat with Chatbot can be established. |
| 4 | User searches for a Chatbot with the keyword “RCSTestBot” again and choose the same Chatbot again. | User can initiate a conversation with the “RCSTestBot” Chatbot directly from the search results. No need to jump to information page and send initial message again. |

#### 58-2.10.1.8 Finding Several Chatbots

Description

Initiating a 1-to-1 Chatbot conversation by searching for a common keyword that is used by several Chatbots like "Chatbot".

Related core specifications

RCC.07v12 3.6, 2.5.4.1, 2.6

Reason for test

It has to be verified that the DUT finds several Chatbots when using a common keyword like "Chatbot".

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT had a previous Chatbot conversation with Chatbot A (Chatbot Service Identification).
3. DUT have not interacted with Chatbot B previously.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Search for a bot using only the keyword "Chatbot". | The Chatbot info screen should be displayed with the Chatbot title, icon and chat icon. |
| 2 | Tap on Chatbot A. | DUT shows the conversation UI with Chatbot A. |
| 3 | Tap on the chat icon of Chatbot B | DUT shows the Chatbot information page. On the introduction page, a button for sending an initial message is displayed. After tapping the button and sending initial message the conversation with Chatbot B can be established. |

#### 58-2.10.1.9 RCS Chatbot Searching with a not Matching Keyword

Description

Searching for the Chatbot Title with an error keyword.

Related core specifications

RCC.07v12 3.6, 2.5.4.1, 2.6

Reason for test

It has to be verified that when searching for a Chatbot with not matching keywords, none of the Chatbots are provided.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT had a previous Chatbot conversation with a Chatbot (Chatbot Service Identification)

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Search with keyword that doesn't match any existing Chatbot (a random set of characters like FPymqt or AdHwjC…). | No Chatbot should be displayed in the results. |

#### 58-2.10.1.10 RCS Capability Discovery towards Chatbot by Searching a Key Word with Geolocation

Description

Contacting a Chatbot by searching a key word with Geolocation.

Related core specifications

GSMA RCC.71 UP2.5 R15-4-3-1 and R18-17-10

Reason for test

It has to be verified that the DUT is able to contact a Chatbot on RCS by searching a key word with Geolocation.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. In the general settings on DUT, location information is allowed to be shared by client.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Enter the keyword on the searching field. E.g., Food or shop or park. Choose “search the Chatbot nearby”. | The Chatbot search result matches the input query keywords. Chatbot search result matches with the current location of DUT. The Chatbots nearby are displayed and ranked by distance. |

### 58-2.10.2 Chatbot information

#### 58-2.10.2.1 Chatbot Information Display

Description

DUT is getting contacted by an unknown Chatbot and should be able to connect.

Related core specifications

GSMA RCC.07v12 3.6, 2.4 and 2.5

RCC.71 UP2.5 R15-1-4

Reason for test

It has to be verified that the DUT is able to accept a conversation request from an unknown Chatbot and that the Chatbot information can be displayed correctly.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot have not interacted previously
4. Chatbot Information Function ready to provide Chatbot information

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot initiates a 1 to1 Chat message with DUT using the user's public identity (i.e. MSISDN) and sends a message. | DUT receives the message and it appears in the Chatbot conversation. |
| 2 | DUT opens the received message. | Delivery/display notifications are sent back to Chatbot.  It is clear that the conversation is with a Chatbot and not a human user. When selecting the top bar or the logo, DUT SHOULD show all the Chatbot information received from the Chatbot information function with the following possible fields;  - Service Name (Mandatory)  - Service ID (Mandatory)  - T&C Page (Mandatory)  - Email (Optional)  - Call-back Phone Number (Optional)  - Website (Optional)  - Service Icon (Optional)  - SMS (Optional)  - Color (Optional)  - Service description (Optional)  - Background image (Optional)  - Chatbot provider’s name (Optional)  - Chatbot Category (Optional)  All of the information can be viewed by the user, but he can’t modify the information unless he saves it on DUT locally. |

#### 58-2.10.2.2 RCS Chatbot Verification

Description

Receiving a 1-to-1 Chatbot conversation request with and without a valid verification.

Related core specifications

GSMA RCC.07v12 3.6 and RCC.71 UP2.5 R15-2-16

Reason for test

It has to be verified that the DUT is able to receive a Chatbot conversation request with and without a valid verification.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are not in an active conversation
4. Chatbot 1 has a valid verification certificate
5. Chatbot 2 verification certificate is not valid

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot 1 sends DUT a message. | When reading the message received by Chatbot 1, the user is made aware that the Chatbot sending it is "Verified". |
| 2 | Chatbot 2 sends DUT a message. | When reading message received by Chatbot 2, the user is NOT made aware that the Chatbot sending it is "Verified". |

#### 58-2.10.2.3 Void

#### 58-2.10.2.4 Chatbot Information Retrieval - Cache-control Max-age has not Expired

Description

DUT is trying to continue an old but not expired conversation with a Chatbot.

Related core specifications

GSMA RCC.07v12 3.6.4.1 and RCC.72v2 3.2.11

Reason for test

It has to be verified that the DUT does not retrieve a conversation info update after Cache-Control Max-Age is still valid.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot had a chat previously
4. Chatbot Information Function ready to provide Chatbot information
5. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | 1. DUT enters in the Chatbot info within the Chatbot conversation.  2. DUT leaves the Chatbot conversation and puts it into the background. | - |
| 2 | DUT enters again after five minutes in the Chatbot info within the Chatbot conversation. | DUT does not show changes for the Chatbot information. |

#### 58-2.10.2.5 Void

#### 58-2.10.2.6 Void

#### 58-2.10.2.7 Void

### 58-2.10.3 Chatbot Management

#### 58-2.10.3.1 Block the Chatbot on DUT

Description

DUT is able to block a Chatbot

Related core specifications

RCC.71 UP2.5 R15-5-2, R15-5-9

Reason for test

It has to be verified that the DUT is able to block a Chatbot

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT had a previous Chatbot conversationwith a Chatbot (Chatbot Service Identification)
3. The Chatbot is not in the critical Chatbot list.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT opens the previous Chatbot conversation and in the settings adds its Chatbot Service Identifier to the blacklisting - blocked contacts. | Blocked Chatbot is confirmed. |
| 2 | Trigger the Blocked Chatbot to send a RCS message (message, FT, geolocation) to DUT. | No message is received from the blocked Chatbot on the DUT. |
| 3 | Search the Chatbot on DUT. | The Chatbot should still be in the search results. Users shall still be able to see the Chatbot Information that likely contains other ways to get in touch, e.g. phone number or email address. |
| 4 | DUT sends a message to the Chatbot. | The DUT UI shouldn’t allow that and alert the user that the Chatbot has been blocked allowing them to unblock the Chatbot. |
| 5 | Unblock the Chatbot on DUT. | Unblocking of the Chatbot is confirmed |
| 6 | Trigger the unlocked Chatbot to send a RCS message (message, FT, geolocation) to DUT. | The message from the Chatbot is received. |

#### 58-2.10.3.2 Discover the Blocked Chatbot List Set by the Network Side

Description

DUT can discover the blocked Chatbot list set by the Network side. DUT can handle the chat correctly with the blocked Chatbot by Network side

Related core specifications

GSMA RCC. 71 UP2.5 R15-5-4, R15-5-6, R15-5-7, R15-5-9

RCC07 v12 3.6.6.1 and 3.6.3.3

Reason for test

It has to be verified that DUT can discover the Chatbot blacklist set by the Network side.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot A had a chat previously
4. Specific Chatbots List Server is ready to provide client with the blocked Chatbot list

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | MNO sets Chatbot A in the Chatbot blacklist by network side: the list of blacklisted Chatbots shall be identified as BLACKLISTED.  The Specific Chatbots List Server passes the BLACKLISTED list file to DUT. After obtaining the list file, DUT parses the list file. |  |
| 2 | DUT caches the network Chatbot blacklist locally. | The network side Chatbot blacklist is not visible to DUT and cannot be edited on DUT. |
| 3 | Chatbot A sends a message to DUT. | DUT does not display or remind user the message sent by the Chatbot A. |
| 4 | Searches for the blocked Chatbot A. | DUT does not show the Chatbot in the search results. |
| 5 | DUT sends one message to the known blocked Chatbot A. | DUT UI shouldn’t allow that and alert the user that the Chatbot has been blocked (with no option to unblock). |

#### 58-2.10.3.3 Void58-2.10.3.3 Void

#### 58-2.10.3.4 Critical Chatbot Identification and cannot be Blocked

Description

User is aware of the fact a Chatbot is a “Critical Chatbot” and cannot be blocked.

Related core specifications

GSMA RCC. 71 UP2.5 R15-1-1-1, R15-1-9-1, R15-2-16-5 and R15-9-1-9

Reason for test

It has to be verified that DUT shows the User that a Chatbot is “Critical” (using icon or toast) and that the User cannot block Chatbots that are discovered to be Critical.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot A is a critical Chatbot and DUT has received the critical Chatbot list file containing Chatbot A.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | User discovers Chatbot Information card. | Information presented to user indicates that this is a Critical Chatbot. |
| 2 | Chatbot A sends one message to DUT. | The message can be displayed on DUT. |
| 3 | Check the Chatbot “setting” or “operation” interface on DUT. | DUT shall automatically identify A as a critical Chatbot, and shall not provide an operation to add it to the blacklist or block it. |

#### 58-2.10.3.5 Mute Notifications of Individual Chatbot

Description

DUT can mute notifications of an individual Chatbot conversation.

Related core specifications

GSMA RCC. 71 UP2.5 R15-8-19

Reason for test

It has to be verified that DUT should be able to mute notifications per individual Chatbot conversation.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Cache-Control max-age validity for the Chatbot Info is not expired
4. Chatbot and DUT had a chat previously

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | On DUT Chatbot setting, Mute the message notification of Chatbot A. | The notification of Chatbot can be set correctly. |
| 2 | Chatbot send a message to DUT. | There will not be a prompt tone or status bar notification of the arrival of a message, but there will be an unread message prompt in the message conversation list (such as red dot or number of unread message bars). |

### 58-2.10.4 Chatbot A2P Message

#### 58-2.10.4.1 A2P Chatbot Message from a Known Chatbot

Description

DUT can receive a message from an already known Chatbot.

Related core specifications

GSMA RCC.07v12 3.6

GSMA RCC.17 v3 ID\_RCS\_RBM\_13

Reason for test

It has to be verified that the DUT is able to receive a 1-to-1 Chatbot message from an already known Chatbot.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot had a chat previously
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot initiates a1-to-1 conversation with DUT using the user's public identity (i.e. MSISDN) and sends a text message in public mode. | DUT notifies user of the message received. |
| 2 | DUT opens the received message and a 1-to-1 conversation is established with the Chatbot. | DUT receives the message and it appears in the Chatbot conversation. Delivery/display notifications are sent back to Chatbot. |

#### 58-2.10.4.2 1-to-1 Chatbot Message with a Suggested Chip List

Description

Chatbot initiates a 1-to-1 message request with Multipart Mixed CPIM in MIME. DUT can receive the Chatbot message.

Related core specifications

GSMA RCC.07v12 3.6.7 and 3.6.10

GSMA RCC.17 v3 ID\_RCS\_RBM\_14

Reason for test

It has to be verified that the DUT is able to initiate a 1-to-1 Chatbot chat from an already known Chatbot using a Multipart Mixed CPIM in MIME message.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot had a chat previously
4. Cache-Control max-age validity for the Chatbot Info has not expired
5. DUT and Chatbot are not in an active conversation

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot initiates a 1-to-1 conversationwith DUT using the user's public identity (i.e. MSISDN) and sends a message with a suggested chip list. | DUT notifies user of the message received. |
| 2 | DUT opens the received message and a1-to-1 conversationis established with the Chatbot. | DUT receives the message witha suggested chip list which appears in the Chatbot conversation. Delivery/display notifications are sent back to Chatbot. |

#### 58-2.10.4.3 1-to-1 Chatbot Message with Rich Card

Description

Chatbot initiates a 1-to-1 message with a Rich Card. DUT can receive the Chatbot message.

Related core specifications

GSMA RCC.07v08 3.2.5, 3.6.7 and 3.6.10

GSMA RCC.17v3 ID\_RCS\_RBM\_16

GSMA RCC.71 UP2.5 R15-8-28, R15-8-44, R15-8-39 and R15-8-47

Reason for test

It has to be verified that the DUT is able to receive a Chatbot message with a Rich Card. The layout of the Rich Card and heights for the media should be displayed appropriately. When a suggested reply is tapped in a Rich Card, the suggested replies and actions in the Rich Card do not disappear.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Cache-Control max-age validity for the Chatbot Info has not expired
4. DUT and Chatbot are in an active conversation
5. Chatbot prepared several media images with different sizes and layouts:

Aspect ratio recommendation for SHORT\_HEIGHT images: 3:1,

Aspect ratio recommendation for MEDIUM\_HEIGHT images: 1.56:1,

Aspect ratio recommendation for TALL\_HEIGHT images: 9:10.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation and Chatbot sends SHORT\_HEIGHT vertical Rich Card which includes suggested replies to DUT. Repeat this test step to cover different media ratios: MEDIUM\_HEIGHT and TALL\_HEIGHT. | DUT receives a new Rich Card message from Chatbot. DUT displays in the conversation with the Chatbot an unique Rich Card which includes on it the suggested replies. The Rich Card media ratio is correct. The top and bottom of the Rich Card media can be cropped appropriately to retain important intermediate elements. Fields in Rich Card should be laid out vertically in relative order as:  1. Media: image, GIF, video, or audio file  2. Title text  3. Description text  4. List of suggested replies and suggested actions |
| 2 | DUT opens the Rich Card and taps on one of the suggested replies (if the chat window is not open already)  Repeat the test case to cover the different medias changing the Rich Card media to cover:  - Image (not animated)  - Video  - Audio  - Map views (based on coordinates) | DUT shows the suggested replies as a new message sent in the chat thread. The rest of the suggested replies are still shown in the DUT’s UI. |
| 3 | Chatbot sends DUT a horizontal Rich Card message. | DUT receives message from Chatbot and displays Rich Card with media file on the right or left side. |

#### 58-2.10.4.4 1-to-1 Chatbot Message with Suggested Chip List

Description

Chatbot initiates a 1-to-1 message with Suggested Chip List. DUT can receive the Chatbot message.

Related core specifications

GSMA RCC.07v12 3.6.7 and 3.6.10

GSMA RCC.17v3 ID\_RCS\_RBM\_18

GSMA RCC.71 UP2.5 US15-8

Reason for test

It has to be verified that the DUT is able to receive a Chatbot message with Suggested Chip List. Once a suggested action is tapped in a Suggested Chip List, there is no residual indication of selection in the UI and the Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. Once a suggested reply is tapped in a Suggested Chip List, the Suggested Chip List disappears.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation and Chatbot sends a multipart message with an RCS Chat Message and Suggested Chip List message which includes at least 2 suggested replies and 2 suggested actions to DUT. | DUT receives the multipart message from Chatbot. DUT displays the chat message and the Suggested Chip List in the conversation with the Chatbot. DUT can navigate and scroll through the list of suggestions. |
| 2 | On DUT open the received message (if the chat window is not open already) and selects one of the suggested actions (i.e., open Url). | DUT performs and displays the selected action (i.e. open Url). |
| 3 | DUT returns to the Chat thread after execution of the action. | There is no residual indication of the action selection in the Chat UI. The Suggested Chip List is still available in the Chat UI. Note: The Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. |
| 4 | DUT taps one of the suggested replies. | DUT shows in the UI the suggested reply as a new message sent in the chat thread. The suggested Chip List is not shown in the Chat UI anymore. |

#### 58-2.10.4.5 1-to-1 Chatbot Multipart CPIM Message- File Transfer with Suggested Chip List

Description

Chatbot Initiates a 1-to-1 Multipart CPIM message: File Transfer with Suggested Chip List. DUT can receive the Chatbot message.

Related core specifications

GSMA RCC.07v12 3.6.7 and 3.6.10

GSMA RCC.17v3 ID\_RCS\_RBM\_19

GSMA RCC.71 UP2.5 US15-8

Reason for test

It has to be verified that the DUT is able to receive a Multipart CPIM. The Multipart CPIM includes File Transfer and Suggested Chip List.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation and Chatbot sends a multipart message with an RCS FT Message and Suggested Chip List message which includes at least 2 suggested replies and 2 suggested actions to DUT. | DUT receives the multipart message from Chatbot.  DUT displays the FT message and the Suggested Chip List in the conversation with the Chatbot. DUT can navigate and scroll through the list of options. |
| 2 | DUT opens the file received in the message and user closes it. | DUT opens the file received and it is shown on the screen. Afterwards DUT closes it and comes back to the chat window. |
| 3 | User taps on DUT a suggested reply from the Suggested Chip List replies and actions. | DUT shows in the UI the suggested reply as a new message sent in the chat thread towards the Chatbot. The Suggested Chip List disappears after this. |

#### 58-2.10.4.6 1-to-1 Chatbot Multipart CPIM Message- Geolocation Push Message with Suggested Chip List

Description

Chatbot initiates a 1-to-1 Multipart CPIM message: Geolocation Push Message with Suggested Chip List. DUT can receive the Chatbot message.

Related core specifications

GSMA RCC.07v12 3.6.7 and 3.6.10

GSMA RCC.17v3 ID\_RCS\_RBM\_20

GSMA RCC.71 UP2.5 US15-8

Reason for test

It has to be verified that the DUT is able to receive Multipart CPIM. The Multipart CPIM includes Chatbot Geolocation Push Message and Suggested Chip List.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation and Chatbot sends a multipart message with an RCS Geolocation Push Message and Suggested Chip List message which includes at least 2 suggested replies and 2 suggested actions to DUT. | DUT receives the multipart message from Chatbot. |
| 2 | DUT opens the received message (if the chat window is not open already). | DUT renders and shows the geolocation push message and the Suggested Chip List in the conversation with the Chatbot. DUT can navigate and scroll into the list of suggestions. |
| 3 | DUT opens the location received in the message and user closes it. | DUT opens the location received and it is showed in the screen. DUT closes it and come back to the chat window. |
| 4 | DUT taps in one of the suggested actions (i.e., open Url). | DUT performs and displays the selected action (i.e. open Url). |
| 5 | DUT returns to the Chat thread with the Chatbot. | There is no residual indication of the action selection in the Chat UI. The Suggested Chip List are still available in the Chat UI. The Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. |

#### 58-2.10.4.7 1-to-1 Chatbot Multipart CPIM Message- Richcard with Suggested Chip List

Description

Chatbot initiates a 1-to-1 Multipart CPIM message: Richcard with Suggested Chip List. DUT can receive the Chatbot message.

Related core specifications

GSMA RCC.07v12 3.6.7 and 3.6.10

GSMA RCC.17v3 ID\_RCS\_RBM\_22

GSMA RCC.71 UP2.5 US15-8

Reason for test

It has to be verified that the DUT is able to receive a Multipart CPIM. The Multipart CPIM includes Richcard and Suggested Chip List.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation and Chatbot sends a multipart message with a RichCard message and Suggested Chip List message which includes 6 suggested replies and 5 suggested actions to DUT. | DUT receives the multipart message from Chatbot. DUT renders and shows the Rich Card and the Suggested Chip List in the conversation with the Chatbot. DUT can navigate and scroll into the list of suggestions. |
| 2 | DUT taps in one of the suggested actions (i.e., open Url). | DUT performs and displays the selected action (i.e., open Url). |
| 3 | DUT returns to the Chat thread with the Chatbot. | The Suggested Chip List is still available in the Chat UI. The Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. |

#### 58-2.10.4.8 1-to-1 Chatbot Carousel Message

Description

Chatbot initiates a 1-to-1 message with a Carousel of Rich Cards.

Related core specifications

GSMA RCC.07v12 3.6.7, 3.6.10 and 3.2.5.3.2.1

GSMA RCC.17v3 ID\_RCS\_RBM\_17 and ID\_RCS\_RBM\_21

GSMA RCC.71 UP2.5 R15-8-45

Reason for test

It has to be verified that the DUT is able to receive a Carousel of Rich Cards from a Chatbot and scroll through it.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired
5. Chatbot platform chunks the message to send it via MSRP

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation and Chatbot sends a Carousel of 2 Rich Cards to DUT. The Rich Card No.2 of the Carousel includes suggested replies. | DUT receives a new Rich Card message from Chatbot. |
| 2 | DUT opens the Carousel of Rich Cards (if the chat window is not open already). | DUT renders and shows the Carousel of Richard in the conversation with the Chatbot. DUT can navigate and scroll into the different Rich Cards. All media files within the cards shall have the same height. |
| 3 | DUT taps a suggested reply from Rich Card number 2. | DUT shows in the UI the suggested reply as a new message sent in the chat thread. The rest of the suggested replies are still shown in the UI. |
| 4 | Chatbot sends a Carousel of 12 Rich Cards to DUT. There are 4 suggested replies in the Rich Cards. Repeat the test step 1-3. | The expected results are the same as step 1-3. |

#### 58-2.10.4.9 1-to-1 Chatbot Session with Suggested Actions

Description

Receiving suggested actions in a suggested chip list.

Related core specifications

GSMA RCC.07v12 3.6.7, 3.6.10

GSMA RCC.71 UP2.5 R15-8-4-6

GSMA RCC.17v3 ID\_RCS\_RBM\_23

Reason for test

It has to be verified that the DUT is able to receive suggested actions in a suggested chip list and select them.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active session
4. Cache-Control max-age validity for the Chatbot Info has not expired
5. Chatbot platform chunks the message to send it via MSRP

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active session and Chatbot sends a RCS text Message with a Suggested Chip List message to DUT which includes all the suggested actions listed below:  1a. Open a web URL  1b. Open a "WebView"  1c. Initiate a voice or video call to a defined destination  1d. Compose an Enriched Call to a defined destination  1e. Send a message to a defined destination  1f. Open the user’s default calendar app to the new event page, with start time, end time, title, and description pre-filled  1g. Share DUT location | DUT receives the multipart message from Chatbot. |
| 2 | DUT opens the received message (if the chat window is not open already) and send one of the suggested actions. | DUT renders and shows the chat message and the Suggested Chip List in the conversation with the Chatbot. DUT can navigate and scroll through the list of suggestions. |
| 3 | DUT returns to the Chat Thread with the Chatbot. Repeat test case so DUT sends all the possible suggested actions (from 1a to 1e). | The Suggested Chip List is still available.  The associated actions are performed. |

#### 58-2.10.4.10 User Privacy Control

Description

Receiving a 1-to-1 Chatbot message request to get device status info of DUT.

Related core specifications

GSMA RCC.07v12 3.2.3.1, 3.6

RCC.71 UP2.5 R15-2-11

Reason for test

It has to be verified that user shall be able to control the sharing of the DUT’s privacy relevant information.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are not in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot sends DUT a text Message with a Suggested Chip List which includes among others the 'requestDeviceSpecifics' suggested action. The suggested action ask user to share the device model. | User is asked every time a Chatbot asks for device status information, without remembering user choice. |
| 2 | User taps the suggested action and accepts to share the device model on DUT. | The Suggested Chip List is still available in the Chat UI. The Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. The DUT model information can be shared to the Chatbot. |
| 3 | Chatbot sends DUT a text Message with a Suggested Chip List which includes among others the 'requestDeviceSpecifics' suggested action. The suggested action ask user to share the identifier information. | User is asked every time a Chatbot asks for device status information, without remembering user choice. |
| 4 | User taps the suggested action and accepts to share the messaging client identifier on DUT. | The Suggested Chip List is still available in the Chat UI. The Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. The DUT identifier information can be shared to the Chatbot. |
| 5 | Chatbot sends DUT a text Message with a Suggested Chip List which includes among others the 'requestDeviceSpecifics' suggested action. The suggested action ask user to share the device model. | User is asked every time a Chatbot asks for device status information, without remembering user choice. |
| 6 | User taps the suggested action and rejects to share the device model on DUT. | The Suggested Chip List is still available in the Chat UI. The Suggested Chip List won’t disappear until a reply (suggested reply or a manually entered) is sent or another message is received. The DUT model information cannot be shared to the Chatbot. |

**Test procedure**

#### 58-2.10.4.11-1 Chatbot Message CSS Functions- Predefined CSS Template is Referred in Chatbot Info

Description

DUT receives Rich Card Message and display it according to the predefined CSS template.

Related core specifications

GSMA RCC.07v12 3.6.4.1.3

RCC.71 UP2.5 R15-8-50

Reason for test

It has to be verified that the DUT is able to handle Rich Card message with predefined CSS template.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired
5. Chatbot Info is with the generic-CSS-template’ field

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation. Chatbot sends a Carousel Message which contains 3 Rich Cards with Suggested Chip Lists. | DUT notifies the user a new message is received, and displays it in predefined CSS template which is referred in Chatbot Info. |
| 2 | Chatbot sends a Rich Card Message with a Suggested Chip List. | DUT notifies the user a new message is received, and displays it in predefined CSS template which is referred in Chatbot Info. |
| 3 | Chatbot sends a Carousel Message which contains 2 Rich Cards without Suggested Chip Lists, Suggested Actions is included in Floating Action Menu. | DUT notifies the user a new message is received, and displays it in predefined CSS template which is referred in Chatbot Info. |

#### 58-2.10.4.11-2 Chatbot MessageCSS Functions- CSS Template is Included in the Rich Card Message

Description

DUT receives Rich Card message and displays it according to the CSS template, which is included in the Rich Card Message.

Related core specifications

GSMA RCC.07v12 3.6.4.1.3

RCC.71 UP2.5 R15-8-50

Reason for test

It has to be verified that the DUT is able to handle Rich Card message with CSS template included in message.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired
5. The ‘generic-CSS-template’ field is not in the Chatbot info and the CSS template should be different with the one in previous test case.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot sends a Single CPIM Message which contains a Rich Card with a CSS template, and a Suggested Chip List. | DUT notifies the user a new message is received, and displays it in the CSS template. The CSS template match with the expected UI, which is different from the previous test case. |

### 58-2.10.5 Chatbot P2A Message

#### 58-2.10.5.1 DUT Sends P2A Messageto Chatbot

Description

DUT can send text, voice, images, videos, files, locations, vCard to Chatbot.

Related core specifications

GSMA RCC.71 UP2.5 R15-4-10 and US15-8

Reason for test

It has to be verified that the DUT is able to send text, voice, images, videos, files, locations, vCard, to Chatbot.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
|  | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in active conversation.  DUT sends a text Message to the Chatbot. | DUT is notified that each of the messages is successfully sent. |
| 2 | DUT sends a voice Message to the Chatbot. | DUT is notified that the message is successfully sent. |
| 3 | DUT sends a picture to the Chatbot. The size of the picture is less than “MaxSizeFileTr” parameter.  DUT sends a picture to the Chatbot. The size of the picture is more than “MaxSizeFileTr” parameter. | DUT is notified that the message is successfully sent. DUT is notified that the size of the picture is beyond the limit. |
| 4 | DUT sends a video to the Chatbot. The size of the video is less than “MaxSizeFileTr” parameter.  DUT sends a video to the Chatbot. The size of the picture is more than “MaxSizeFileTr” parameter. | DUT is notified that the message is successfully sent.  DUT is notified that the size of the video is beyond the limit. |
| 5 | -DUT sends a file to the Chatbot. The size of the file is less than “MaxSizeFileTr” parameter.  -DUT sends a file to the Chatbot. The size of the file is more than “MaxSizeFileTr” parameter. | DUT is notified that the message is successfully sent. DUT is notified that the size of the file is beyond the limit. |
| 6 | DUT sends a location to the Chatbot. | DUT is notified that the message is successfully sent. |
| 7 | DUT sends a vCard message to the Chatbot. | DUT is notified that the message is successfully sent. |

#### 58-2.10.5.2 DUT Sends message to Chatbot (Fail)

Description

When DUT is failed to send a message to Chatbot, user can choose to resend it.

Related core specifications

GSMA RCC.71 UP2.5 R15-8-15

Reason for test

It has to be verified that the DUT is able to resend message to Chatbot.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. DUT and Chatbot are in an active conversation
4. Cache-Control max-age validity for the Chatbot Info has not expired

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT and Chatbot are in an active conversation.  DUT turns off data connection, and sends a text message to Chatbot. | DUT is notified it failed to send the message, and DUT offers the user a resend option. |
| 2 | DUT turns on data connection, and click on the resend option. | DUT is notified that the message is successfully sent. |

### 58-2.10.6 Anti-Spam

#### 58-2.10.6.1 A Single Message is Reported as Spam (Optional)

Description

DUT can report one single message as spam to the MaaP platform.

Related core specifications

GSMA RCC. 71 UP2.5 R15-5-3-1 and R15-5-3-2

Reason for test

It has to be verified that DUT can report a single message as spam.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Cache-Control max-age validity for the Chatbot Info is not expired
4. Chatbot and DUT have conversations before

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT opens the chat and choose one single message. Choose to report this message as spam. | DUT provides “report as spam” operation. The message can be reported as spam to the MaaP platform. |
| 2 | DUT opens the chat and choose one single message. Choose to report this message as fraud. | DUT provides “report as fraud” operation. The message can be reported as fraud to the MaaP platform. |

#### 58-2.10.6.2 A Chatbot is Reported as Spam (Mandatory)

Description

DUT can report one Chatbot as spam to the MaaP.

Related core specifications

GSMA RCC. 71 UP2.5 R15-5-3-1 and R15-5-3-2

Reason for test

It has to be verified that DUT can report a Chatbot for “Spam”.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Cache-Control max-age validity for the Chatbot Info is not expired
4. Chatbot and DUT have conversations before

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT selects one Chatbot. Choose to report this Chatbot as spam. | DUT provides “report as spam” operation in the Chatbot information interface. The Chatbot can be reported as spam to the MaaP platform. |

### 58-2.10.7 Chatbot Conversation Management

#### 58-2.10.7.1 Store and Forward Message Request

Description

When DUT is back online, it can receive the Chatbot messages, which were Stored in the network.

Related core specifications

GSMA RCC.07v12 3.6, 2.4 and 3.2.3.1

GSMA RCC.71 UP2.5 R15-8-15

GSMA RCC.17v3 ID\_RCS\_RBM\_27

Reason for test

It has to be verified that the DUT is able to handle the Stored and Forward Chatbot message.

Initial configuration

1. DUT is RCS Provisioned - Registered (Offline)
2. Messaging server is ready to handle a Chatbot conversation on behalf of DUT

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | A known Chatbot platform starts a conversation towards DUT and sends:  - A multipart CPIM message with Rich Card and suggested chip  - A single CPIM with a Carousel  - A Multipart CPIM with a File Transfer and a suggested chip list | - |
| 2 | Wait for at least 10min and come back online. | Three messages will be shown. The suggested chip list of the first message won’t be displayed on the screen. |

#### 58-2.10.7.2 P2A Message Statues Display- ‘Delivered’ IMDN on DUT

Description

The MaaP platform properly conveys the status to a User, of messages sent to the Chatbot.

Related core specifications

GSMA RCC.07 v12 3.6.8.8

Reason for test

It has to be verified that the Operator equipment and User receive accurate Message Status for messages delivered to the Chatbot.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot is ready to send Messages and listening for Status updates and replies.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | User sends Message to Chatbot | MaaP Platform receives user message and sends “delivered” and “displayed” IMDN to DUT. |

#### 58-2.10.7.3 P2A Message Statues Display - Chatbot is Unavailable

Description

Chatbots that are temporarily unavailable shall be handled by the MaaP platform and the Operator User shall be informed that messages cannot be delivered.

Related core specifications

GSMA RCC.71 v2.5 R15-4-16

RCC.07 v12 3.6.8.2.3

Reason for test

It has to be verified that the MaaP platform recognizes that messages are not successfully handled by the Chatbot and that it will send the appropriate error message to the User.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot is ready to send Messages and listening for Status updates and replies.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Verify Chatbot and MaaP platform are capable of receiving P2A messages, by sending a message to the Chatbot on DUT. | Chatbot receives the message and the user receives a “delivered” status. Optionally the Chatbot can send “read” and potentially a reply. |
| 2 | Temporary disable the Chatbot from receiving Messages. Send another P2A Message on DUT. | DUT receives “apologies this Chatbot is temporarily unavailable, please try again later”. |

#### 58-2.10.7.4 A2P Message Statues Display

Description

The MaaP platform properly conveys the status of messages to the Chatbot.

Related core specifications

GSMA RCC.71 v2.5 R15-2-5-2

Reason for test

It has to be verified that the Operator equipment and MaaP platform shares the message status under all circumstances and the status messages are accurate.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot is ready to send Messages and listening for Status updates and replies.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbots sends A2P message to the User. User receives and reads the message. | Chatbot is expected to Receive “Pending”, “Sent”, “Delivered” and “read” status messages for the Message ID of the A2P message. |
| 2 | Power the DUT off and send multiple Chatbot A2P Messages. Wait for a short period and power the DUT ON. | Chatbot receives “Pending” status for all messages with appropriate Message IDs.  Chatbot receives “Sent” status for all messages that are now in store at the Operator.  Once the DUT is ON, the messages are delivered and read and the Chatbot receives the status messages in the correct order. |

#### 58-2.10.7.5 The Maximum Size of a PostBack Data Element is 1024bytes

Description

DUT can receive an A2P message whose PostBack data can be up to 1024KB.

Related core specifications

GSMA RCC.07 v12 3.6.10.6.2.2

Reason for test

It has to be verified that the DUT can process PostBack data up to 1024KB.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot is ready to send Messages and listening for Status updates and replies.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | A Chatbot sends a message with suggested action that includes PostBack data of 1024KB in size | DUT receives and renders the message.  On selecting the action, the PostBack data is correctly sent back the Chatbot |

#### 58-2.10.7.6 Maximum A2P Message Size：DUT can Receives a 250KB JSON Payload

Description

DUT can receive a very large Chatbot message.

Related core specifications

GSMA RCC.07 v12 3.6.10.1

Reason for test

It has to be verified that the DUT can receive large carousel sizes that contain links and PostBack data.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot is ready to send Messages and listening for Status updates and replies.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | A Chatbot sends a Rich Card Carousel message that should contain at least 10 Rich Cards with the maximum number of suggested Replies and Actions, text, image and each action shall have a PostBack Data of 1024KB length. The total size of the JSON should be 250KB. | DUT receives and renders the Rich card Carousel Message correctly. On Selecting any of the options, the PostBack data is correctly sent back the Chatbot. |

#### 58-2.10.7.7 Select a Conversation to Pin it to the Top of the List

Description

DUT can select a Chatbot conversation to pin it to the top of the list.

Related core specifications

GSMA RCC.71 UP 2.5 US5-29

Reason for test

To validate UP 2.5 US5-29 and subsequent requirements: be able to select a Chatbot conversation to pin it to the top of the list.

Initial configuration

1.DUT is RCS online.

2.There are at least three Chatbot conversations at DUT.

3.There are some 1-to-1 and group conversations at DUT.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, user selects the Chatbot 1 conversation and pin it to the top of the list. | At DUT, the Chatbot 1 that selected in step 1 is displayed at the top of the list. |
| 2 | At DUT, user sends at least one Chatbot message to Chatbot 2 and to Chatbot 3. | At DUT, Chatbot 1 conversation is still displayed at the top of the list. At DUT, Chatbot 2 conversation, Chatbot 3 conversation and other conversations are still listed under the Chatbot 1 conversation. |

#### 58-2.10.7.8 Select and Flag Messages as Important

Description

DUT can select and flag messages as important in Chatbot conversations.

Related core specifications

GSMA RCC.71 UP 2.5 US5-28

Reason for test

To validate UP 2.5 US5-28 and subsequent requirements: easily and quickly find messages in Chatbot conversations that are important to users.

Initial configuration

1.DUT is RCS online.

2.There are at least three Chatbot conversations at DUT.

3.There are some 1-to-1 and group conversations at DUT.

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | At DUT, user opens at least one Chatbot conversation, then selects and flags at least three messages as important among all Chatbot conversations. | At DUT, the messages which are flagged as “important” in step 1 is visible. |
| 2 | At DUT, user selects the feature “show important messages only”. | At DUT, only important messages are displayed. |
| 3 | At DUT, user deselects one messages that have been flagged as important before. | At DUT, the messages selected in step 3 is not displayed as important. |
| 4 | At DUT, user selects the feature “show important messages only”. | At DUT, only left important messages after step3 are displayed. |
| 5 | At DUT, user deletes one message that has been flagged as important in step 1. | At DUT, the UI implementation shows a confirmation prompt that the message to be deleted is flagged as important. |
| 6 | At DUT, user deletes one Chatbot conversation that includes some important messages. | At DUT, the UI implementation shows a confirmation prompt that the Chatbot conversation to be deleted contains messages which are flagged as important. |

#### 58-2.10.7.9 Search for a Chat Record

Description

DUT can search for a chat record.

Related core specifications

GSMA RCC. 71 UP2.4

Reason for test

It has to be verified that DUT can search for a chat record within the Chatbot conversation.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Cache-Control max-age validity for the Chatbot Info is not expired
4. Chatbot and DUT have conversations before

Test procedure

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | DUT opens the chat with one Chatbot. Enter keywords in the search field. E.g., Numbers, Letters, Dates, Names. | DUT can search for content within the text messages. DUT can search for the text content within the Rich Card Message, including subject and content. |

#### 58-2.10.7.10 Chatbot Conversation - Messages ordered by Timestamp

Description

Messages delivered between DUT and Chatbot should be displayed properly and in time-based order on DUT.

Related core specifications

GSMA RCC.71 v2.5 R15-1-4-9, R15-2-5-5

Reason for test

It has to be verified that the DUT can handle the display of multiple type of messages in Chatbot conversation properly.

Initial configuration

1. DUT is RCS Provisioned - Registered (Online)
2. DUT and Chatbot platform are ready to handle capability requests via Options
3. Chatbot is ready to send and receive messages.
4. Chatbot Service Provider supports SMS, and SMS port number is available in the Chatbot Info.

|  |  |  |
| --- | --- | --- |
| - | Test procedure | Expected behaviour |
| 1 | Chatbot initiates a 1 to1 Chat message with DUT and sends a text message. | DUT displays the message and notifies user of the message received. |
| 2 | DUT sends a file message to the Chatbot. | The file is sent |
| 3 | Chatbot sends DUT a file message. | DUT receives the file message. |
| 4 | DUT uses SMS port number in Chatbot Info to send an SMS message to Chatbot. | The SMS message is sent to the Chatbot, and is displayed in the same conversation in time-based order with the messages in steps 1-3 on DUT. |

#### 58-2.10.7.11 Void

# 59 Void

# 59-1 Network Selection

## 59-1.1 Network Selection - Automatic Mode - At Power On

It is preferable to run the tests more than once. Because of consistency, the initial conditions shall be restored if the same test is repeated. Each VPLMN ID refers to unique MCC-MNC combination which may be present in multiple RATs.

### 59-1.1.3 Network Selection - Automatic Mode - At Power On - User Controlled (PLMNwACT)

Description

This test is confirming the behaviour of the DUT when attempting to camp to a network when the HPLMN and last stored network are not available.

When DUT is powered on outside of its HPLMN in automatic network selection mode with EFPLMNwAcT containing an available entry, it should select the network with the highest priority

Related 3GPP specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFPLMNwAcT on the UICC.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | VPLMN2 is placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |
| EFOPLMNwAcT | All available entries refer to networks not available at test location |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 2 VPLMNs available (VPLMN1, VPLMN2).

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other means (e.g. AT commands; proprietary API) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN2. | DUT is attached to VPLMN2. |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Repeat steps 1-4 for several attempts to ensure DUT always camps to VPLMN2 | After performing several attempts, the DUT always successfully camps to VPLMN2 |

### 59-1.1.4 Network Selection - Automatic Mode - At Power On - Operator Controlled (OPLMNwACT)

Description

This test is confirming the behaviour of the DUT when attempting to camp to a network when the HPLMN and last stored network are not available.

When DUT is powered on outside of its HPLMN in automatic network selection mode with EFOPLMNwAcT containing an available entry, it should select the network with the highest priority

Related 3GPP specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | All available entries are blank or refer to networks not available at test location: FF FF FF 00 00 |
| EFOPLMNwAcT | VPLMN2 is present, preferably on the last position .  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3) .

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other means (e.g. AT commands; proprietary APIs) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN2. | DUT is attached to VPLMN2. |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Repeat steps 1-4 for several attempts to ensure DUT always camps to VPLMN2 | After performing several attempts, the DUT always successfully camps to VPLMN2 |

### 59-1.1.5 Network Selection - Automatic Mode - At Power On - Higher prioritised network available - last registered network was a lower prioritized network

Description

This test is confirming the behaviour of the DUT when attempting to camp to a network when the HPLMN is not available but the last stored network is available (and was a prioritised network).

When DUT is powered on outside of its HPLMN in automatic network selection mode with EFOPLMNwAcT containing more than 1 available entry, it should select the network with the highest priority and not the previously selected network which is lower priority.

Related 3GPP/GSM core specifications

TS 23.120

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFLOCI | Contains VPLMN 1 as previously select network. |
| EFPSLOCI | Contains VPLMN 1 as previously select network. |
| EFEPSLOCI | Contains VPLMN 1 as previously select network |
| EF5GS3GPPLOCI | Contains VPLMN 1 as previously select network. |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | VPLMN2 is placed on the first position.  VPLMN3 is placed on the second position.  VPLMN1 is placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |
| EFOPLMNwAcT | VPLMN2 is placed on the first position.  VPLMN3 is placed on the second position.  VPLMN1 is placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3). This can be done on a live network or on a system simulator allowing the same environment as a live network.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other available means (e.g. AT commands; proprietary API) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN1 | DUT is attached to VPLMN1. |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Repeat steps 1-4 for several attempts to ensure DUT always camps to VPLMN1 | After performing several attempts, the DUT always successfully camps to VPLMN1 |

### 59-1.1.6 Network Selection - Automatic Mode - At Power On - Higher prioritised network available - last registered network was a non-prioritised network

Description

This test is confirming the behaviour of the DUT when attempting to camp to a network when the HPLMN is not available but the last stored network is available (but not a prioritised network).

When DUT is powered on outside of its HPLMN in automatic network selection mode with EFOPLMNwAcT containing more than 1 available entry, it should select the network with the highest priority and not the previously selected network which is not a prioritised network.

Related 3GPP/GSM core specifications

TS 23.120

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFLOCI | Contains VPLMN 1 as previously select network. |
| EFPSLOCI | Contains VPLMN 1 as previously select network. |
| EFEPSLOCI | Contains VPLMN 1 as previously select network. |
| EF5GS3GPPLOCI | Contains VPLMN 1 as previously select network. |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | VPLMN2 is placed on the first position.  VPLMN3 is placed on the second position.  All other fields are filled with network codes corresponding to networks not available at the test location. |
| EFOPLMNwAcT | VPLMN2 is placed on the first position.  VPLMN3 is placed on the second position.  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3). This can be done on a live network or on a system simulator allowing the same environment as a live network.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | Expected behaviour |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other means (e.g. AT commands; proprietary APIs) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN1 | DUT is attached to VPLMN1 |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Repeat steps 1-4 for several attempts to ensure DUT always camps to VPLMN1 | After performing several attempts, the DUT always successfully camps to VPLMN1 |

## 59-1.2 Network Selection - Automatic Mode - Regaining Coverage

### 59-1.2.1 Void

### 59-1.2.2 Network Selection - Automatic Mode - Regaining Coverage - User Controlled (PLMNwACT)

Description

The test is confirming that the DUT correctly selects a new prioritised network, after having lost the old VPLMN due to loss of coverage.

When DUT is powered on outside of its HPLMN in automatic network selection mode with EFPLMNwAcT containing available entries, it should select the network with the highest priority on the EFPLMNwAcT field when it loses coverage on the currently selected network.

Related 3GPP/GSM core specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFPLMNwAcT on the UICC.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | VPLMN2 is placed on the second to last position.  VPLMN3 is placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |
| EFOPLMNwAcT | All available entries are blank or refer to networks not available at test location: FF FF FF 00 00 |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3). This can be done on a live network or on a system simulator allowing the same environment as a live network.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other means (e.g. AT commands; proprietary APIs) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN2 | DUT is attached to VPLMN2 |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Move DUT to an area where VPLMN 2 is not available but VPLMN 1 and VPLMN3 are available. This can be done by physically driving the device to a known area, or by using a shielded cloth in a way when you know the signal level of VPLMN 1 and VPLMN3 are stronger than VPLMN2 so they are available but VPLMN2 isn’t | DUT loses coverage with VPLMN2. |
| 6 | DUT performs LAU request on VPLMN3 | DUT performs LAU procedure VPLMN3 and receives LAU Accept. |
| 7 | Receive MT voice call (or MT SMS). | MT voice call (or MT SMS) is successful. |

### 59-1.2.3 Network Selection - Automatic Mode - Regaining Coverage - Operator Controlled (OPLMNwACT)

Description

The test is confirming that the DUT correctly selects a new prioritised network, after having lost the old VPLMN due to loss of coverage.

When DUT is powered on outside of its HPLMN in automatic network selection mode with EFOPLMNwAcT containing available entries, it should select the network with the highest priority on the EFOPLMNwAcT field when it loses coverage on the currently selected network.

Related 3GPP/GSM core specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | All available entries are blank or refer to networks not available at test location: FF FF FF 00 00 |
| EFOPLMNwAcT | VPLMN2 is placed on the second to last position.  VPLMN3 is placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3). This can be done on a live network or on a system simulator allowing the same environment as a live network.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other available means (e.g. AT commands; proprietary API) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN2. | DUT is attached to VPLMN2 |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Move DUT to an area where VPLMN 2 is not available but VPLMN 1 and VPLMN3 are available. This can be done by physically driving the device to a known area, or by using a shielded cloth in a way when you know the signal level of VPLMN 1 and VPLMN3 are stronger than VPLMN2 so they are available but VPLMN2 isn’t | DUT loses coverage with VPLMN2. |
| 6 | DUT performs Registration procedure on VPLMN3 | DUT is attached to VPLMN3 |
| 7 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |

## 59-1.3 Network Reselection - Automatic Mode - HPPLMN Timer Expiry

### 59-1.3.1 Network Reselection - Automatic Mode - HPPLMN Timer Expiry - No higher prioritised network available

Description

The test is confirming that the DUT remains on the current network when no higher prioritised networks are available, after HPLMN timer has expired.

Related 3GPP/GSM core specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC after HPLMN expiry.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFHPLMN | HPLMN timer is set to a known value |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | All available entries are blank or refer to networks not available at test location: FF FF FF 00 00 |
| EFOPLMNwAcT | VPLMN2 is placed on the second to last position.  VPLMN3 is placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3). This can be done on a live network or on a system simulator allowing the same environment as a live network.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other available means (e.g. AT commands; proprietary API) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT in an area where VPLMN 2 is not available but VPLMN 1 and VPLMN3 are available. This can be done by physically driving the device to a known area, or by using a shielded cloth in a way when you know the signal level of VPLMN 1 and VPLMN3 are stronger than VPLMN2 so they are available but VPLMN2 isn’t. | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN3. | DUT is attached to VPLMN3. |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Wait for HPLMN timer to expire. | HPLMN timer expires and DUT remains on VPLMN3. |
| 6 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |

### 59-1.3.2 Network Reselection - Automatic Mode - HPLMN Timer Expiry - Higher prioritised network available - Camping on a prioritised network

Description

The test is confirming that the DUT reselects a higher prioritised networks after HPLMN timer has expired.

Related 3GPP specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC after HPLMN expiry.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFHPPLMN | HPLMN timer is set to a known value |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | All available entries are blank or refer to networks not available at test location: FF FF FF 00 00 |
| EFOPLMNwAcT | VPLMN2 and VPLMN3 is present preferably on the last positions VPLMN2 has higher priority than VPLMN3  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3).

Most common live network environment is cross-border:

* VPLMN2 belongs to country A
* VPLMN3 belongs to country B

Another alternative is to receive preconfigured USIMs with VPLMN2 and VPLMN3 in EFoplmnwact

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other means (e.g. AT commands; proprietary API) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT.. | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN2. | DUT is attached to VPLMN2. |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Move DUT to an area where VPLMN2 is not available but VPLMN1 and VPLMN3 are available. This can be done by physically driving the device to a known area, or by using a shielded cloth in a way when you know the signal level of VPLMN1 and VPLMN3 are stronger than VPLMN2 so they are available but VPLMN2 isn’t. | DUT loses coverage with VPLMN2 |
| 6 | DUT performs Registration procedure on VPLMN3. | DUT is attached to VPLMN3. |
| 7 | Move DUT to an area where VPLMN1, VPLMN2 and VPLMN3 are all available | DUT remains on VPLMN3 |
| 8 | Wait for HPLMN timer to expire. | HPLMN timer expires and DUT reselects higher prioritised network VPLMN2.  Note: In case if the DUT is configured with Fast First Higher Priority PLMN search, the reselection to VPLMN2 will happen after two minutes |
| 9 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |

### 59-1.3.3 Network Reselection - Automatic Mode - HPLMN Timer Expiry - Higher prioritised network available - Camping on a non-prioritised network

Description

The test is confirming that the DUT reselects a higher prioritised network after HPLMN timer has expired.

Related 3GPP specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC after HPLMN expiry.

Initial conditions

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

DUT is powered off.

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

UICC preparation:

|  |  |
| --- | --- |
| EFHPPLMN | HPLMN timer is set to a known value |
| EFLOCI | FF FF FF FF FF FF FF FF FF 00 01 |
| EFPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFEPSLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EF5GS3GPPLOCI | FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF 01 |
| EFFPLMN | FF FF FF FF FF FF FF FF FF FF FF FF |
| EFPLMNwAcT | All available entries are blank or refer to networks not available at test location: FF FF FF 00 00 |
| EFOPLMNwAcT | VPLMN3 is present, preferably placed on the last position.  All other fields are filled with network codes corresponding to networks not available at the test location. |

Note: EF LOCI fields are populated in accordance with supported technologies by the device.

Test should happen in a static test location with at least 3 VPLMNs available (VPLMN1, VPLMN2, VPLMN3).

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Prepare UICC as in initial configuration using an UICC editor or any other available means (e.g. AT commands; proprietary API) | UICC is prepared as in the initial configuration |
| 2 | Power on DUT.. | DUT is powered on |
| 3 | DUT performs Registration procedure on VPLMN3. | DUT is attached to VPLMN3. |
| 4 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |
| 5 | Move DUT to an area where VPLMN 3 is not available but VPLMN1 and VPLMN2 are available. This can be done by physically driving the device to a known area, or by using a shielded cloth in a way when you know the signal level of VPLMN1 and VPLMN2 are stronger than VPLMN3 so they are available but VPLMN3 isn’t. | DUT loses coverage with VPLMN3 |
| 6 | DUT performs Registration procedure on VPLMN1 or VPLMN2. | DUT is attached to VPLMN1 or VPLMN2. |
| 7 | Move DUT to an area where VPLMN1, VPLMN2 and VPLMN3 are all available | DUT remains on VPLMN1 or VPLMN2. |
| 8 | Wait for HPLMN timer to expire. | HPLMN timer expires and DUT reselects higher prioritised network VPLMN3  Note: In case if the DUT is configured with Fast First Higher Priority PLMN search, the reselection to VPLMN3 will happen after two minutes |
| 9 | Perform service check. E.g. MT voice call, MT SMS, open browser (other service checks are available). | Service check performed is successful to confirm the DUT has correctly camped to the network. |

### 59-1.3.4 Network Reselection - Automatic Mode - HPLMN Timer Expiry - During ongoing voice call

Description

The test is confirming that the DUT reselects a higher prioritised network after HPLMN timer has expiredduring an on-going voice call.

Related 3GPP specifications

TS 23.122

Reason for test

To ensure that the DUT is correctly reading the data from EFOPLMNwAcT on the UICC after HPLMN expiry.

The network re-selection shall be performed after the voice call has been terminated.

Initial configuration

DUT network selection setting is set to Automatic.

DUT band selection setting is set to Automatic so all supported technologies by the device are available (e.g. 5G/4G/3G/2G).

UICC shall be enabled for roaming with access to all available networks.

UICC used in the test will be outside its HPLMN (camping on a VPLMN)

A UICC shall be used for this test where

|  |  |
| --- | --- |
| On the UICC  PLMN Selector (EFPLMNwAcT) | The MCC / MNC of the Preferred VPLMN A and VPLMN B are stored in the last two positions of the PLMN Selector.  All other fields in all PLMN Selectors (EFPLMNsel, EFPLMNwAcT, EFOPLMNwAcT) are filled with network codes corresponding to networks not available at the test location.  Access Technology for EFPLMNwAcT and EFOPLMNwAcT (2 bytes, set to 80 80) |

For this test a special is recommended. For this card the HPLMN Search Period Timer (EFHPPLMN) shall be set to 6 minutes (“01”).

UE has already successfully selected the prioritised network VPLMN A and if left on, is in automatic network selection mode.

Test procedure

The test can be performed in a live network or on a system simulator. The reason for using a system simulator is simply that the network condition (i.e. received signal strength of the BCCH by the UE) can be configured easily and the conditions seen by the mobile can be assured).

Either procedure A or B needs to be tested

**Procedure A (On a feasible location)**

1. The UE is powered up at a location, where not less than 3 networks are available with a field strength of GSM better than -85 dBm or primary CPICH RSCP better than -95 dBm for UMTS-FDD, RSRP LTE better than -105 dBm
2. While driving around, the coverage of VPLMN A shall be lost (for all radio access technologies of this PLMN). The device shall then select VPLMN B.
3. One drives to a location where both, VPLMN A and VPLMN B are available.
4. The tester starts a voice call and waits until HPLMN Search Period Timer (EFHPPLMN) is expired. Afterwards the call is released.

**Procedure B (Alternative test performed on a system simulator)**

1. VPLMN B is the only available network. The UE is powered up and selects VPLMN B.
2. The radio conditions are changed so VPLMN A, VPLMN B and at least one non-prioritised network(s) is available. VPLMN B should transmit with a higher power than the other networks but all networks should transmit in such a way, that the UE would receive the signal strength for GSM better than -85 dBm and primary CPICH RSCP better than -95 dBm for UMTS-FDD, RSRP LTE better than -105 dBm
3. The tester starts a voice call and waits until HPLMN Search Period Timer (EFHPPLMN) is expired. Afterwards the call is released.

Expected behaviour

It shall be checked that the voice call is active while HPLMN Search Period Timer (EFHPPLMN) expired. After releasing the call the UE shall re-select the higher priority VPLMN A.

## 59-1.4 Network Selection - Manual Mode

### 59-1.4.1 Network Selection - Manual Mode – All available networks

Description

When performing a manual network selection search, the DUT shall list all available PLMNs.

Networks listed on the Forbidden List that are available at the test site should be selectable.

Once a network on the Forbidden List is selected, it is removed from the Forbidden List.

Manual network selection should not change the information on the Preferred PLMN list.

Related 3GPP core specifications

TS 22.011, sub clause 3.2.2.2

Reason for test

To ensure manual network selection works correctly.

Initial configuration

UICC used for test is roaming outside its HPLMN.

At least 2 networks (5G/4G/3G/2G) are available at test site (Network A, Network B)

Network A is on the preferred PLMN List. Network B is on the Forbidden List.

DUT is switched on in Automatic network selection mode and camping to Network A or any higher priority network on the preferred PLMN list.

All network should not reject the registration/attach procedure while DUT is trying to access it.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Change Network Selection Mode from automatic to manual. | DUT is in manual Network Selection Mode. |
| 2 | Manually select Network B. | DUT successfully camps to Network B (if steering of roaming occurs then at least an attempt to camp to the network is deemed ok). |
| 3 | Perform Manual network selection scan. | DUT displays all available networks at test site. |
| 4 | Manually select Network A. | DUT successfully camps to Network A. |
| 5 | Power off DUT and remove UICC | DUT is powered off and UICC is removed. |
| 6 | Check Preferred PLMN List. | Preferred list remains unchanged - the same as in initial configuration. |
| 7 | Check Forbidden List. | Network B is no longer on the Forbidden List. |

## 59-1.5 Network Selection - Change of Selection Mode

### 59-1.5.1 Network Selection - Change of Selection Mode - Automatic to Manual Mode

Description

The DUT shall retain its configuration of manual network selection mode when switched off.

Related 3GPP core specifications

TS 22.011, sub clause 3.2.2.2

Reason for test

To ensure that the DUT retains its configuration of manual selection mode when switched off.

Initial configuration

DUT is in idle mode, with automatic network selection mode configured.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Manually select a network. | DUT camps to network in manual selection mode. |
| 2 | Turn the DUT off and on. | DUT is powered off and on. |
| 3 | Check that manual network selection mode is in use. | The DUT is in manual network selection. |

### 59-1.5.2 Network Selection - Change of Selection Mode - Manual to Automatic Mode

Description

The DUT shall retain its configuration of automatic selection mode when switched off.

Related 3GPP core specifications

TS 22.011, sub clause 3.2.2.2

Reason for test

To ensure that the DUT retains its configuration of automatic selection mode when switched off.

Initial configuration

DUT in idle mode, with manual network selection mode configured.

|  |  |  |
| --- | --- | --- |
| - | **Test procedure** | **Expected behaviour** |
| 1 | Select automatic network selection. | DUT camps to network in automatic selection mode. |
| 2 | Turn the DUT off and on. | DUT is powered off and on. |
| 3 | Check that automatic network selection mode is in use. | The DUT is in automatic network selection. |

# Document Management

## Document History

| Version | Date | Brief Description of Change | Approval Authority | Editor / Company |
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| Initial to 11.6 |  | Rev. of this PRD as described in Annex J, approved at TSG FT#XX |  | Hajo Schulze / Vodafone |
| 11.7 | 26/03/2014 | Rev. of this PRD as described in Annex J, approved at TSG FT#45 | TSG#15 | Momar Goumballe / Orange |
| 11.8 | 26/06/2014 | Rev. of this PRD as described in Annex J, approved at TSG FT#46 | TSG#16 | Momar Goumballe / Orange |
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| 12.2 | 18/03/2015 | Rev. of this PRD as described in Annex J, approved at TSG FT#49 | TSG#19 | Momar Goumballe / Orange |
| 13.0 | 05/08/2015 | Rev. of this PRD as described in Annex J, approved at TSG FT#50 | TSG#20 | Momar Goumballe / Orange |
| 14.0 | 16/09/2015 | Rev. of this PRD as described in Annex J, approved at TSG FT#51 | TSG#21 | Momar Goumballe / Orange |
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| 19.0 | 14/03/2017 | Rev. of this PRD as described in Annex J, approved at TSG FT#57 | TSG#27 | Momar Goumballe / Orange |
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| 21 | 03/10/2017 | Rev. of this PRD as described in Annex J, approved at TSG FT#59 | TSG#29 | Momar Goumballe / Orange |
| 22 | 26/12/2017 | Rev. of this PRD as described in Annex J, approved at TSG FT#60 | TSG#30 | Momar Goumballe / Orange |
| 23 | 26/03/2018 | Rev. of this PRD as described in Annex J, approved at TSG FT#61 | TSG#31 | Momar Goumballe / Orange |
| 24 | 26/06/2018 | Rev. of this PRD as described in Annex J, approved at TSG FT#62 | TSG#32 | Momar Goumballe / Orange |
| 25 | 26/09/2018 | Rev. of this PRD as described in Annex J, approved at TSG FT#63 | TSG#33 | Momar Goumballe / Orange |
| 26 | 19/12/2018 | Rev. of this PRD as described in Annex J, approved at TSG FT#64 | TSG#34 | Momar Goumballe / Orange |
| 27 | 27/03/2019 | Rev. of this PRD as described in  Annex J, approved at TSG FT#65 | TSG#35 | Momar Goumballe / Orange |
| 28 | 03/07/2019 | Rev. of this PRD as described in  Annex J, approved at TSG FT#66 | TSG#36 | Momar Goumballe / Orange |
| 29 | 25/09/2019 | Rev. of this PRD as described in  Annex J, approved at TSG FT#67 | TSG#37 | Momar Goumballe / Orange |
| 30 | 24/12/2019 | Rev. of this PRD as described in  Annex J, approved at TSG FT#68 | TSG#38 | Momar Goumballe / Orange |
| 31 | 30/06/2020 | Rev. of this PRD as described in  Annex J, approved at TSG FT#70 | TSG#40 | Momar Goumballe / Orange |
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| 33 | 18/12/2020 | Rev. of this PRD as described in  Annex J, approved at TSG FT#72 | TSG#42 | Momar Goumballe / Orange |
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| 35 | 18/06/2021 | Rev. of this PRD as described in  Annex J, approved at TSG FT#74 | TSG#44 | Momar Goumballe / Orange |
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## Other Information

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| Document Owner | GSMA Terminal Steering Group |
| Editor / Company | Momar Goumballe, Orange  momar.goumballe@orange.com |