SIM Access Profile (SAP)

Bluetooth® Test Specification

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- **Group Prepared By**: BTI
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**Abstract:**
This document defines test structures and procedures for the interoperability test of Bluetooth® products on the SIM Access Profile.
### Revision History

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| 1.1.4r0         | 2012-09-06 | TSE 4825: Change to Report Status- Card not accessible in TCMT.                                                                           |
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• Updated TCMT mapping for SAP/CL/CSU/BI-02-I, SAP/SR/CSU/BI-02-I (legacy test case ID TP/CSU/BI-02-I) to “(SAP 2/1 AND NOT SAP 2/1b) OR (SAP 3/1 AND NOT SAP 3/1b)”  
• Updated TCMT mapping for SAP/CL/CSU/BV-02-I and SAP/SR/CSU/BV-02-I (legacy test case ID TP/CSU/BV-02-I) to (SAP 2/1 AND SAP 2/1b) OR (SAP 3/1 AND SAP 3/1b) and updated description  
• Updated TCMT mapping for SAP/CL/CSU/BV-01-I (legacy test case ID TP/CSU/BV-01-I) to “SAP 2/1 OR SAP 3/1” and updated description  
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• Updated TCMT mapping for SAP/CL/RPS/BV-01-I, SAP/SR/RPS/BV-01-I (legacy test case ID TP/RPS/BV-01-I) to “(SAP 2/7a OR SAP 2/7b) OR SAP 3/8” |
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1 Scope

This Bluetooth document contains the Test Suite Structure (TSS) and Test Cases (TC) to test the Bluetooth SIM Access Profile (SAP).
2 References, Definitions, and Abbreviations

2.1 References
This Bluetooth document incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter.

[1] SIM Access Profile
[3] Serial Port Profile
[5] GSM 11.11
[9] ICS Proforma for SIM Access Profile
[10] Test Strategy and Terminology Overview
[11] Bluetooth Specification v2.0 or later

2.2 Definitions
For the purpose of this Bluetooth document, the definitions from [10] and [11] apply.

2.3 Acronyms and Abbreviations
For the purpose of this Bluetooth document, the abbreviations from [10] and [11] apply.

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<tr>
<td>APDU</td>
<td>Application Protocol Data Unit</td>
</tr>
<tr>
<td>ATR</td>
<td>Answer To Reset</td>
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<tr>
<td>GSM</td>
<td>Global System for Mobile Communications</td>
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<td>SIM</td>
<td>Subscriber Identity Module</td>
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3 Test Suite Structure (TSS)

3.1 Overview

The SIM Access Profile [1] is an application profile, which is dependent on the Generic Access Profile [2], and the Serial Port Profile [3]. It defines the features and procedures for accessing the data and services of a SIM card over a Bluetooth link.

The SIM Access Profile specifies two typical configurations of devices or roles for this profile:

**SIM Access Server** – The SIM Access Server has direct access to a SIM and establishes a physical (galvanic) connection to it. The Server grants the SIM Access Client access to the services and files of the SIM.

**SIM Access Client** – The SIM Access Client is connected via a Bluetooth link to the SIM Access Server. The Client accesses the services and files of the SIM inside the Server and might use them for a connection to the cellular network.

3.2 Test Suite Structure

Figure 3.1 shows the SIM Access Profile Test Suite Structure (TSS) including its subgroups defined for the interoperability testing.
SIM Access Profile Test Suite Structure

- **Connection Setup**
  - Connection Setup without SSP
  - Connection Setup with SSP
  - Passkey Length
  - Passkey Length (bonded)

- **Disconnect**
  - Disconnect initiated by the Client
  - Disconnect (graceful) initiated by the Server
  - Disconnect (immediate) initiated by the Server

- **Power SIM off**
  - Power SIM off

- **Power SIM on**
  - Power SIM on

- **Reset SIM**
  - Reset SIM

- **Report Status**
  - Report Status of a mute card
  - Report Status of a removed card

- **Transfer Card Reader Status**
  - Transfer Card Reader Status

- **Set Transport Protocol**
  - Set Transport Protocol

*Figure 3.1: Test Suite Structure for the SIM Access Profile*

### 3.3 Test Groups

The test groups are organized in 3 levels. The first level defines the Profile Service groups representing the services of the profile. The second level separates between the different states within the services. The last level in each branch contains the standard ISO subgroups BV and BI. For a general test strategy overview, see [8].

#### 3.3.1 Profile Procedure Groups

The test groups are based on the features of the SIM Access Profile as defined in [1]. These features are arranged in the following test groups:

##### 3.3.1.1 Connection Setup

This group handles testing of the Connection Setup procedures and security requirements of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1], the Generic Access Profile [2] and the Serial Port Profile [3].
3.3.1.2 Disconnect
This group handles testing of the Disconnect procedures of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.1.3 Report Status
This group handles testing of the Report Status procedure of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.1.4 Power SIM Off
This group handles testing of the Power SIM off procedure of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.1.5 Power SIM On
This group handles testing of the Power SIM on procedure of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.1.6 Reset SIM
This group handles testing of the Reset SIM procedure of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.1.7 Transfer Card Reader Status
This group handles testing of the Card Reader Status procedure of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.1.8 Set Transport Protocol
This group handles testing of the Set Transport Protocol procedure of the SIM Access Profile. The test cases found in this group are based on the SIM Access Profile [1].

3.3.2 Main Test Groups
The main test groups are the valid behavior group and the invalid behavior group.

3.3.2.1 Valid Behavior (BV) Tests
This sub group provides testing to verify that the IUT reacts in conformity with the SIM Access Profile.

3.3.2.2 Invalid Behavior (BI) Tests
This sub group provides testing to verify that the IUT reacts on errors while operation in conformity with the SIM Access Profile (e.g. receipt of a syntactically or semantically invalid message).

3.4 Test Environment
The test environment mainly consists of the two devices (a SIM Access Client and a SIM Access Server) which are to be tested using the interoperability test cases specified in Section 4.

The user interfaces of the Client and Server are the primary means for performing the test procedures and monitoring the outcome (pass or fail verdict). If the user interface of either device is not suitable for that purpose, test can also be carried out using engineering evidence, e.g. in form of an over-the-air log.
For those test cases, which involve SIM card activity for either performing the test procedures or monitoring the outcome, it is recommended to use tools for emulating the SIM card in order to facilitate the testing.

The test cases refer to the first scenario described in Section 2.3 of [1]:

Scenario 1: SIM in the Server.

The second scenario, Proactive SIM\(^1\) in the Client and additional SIM in the Server, is not explicitly tested in this test specification.

For each test case, the applicable scenario is given.

If the Client device is capable of attaching to a cellular network and/or making a call by using the SIM card, then this is considered the “intended functionality” and needs to be included in the test setup if requested as Initial conditions

\(^1\) A SIM running the SIM Application Toolkit [6]
4 Test Cases (TC)

4.1 Introduction

4.1.1 Test Case Identification Conventions

Test cases shall be assigned unique identifiers per the conventions in [10]. The convention used here is `<spec abbreviation>/<IUT role>/<class>/<feat>/<func>/<subfunc>/<cap>/<xx>-<nn>-<y>.

Bolded ID parts shall appear in the order prescribed. Non-bolded ID parts (if applicable) shall appear between the bolded parts. The order of the non-bolded parts may vary from test specification to test specification, but shall be consistent within each individual test specification.

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<td>SAP</td>
<td>SIM Access Profile</td>
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<td>CL</td>
<td>Client Role</td>
</tr>
<tr>
<td>SR</td>
<td>Server Role</td>
</tr>
<tr>
<td>CSU</td>
<td>Connection Setup</td>
</tr>
<tr>
<td>DCN</td>
<td>Disconnect</td>
</tr>
<tr>
<td>RPS</td>
<td>Report Status</td>
</tr>
<tr>
<td>POF</td>
<td>Power SIM off</td>
</tr>
<tr>
<td>PON</td>
<td>Power SIM on</td>
</tr>
<tr>
<td>RST</td>
<td>Reset SIM</td>
</tr>
<tr>
<td>CRS</td>
<td>Transfer Card Reader Status</td>
</tr>
<tr>
<td>STP</td>
<td>Set Transport Protocol</td>
</tr>
</tbody>
</table>

*Table 4.1: SAP TC Feature Naming Conventions*

4.1.2 Conformance

When conformance is claimed, all capabilities indicated as mandatory for this Specification shall be supported in the specified manner (process-mandatory). This also applies for all optional and conditional capabilities for which support is indicated. All mandatory capabilities, and optional and conditional capabilities for which support is indicated, are subject to verification as part of the Bluetooth Qualification Program.

The Bluetooth Qualification Program may employ tests to verify implementation robustness. The level of implementation robustness that is verified varies from one Specification to another and may be revised for cause based on interoperability issues found in the market.

Such tests may verify:
• That claimed capabilities may be used in any order and any number of repetitions that is not excluded by the Specification, OR

• That capabilities enabled by the implementations are sustained over durations expected by the use case, OR

• That the implementation gracefully handles any quantity of data expected by the use case, OR

• That in cases where more than one valid interpretation of the Specification exist, the implementation complies with at least one interpretation and gracefully handles other interpretations OR

• That the implementation is immune to attempted security exploits.

A single execution of each of the required tests is required in order to constitute a pass verdict. However, it is noted that in order to provide a foundation for interoperability, it is necessary that a qualified implementation consistently and repeatedly pass any of the applicable tests.

In any case, where a member finds an issue with the Test Plan Generator, the Test Case as described in the Test Specification, or with the Test System utilized, the Member is required to notify the responsible party via an errata request such that the issue may be addressed.

4.1.3 Pass/Fail Verdict Conventions

Each test case has an Expected Outcome section, which outlines all the detailed pass criteria conditions that shall be met by the IUT to merit a Pass Verdict.

The convention in this test specification is that, unless there are a specific set of fail conditions outlined in the test case, the IUT fails the test case as soon as one of the pass criteria conditions cannot be met. If this occurs the outcome of the test shall be the Fail Verdict.

4.2 Connection Setup

Test group objectives:

- To verify that Client and Server can establish a SAP connection in accordance with the security requirements stated in the SIM Access Profile.

4.2.1 Connection Setup without SSP

• Test Case ID(s)
  
  **SAP/CL/CSU/BV-01-I**

  **SAP/SR/CSU/BV-01-I**

• Test Purpose
  
  To verify that Client and Server can establish a SAP connection in accordance with the security requirements stated in the SIM Access Profile.

• Reference
  
  [1] 2.5, 4.1, Scenario 1 in Section 2.3

• Initial Condition
  
  Client and Server are not bonded.
Client is not engaged in a SIM Access Profile connection.

Server is not engaged in a SIM Access Profile connection.

A SIM card is inserted in the Server.

At least one of the devices does not support secure simple pairing.

• Test Procedure
  Establish SIM Access Profile connection between Client and Server.

  A 16 digit (decimal) passkey is entered during the pairing procedure.

  The Client shall perform its proper functionality; for example, establish a call using the SIM in the Server.

• Expected Outcome
  Pass verdict

  The passkey used during the pairing procedure has a (minimum) length of 16 digits (decimal)

  The connection between Client and Server is completed.

  The Client has performed its intended functionality, for example established a call using the SIM in the Server.

4.2.2 Connection Setup with SSP

• Test Case ID(s)
  SAP/CL/CSU/BV-02-I
  SAP/SR/CSU/BV-02-I

• Test Purpose
  To verify that Client and Server can establish a SAP connection in accordance with the security requirements stated in the SIM Access Profile.

• Reference
  [1] 2.5, 4.1, Scenario 1 in Section 2.3

• Initial Condition
  Client and Server are not bonded.

  Client is not engaged in a SIM Access Profile connection.

  Server is not engaged in a SIM Access Profile connection.

  A SIM card is inserted in the Server.
Both devices support secure simple pairing.

• **Test Procedure**

  Establish SIM Access Profile connection between Client and Server.

  Complete the pairing operation by using the user interfaces of the IUT and the other device.

  The Client shall perform its proper functionality; for example, establish a call using the SIM in the Server.

• **Expected Outcome**

  **Pass verdict**

  A six digit passkey is displayed on both devices during the pairing procedure.

  The six digit passkeys displayed on the two devices match.

  The connection between Client and Server is completed.

  The Client has performed its intended functionality, for example established a call using the SIM in the Server.

4.2.3 **Passkey Length**

• **Test Case ID(s)**

  SAP/CL/CSU/BI-01-I

  SAP/SR/CSU/BI-01-I

• **Test Purpose**

  To verify that Client and Server require a 16 digit (decimal) passkey.

• **Reference**

  [1] 2.5, Scenario 1 in Section 2.3

• **Initial Condition**

  Client and Server are not bonded.

  Client is not engaged in a SIM Access Profile connection.

  Server is not engaged in a SIM Access Profile connection.

  A SIM card is inserted in the Server.

  At least one of the devices does not support secure simple pairing.

• **Test Procedure**

  Establish SIM Access Profile connection between Client and Server.

  Enter a passkey of less than 16 digits during the pairing process.
• Expected Outcome
   Pass verdict

   The device where the passkey was entered rejects the passkey.

**4.2.4 Passkey Length – Devices are Bonded**

• Test Case ID(s)
   SAP/CL/CSU/BI-02-I
   SAP/SR/CSU/BI-02-I

• Test Purpose
   To verify that Client and Server require a 16 digit (decimal) passkey.

• Reference
   [1] 2.5, Scenario 1 in Section 2.3

• Initial Condition
   Client and Server are bonded. A PIN with less than 16 digits was used to perform the bonding.

   Client is not engaged in a SIM Access Profile connection.

   Server is not engaged in a SIM Access Profile connection.

   A SIM card is inserted in the Server.

   At least one of the devices does not support secure simple pairing.

• Test Procedure
   Start to establish SIM Access Profile connection between Client and Server. If a device asks for a passkey, a passkey of proper length is entered.

• Expected Outcome
   Pass verdict

   The devices ask for a new passkey and a passkey with less than 16 digits is not accepted.

   The SIM Access Profile connection is established with the use of the new passkey.

   OR

   The SIM Access Profile connection establishment is not completed.

**4.3 Disconnection**

Test group objectives:

- To verify that Client and Server can terminate a SIM Access Profile connection.
4.3.1  Disconnect Initiated by the Client

Test subgroup objectives:

- To verify that the Client can request a termination of the SIM Access Profile connection.
- To verify that the Server can handle this request.

4.3.1.1  Disconnect Initiated by Client

• Test Case ID(s)

  SAP/CL/DCN/BV-01-I
  SAP/SR/DCN/BV-01-I

• Test Purpose

  To verify that the Client can request a termination of the SIM Access Profile connection.

  To verify that the Server can handle this request.

• Reference

  [1] 4.2, Scenario 1 in Section 2.3

• Initial Condition

  The Client and Server have an active SIM Access Profile connection.

• Test Procedure

  User initiates a disconnect at the Client.

  Client and Server disconnect.

• Expected Outcome

  Pass verdict

  Any cellular network connection is terminated by the Client.

  Client and Server disconnect.

4.3.2  Disconnect Initiated by the Server

Test subgroup objectives:

- To verify that the Server can request a termination of the SIM Access Profile connection.
- To verify that the Client can handle this request.

4.3.2.1  Disconnect (Graceful) Initiated by Server

• Test Case ID(s)

  SAP/CL/DCN/BV-02-I
  SAP/SR/DCN/BV-02-I

• Test Purpose
To verify that the Server can request a termination of the SIM Access Profile connection
To verify that the Client can handle this request.

- **Reference**
  
  [1] 4.3, Scenario 1 in Section 2.3

- **Initial Condition**
  The Client and Server have an active SIM Access Profile connection.
  The Client has made proper use of the SIM, for example, established a call.

- **Test Procedure**
  User initiates a graceful disconnect at the Server.

- **Expected Outcome**
  **Pass verdict**
  The Client has stopped making use of the remote SIM card.
  Any ongoing calls have been released by the client.
  There is no connection to the cellular network.
  Client and Server disconnect.

### 4.3.2.2 Disconnect (Immediate) Initiated by Server

- **Test Case ID(s)**

  **SAP/CL/DCN/BV-03-I**
  **SAP/SR/DCN/BV-03-I**

- **Test Purpose**
  To verify that the Server can request a termination of the SIM Access Profile connection
  To verify that the Client can handle this request.

- **Reference**
  
  [1] 4.3, Scenario 1 in Section 2.3

- **Initial Condition**
  The Client and Server have an active SIM Access Profile connection.
  The Client has made proper use of the SIM, for example, established a call.

- **Test Procedure**
  User initiates an immediate disconnect at the Server.
• Expected Outcome
  
  Pass verdict

  The client has stopped making use of the remote SIM card.
  
  Any ongoing calls have been released by the client and there is no connection to the cellular network.
  
  Client and Server disconnect.

4.4   **Power SIM On/Off**

Test group objectives:

- To verify that the Client can request the Server to power the SIM on or off.
- To verify that the Server can power the SIM on or off and send the Client a response.

4.4.1   **Power SIM Off**

• Test Case ID(s)

  SAP/CL/POF/BV-01-I
  SAP/SR/POF/BV-01-I

• Test Purpose

  To verify that the Client can request the Server to power the SIM off
  
  To verify that the Server can power the SIM off and send the Client a response.

• Reference

  [1] 4.6
  [6] 6.4.18

• Initial Condition

  The Client and Server have an active SIM Access Profile connection and a SIM card is inserted in the Server and powered on.

• Test Procedure

  The Client requests the Server to power off the SIM card in the Server.
  
  The Server powers off its SIM card and send the response message to the Client.

• Expected Outcome

  Pass verdict

  The Server powered off the SIM card.

4.4.2   **Power SIM On**

• Test Case ID(s)
**SAP/CL/PON/BV-01-I**

**SAP/SR/PON/BV-01-I**

- **Test Purpose**
  To verify that the Client can request the Server to power the SIM in the Server on.
  To verify that the Server can power the SIM in the Server on and send the Client a response.

- **Reference**
  [1] 4.7, Scenario 1 in Section 2.3
  [6] 6.4.19

- **Initial Condition**
  The Client and Server have an active SIM Access Profile connection.
  The Server does not contain a SIM card.

- **Test Procedure**
  A SIM card is inserted in the Server; the Server reports this to the Client.
  The Client requests the Server to power on the SIM card.
  The Client performs its intended functionality e.g. establishes a call using the SIM in the Server.

- **Expected Outcome**
  Pass verdict
  The Server has powered on the SIM card.
  The Client has made proper use of the SIM, e.g. established a call using the SIM in the Server.

### 4.5 Reset SIM

Test group objectives:
- To verify that the Client can request the Server to reset the SIM.
- To verify that the Server can reset the SIM and send the Client a response.

### 4.5.1 Reset SIM

- **Test Case ID(s)**
  **SAP/CL/RST/BV-01-I**
  **SAP/SR/RST/BV-01-I**

- **Test Purpose**
  To verify that the Client can request the Server to reset the SIM.
  To verify that the Server can reset the SIM and send the Client a response.
• Reference
  [1] 4.7, Scenario 1 in Section 2.3

[6] 6.4.7

• Initial Condition
  The Client and Server have an active SIM Access Profile connection and a SIM card is inserted in the Server and powered on.

• Test Procedure
  The Client requests the Server to reset the SIM card in the Server.

• Expected Outcome
  Pass verdict
  The Server has reset the SIM card.

4.6  Report Status
Test group objectives:

- To verify that the Server can report a change in the status of the SIM card or SIM card reader to the Client.
- To verify that the Client reacts appropriately.

4.6.1  Report Status – Card Not Accessible
• Test Case ID(s)
  SAP/CL/RPS/BV-01-I
  SAP/SR/RPS/BV-01-I

• Test Purpose
  To verify that the Server can report a SIM card that is no longer accessible to the Client
  To verify that the Client reacts according to the SIM Access Profile specification.

• Reference
  [1] 4.9, Scenario 1 in Section 2.3

• Initial Condition
  The Client and Server have an active SIM Access Profile connection and a SIM (emulation) is inserted in the Server and powered on.
  The Client performs its intended functionality, e.g. uses the SIM (emulation) for a call.

• Test Procedure
  The SIM (emulation) becomes not accessible, i.e. it remains in the Server, but ceases to react.
• Expected Outcome
  Pass verdict
  The Server reports the status change to the Client
  The Client terminates all calls.
  The Client terminates any connection to the cellular network.

4.6.1.1 Report Status – Removed Card
• Test Case ID(s)
  SAP/CL/RPS/BV-02-I
  SAP/SR/RPS/BV-02-I
• Test Purpose
  To verify that the Server can report to the Client, that the SIM card has been removed.
  To verify that the Client reacts according to the SIM Access Profile specification.
• Reference
  [1] 4.9, Scenario 1 in Section 2.3
• Initial Condition
  The Client and Server have an active SIM Access Profile connection and a SIM is inserted in the
  Server and powered on
  The Client makes use of the SIM, e.g. uses the SIM for a call.
• Test Procedure
  The SIM is removed from the Server.
• Expected Outcome
  Pass verdict
  The Server reports the status change to the Client
  The Client terminates all calls
  The Client terminates any connection to the cellular network.
  Fail verdict
  The Server does not report the status change to the Client
  The Client does not terminate all calls.
The Client does not terminate any connection to the cellular network.

### 4.7 Transfer Card Read Status

Test group objectives:

- To verify that the Client can request the Card Reader Status from the Server.
- To verify that the Server can answer this request.

#### 4.7.1 Transfer Card Reader Status

- **Test Case ID(s)**
  - SAP/CL/CRS/BV-01-I
  - SAP/SR/CRS/BV-01-I

- **Test Purpose**
  
  - To verify that the Client can request the Card Reader Status from the Server.
  
  - To verify that the Server can answer this request.

- **Reference**
  
  - [1] 4.10
  - [6] 6.4.20

- **Initial Condition**
  
  The Client and Server have an active SIM Access Profile connection and a SIM card is inserted in the Server and powered on.

- **Test Procedure**
  
  The Client requests the Card Reader Status from the Server.

  The Server sends the Card Reader Status to the Client.

- **Expected Outcome**
  
  - Pass verdict
  
  The correct Card Reader Status is passed to the Client.

### 4.8 Set Transport Protocol

Test group objectives:

- To verify that the client can request to change the used transport protocol
- To verify that the server can handle this request.
4.8.1 Set Transport Protocol

- Test Case ID(s)
  
  SAP/CL/STP/BV-01-I
  SAP/SR/STP/BV-01-I

- Test Purpose
  
  To verify that the client can request the use of a non-GSM (T=0) Transport Protocol
  
  To verify that the server can handle this request.

- Reference
  
  [1] 4.1, 4.12

- Initial Condition
  
  Client and Server are not connected.
  
  Client is not engaged in a SIM Access Profile connection.
  
  Server is not engaged in a SIM Access Profile connection.
  
  A SIM card is inserted in the server.
  
  The SIM card supports the Transport Protocol which the client will use.
  
  The Client will use a Transport Protocol other than T=0.

- Test Procedure
  
  Establish SIM Access Profile connection between Client and Server.
  
  Perform the intended functionality with the Client, e.g. establish a call.

- Expected Outcome
  
  Pass verdict
  
  The Client can perform its intended functionality, e.g. establish a call.
## 5 Test Case Mapping

The Test Case Mapping Table (TCMT) maps test cases to specific requirements in the ICS. The product shall be tested in all roles for which support is declared in the ICS document.

The columns for the TCMT are defined as follows:

**Item:** Contains a y/x reference, where y corresponds to the table number and x corresponds to the feature number as defined in the ICS Proforma for SIM Access Profile (SAP) [9]. If the item is defined with Protocol, Profile or Service abbreviation before y/x, the table and feature number referenced are defined in the abbreviated ICS Proforma document.

**Feature:** Recommended to be the primary feature defined in the ICS being tested or may be the test case name.

**Test Case(s):** The applicable test case identifiers required for Bluetooth Qualification if the corresponding y/x references defined in the Item column are supported.

**Test Case Applicable:** May be used to note if a test is required based on the supported features.

For purpose and structure of the ICS/IXIT Proforma and instructions for completing the ICS/IXIT Proforma refer to the Bluetooth ICS and IXIT Proforma document.

<table>
<thead>
<tr>
<th>Item</th>
<th>Feature</th>
<th>Test Case(s)</th>
<th>Test Case Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP 2/1 AND NOT SAP 2/1b</td>
<td>Connection Management</td>
<td>SAP/CL/CSU/BI-01-I</td>
<td></td>
</tr>
<tr>
<td>SAP 3/1 AND NOT SAP 3/1b</td>
<td>Connection Management</td>
<td>SAP/SR/CSU/BI-01-I</td>
<td></td>
</tr>
<tr>
<td>SAP 2/1</td>
<td>Connection Management</td>
<td>SAP/CL/DCN/BV-01-I</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAP/CL/DCN/BV-02-I</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>SAP/CL/DCN/BV-03-I</td>
<td></td>
</tr>
<tr>
<td>SAP 3/1</td>
<td>Connection Management</td>
<td>SAP/SR/DCN/BV-01-I</td>
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<tr>
<td></td>
<td></td>
<td>SAP/SR/DCN/BV-02-I</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>SAP/SR/DCN/BV-03-I</td>
<td></td>
</tr>
<tr>
<td>SAP 2/1 AND NOT SAP 2/1b</td>
<td>Passkey length – Devices are bonded</td>
<td>SAP/CL/CSU/BI-02-I</td>
<td></td>
</tr>
<tr>
<td>SAP 3/1 AND NOT SAP 3/1b</td>
<td>Passkey length – Devices are bonded</td>
<td>SAP/SR/CSU/BI-02-I</td>
<td></td>
</tr>
<tr>
<td>SAP 2/1 AND SAP 2/1b</td>
<td>Connection Setup with SSP</td>
<td>SAP/CL/CSU/BI-02-I</td>
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<tr>
<td>SAP 3/1 AND SAP 3/1b</td>
<td>Connection Setup with SSP</td>
<td>SAP/SR/CSU/BI-02-I</td>
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<tr>
<td>SAP 2/1</td>
<td>Connection Setup without SSP</td>
<td>SAP/CL/CSU/BI-01-I</td>
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</tr>
<tr>
<td>SAP 3/1</td>
<td>Connection Setup without SSP</td>
<td>SAP/SR/CSU/BI-01-I</td>
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<tr>
<td>SAP 2/4</td>
<td>Power SIM off</td>
<td>SAP/CL/POF/BV-01-I</td>
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<td>SAP 3/4</td>
<td>Power SIM off</td>
<td>SAP/SR/POF/BV-01-I</td>
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<tr>
<td>Item</td>
<td>Feature</td>
<td>Test Case(s)</td>
<td>Test Case Applicable</td>
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<td>SAP 2/5a AND SAP 2/7a</td>
<td>Power SIM on Report Status - Card inserted</td>
<td>SAP/CL/PON/BV-01-I</td>
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<td>SAP 2/6</td>
<td>Reset SIM</td>
<td>SAP/CL/RST/BV-01-I</td>
<td></td>
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<tr>
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<td>Reset SIM</td>
<td>SAP/SR/RST/BV-01-I</td>
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<td>SAP/CL/RPS/BV-01-I</td>
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<td>Report Status - Card removed</td>
<td>SAP/CL/RPS/BV-02-I</td>
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<tr>
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<td>Report Status - Card removed</td>
<td>SAP/SR/RPS/BV-02-I</td>
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<td>SAP 2/8</td>
<td>Transfer Card Reader Status</td>
<td>SAP/CL/CRS/BV-01-I</td>
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<td>Transfer Card Reader Status</td>
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<td>SAP 2/9</td>
<td>Set Transport Protocol</td>
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<td>Set Transport Protocol</td>
<td>SAP/SR/STP/BV-01-I</td>
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</tr>
</tbody>
</table>

*Table 5.1: Test Case Mapping*