SIM Access Profile (SAP)

***Bluetooth*® Test Suite**

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Contents

1 Scope

This Bluetooth document contains the Test Suite Structure (TSS) and test cases to test the implementation of the Bluetooth SIM Access Profile (SAP) with the objective to provide a high probability of air interface interoperability between the tested implementation and other manufacturers' Bluetooth devices.

2 References, definitions, and abbreviations

2.1 References

This document incorporates provisions from other publications by dated or undated reference. These references are cited at the appropriate places in the text, and the publications are listed hereinafter. Additional definitions and abbreviations can be found in [10] and [11].

[1] SIM Access Profile

[2] Generic Access Profile

[3] Serial Port Profile

[4] Specification of the Bluetooth System - Radio Specification

[5] GSM 11.11

[6] Specification of the Subscriber Identity Module - Mobile Equipment (SIM-ME) Interface

[7] GSM 11.14

[8] Specification of the SIM Application Toolkit for the Subscriber Identity Module - Mobile Equipment (SIM - ME) Interface

[9] ICS Proforma for SIM Access Profile

[10] Test Strategy and Terminology Overview

[11] Bluetooth Specification, Version 2.0 or later

[12] SDP Test Suite, SDP.TS

2.2 Definitions

In this Bluetooth document, the definitions from [10] and [11] apply.

2.3 Acronyms and abbreviations

In this Bluetooth document, the definitions, acronyms, and abbreviations from [10] and [11] apply.

Abbreviation	Definition
APDU	Application Protocol Data Unit
ATR	Answer To Reset
GSM	Global System for Mobile Communications
SIM	Subscriber Identity Module

Table 2.1: Acronyms and abbreviations

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 Strategy

The test objectives are to verify the functionality of the SIM Access Profile (SAP) within a Bluetooth Host and enable interoperability between Bluetooth Hosts on different devices. The testing approach covers mandatory and optional requirements in the specification and matches these to the support of the IUT as described in the ICS. Any defined test herein is applicable to the IUT if the ICS logical expression defined in the Test Case Mapping Table (TCMT) evaluates to true.

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 test cases specified in Section 4.

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 equipment provides an implementation of the Radio Controller and the parts of the Host needed to perform the test cases defined in this Test Suite. A Lower Tester acts as the IUT's peer device and interacts with the IUT over-the-air interface. The configuration, including the IUT, needs to implement similar capabilities to communicate with the test equipment. For some test cases, it is necessary to stimulate the IUT from an Upper Tester. In practice, this could be implemented as a special test interface, a Man Machine Interface (MMI), or another interface supported by the IUT.

The test cases refer to Scenario 1: SIM in the Server described in Section 2.3 of [1]. Scenario 2: Proactive SIM[1] in the Client and additional SIM in the Server is not explicitly tested in this Test Suite.

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.

This Test Suite contains Valid Behavior (BV) tests complemented with Invalid Behavior (BI) tests where required. The test coverage mirrored in the Test Suite Structure is the result of a process that started with catalogued specification requirements that were logically grouped and assessed for testability enabling coverage in defined test purposes.

[1] A SIM running the SIM Application Toolkit [6]

3.3 Test groups

The following test groups have been defined:

- Generic SDP Integrated Tests
- Connection Setup
- Disconnect
- Report Status
- Power SIM Off
- Power SIM On
- Reset SIM
- Transfer Card Reader Status
- Set Transport Protocol

4 Test cases (TC)

4.1 Introduction

4.1.1 Test case identification conventions

Test cases are 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>**.

Additionally, testing of this specification includes tests from the SDP Test Suite [12] referred to as Generic SDP Integrated Tests (GSIT); when used, the test cases in GSIT are referred to through a TCID string using the following convention:
<spec abbreviation>/<IUT role>/<GSIT test group>/<GSIT class>/<xx>-<nn>-<y>.

Identifier Abbreviation	**Spec Identifier <spec abbreviation>**
SAP	SIM Access Profile
Identifier Abbreviation	**Role Identifier <IUT role>**
CL	Client role
SR	Server role
Identifier Abbreviation	**Reference Identifier <GSIT test group>**
CGSIT	Client Generic SDP Integrated Tests
SGSIT	Server Generic SDP Integrated Tests
Identifier Abbreviation	**Reference Identifier <GSIT class>**
ATTR	Attribute
OFFS	Attribute ID Offset String
SERR	Service Record
SFC	SDP Future Compatibility
Identifier Abbreviation	**Feature Identifier <feat>**
CRS	Transfer Card Reader Status
CSU	Connection Setup
DCN	Disconnect
POF	Power SIM off
PON	Power SIM on
RPS	Report Status
RST	Reset SIM
SAP	SIM Access Profile
STP	Set Transport Protocol

Table 4.1: SAP TC feature naming conventions

4.1.2 Conformance

When conformance is claimed for a particular specification, all capabilities are to be supported in the specified manner. The mandated tests from this Test Suite depend on the capabilities to which conformance is claimed.

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 not excluded by the specification
- That capabilities enabled by the implementations are sustained over durations expected by the use case
- That the implementation gracefully handles any quantity of data expected by the use case
- That in cases where more than one valid interpretation of the specification exists, the implementation complies with at least one interpretation and gracefully handles other interpretations
- That the implementation is immune to attempted security exploits

A single execution of each of the required tests is required to constitute a Pass verdict. However, it is noted that 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 generated by the Bluetooth SIG qualification tool, with the test case as described in the Test Suite, or with the test system utilized, the member is required to notify the responsible party via an erratum request such that the issue may be addressed.

4.1.3 Pass/Fail verdict conventions

Each test case has an Expected Outcome section. The IUT is granted the Pass verdict when all the detailed pass criteria conditions within the Expected Outcome section are met.

The convention in this Test Suite is that, unless there is 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, then the outcome of the test is a Fail verdict.

4.2 Generic SDP Integrated Tests

4.2.1 Server Generic SDP Integrated Tests

4.2.1.1 SIM Access Profile – Server

Execute the Generic SDP Integrated Tests defined in Section 6.3, Server test procedures (SGSIT), in [12] using Table 4.2 below as input:

TCID	Reference	Attribute ID name	Attribute ID definition source (Universal, Profile)	Value/secondary value	Attribute presence (Present/Present for [role], Optionally present, TCMT defined)
SAP/SR/SGSIT/SERR/BV-01-C [Service record GSIT – SAP Server]	[1] 6	ServiceClassIDList	Universal	"SIM Access" (UUID), "GenericTelephony" (UUID)	Present for Server
SAP/SR/SGSIT/ATTR/BV-01-C [Attribute GSIT – Protocol Descriptor List]	[1] 6	ProtocolDescriptorList	Universal	"L2CAP" (UUID), "RFCOMM" (UUID): Server Channel – skip (Uint8)	Present for Server
SAP/SR/SGSIT/ATTR/BV-02-C [Attribute GSIT – Bluetooth Profile Descriptor List]	[1] 6	BluetoothProfileDescriptorList	Universal	"SIM Access" (UUID): Version – "0x0102" (Uint16)	Present for Server

Table 4.2: Input for the SIM Access Profile Server SGSIT SDP test procedure

4.2.1.2 SIM Access Profile – Attribute ID Offset String tests

Execute the Generic SDP Integrated Tests defined in Section 6.3, Server test procedures (SGSIT), in [12] using Table 4.3 below as input:

TCID	Reference	ServiceSearchPattern	Attribute ID name	Attribute ID Offset	Attribute presence (Present/Present for [role], Optionally present, TCMT defined)
SAP/SR/SGSIT/OFFS/BV-01-C [Attribute ID Offset String GSIT – Service Name]	[1] 6	SIM Access	ServiceName	0x0000	Optionally present

Table 4.3: Input for the SIM Access Profile SGSIT Attribute ID Offset String tests

4.2.2 Client Generic SDP Integrated Tests

Execute the Generic SDP Future Compatibility Tests defined in Section 6.4, Client test procedures (CGSIT), in [12] using Table 4.3 below as input:

TCID	Reference	Service Record Service Class UUID description	Lower Tester SDP record initial conditions
SAP/CL/CGSIT/SFC/BV-01-C [SDP Future Compatibility – IUT is SAP Client]	[1] 6	SIM Access, GenericTelephony	The Lower Tester exposes an SAP Server SDP record. The version in the Bluetooth Profile Descriptor List is greater than the most recently adopted version.

Table 4.4: Input for the Client CGSIT SDP future compatibility tests

4.3 Connection Setup

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

4.3.1 Connection Setup without SSP

- Test Purpose

  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 Case Configuration

Test Case
SAP/CL/CSU/BV-01-C [Connection Setup without SSP]
SAP/SR/CSU/BV-01-C [Connection Setup without SSP]

Table 4.5: Connection Setup without SSP test cases

- Test Procedure

  1. Establish SIM Access Profile connection between Client and Server.
  2. A 16 digit (decimal) passkey is entered during the pairing procedure.
  3. The Client performs its proper functionality; for example, establishes 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.

4.3.2 Connection Setup with SSP

- Test Purpose

  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 Case Configuration

Test Case
SAP/CL/CSU/BV-02-C [Connection Setup with SSP]
SAP/SR/CSU/BV-02-C [Connection Setup with SSP]

Table 4.6: Connection Setup with SSP test cases

- Test Procedure

  1. Establish SIM Access Profile connection between Client and Server.
  2. Complete the pairing operation by using the user interfaces of the IUT and the other device.
  3. The Client performs its proper functionality; for example, establishes 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.

4.3.3 Passkey Length

- Test Purpose

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

- Reference

  [1] 2.5, Scenario 1 in Section 2.3

- Initial Condition
  - The IUT and the Lower Tester are not bonded.
  - The IUT is not engaged in a SIM Access Profile connection.
  - A SIM card is inserted in the Server.
  - The Lower Tester does not support secure simple pairing.
- Test Case Configuration

Test Case
SAP/CL/CSU/BI-01-C [Passkey Length]
SAP/SR/CSU/BI-01-C [Passkey Length]

Table 4.7: Passkey Length test cases

- Test Procedure

1. Establish a SIM Access Profile connection between the IUT and the Lower Tester.
2. Enter a passkey of less than 16 digits into the IUT during the pairing process.
3. The Upper Tester verifies that the passkey is rejected.

- Expected Outcome

  Pass verdict

  The IUT rejects the passkey.

4.3.4 Passkey Length – Devices are Bonded

- Test Purpose

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

- Reference

  [1] 2.5, Scenario 1 in Section 2.3

- Initial Condition
  - The IUT and the Lower Tester are bonded. A PIN with less than 16 digits was used to perform the bonding.
  - The IUT is not engaged in a SIM Access Profile connection.
  - A SIM card is inserted in the Server.
  - The Lower Tester does not support secure simple pairing.
- Test Case Configuration

Test Case
SAP/CL/CSU/BI-02-C [Passkey Length – Devices are Bonded]
SAP/SR/CSU/BI-02-C [Passkey Length – Devices are Bonded]

Table 4.8: Passkey Length – Devices are Bonded test cases

- Test Procedure

  1. Start to establish a SIM Access Profile connection between the IUT and the Lower Tester. If the IUT asks for a passkey, then a passkey of proper length is entered.

- Expected Outcome

  Pass verdict

  If the IUT asks for a new passkey, then the SIM Access Profile connection is established with the use of the new passkey.

  If the IUT does not ask for a new passkey, then the SIM Access Profile connection establishment is not completed.

  Fail verdict

  The SIM Access Profile connection is established with a passkey that has less than 16 digits.

4.4 Disconnection

Verify that Client and Server can terminate a SIM Access Profile connection.

4.4.1 Disconnect Initiated by the Client

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

4.4.1.1 Disconnect Initiated by Client

- Test Purpose

  Verify that the Client can request a termination of the SIM Access Profile connection. 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 Case Configuration

Test Case
SAP/CL/DCN/BV-01-C [Disconnect Initiated by Client]
SAP/SR/DCN/BV-01-C [Disconnect Initiated by Client]

Table 4.9: Disconnect Initiated by Client test cases

- Test Procedure

  1. User initiates a disconnect at the Client.
  2. Client and Server disconnect.

- Expected Outcome

  Pass verdict

  Any cellular network connection is terminated by the Client.

  Client and Server disconnect.

4.4.2 Disconnect Initiated by the Server

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

4.4.2.1 Disconnect (Graceful) Initiated by Server

- Test Purpose

  Verify that the Server can request a termination of the SIM Access Profile connection. 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 Case Configuration

Test Case
SAP/CL/DCN/BV-02-C [Disconnect (Graceful) Initiated by Server]
SAP/SR/DCN/BV-02-C [Disconnect (Graceful) Initiated by Server]

Table 4.10: Disconnect (Graceful) Initiated by Server test cases

- Test Procedure

  1. 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.

4.4.2.2 Disconnect (Immediate) Initiated by Server

- Test Purpose

  Verify that the Server can request a termination of the SIM Access Profile connection. 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 Case Configuration

Test Case
SAP/CL/DCN/BV-03-C [Disconnect (Immediate) Initiated by Server]
SAP/SR/DCN/BV-03-C [Disconnect (Immediate) Initiated by Server]

Table 4.11: Disconnect (Immediate) Initiated by Server test cases

- Test Procedure

  1. 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.

4.5 Power SIM On/Off

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

4.5.1 Power SIM Off

- Test Purpose

  Verify that the Client can request the Server to power the SIM off. 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 Case Configuration

Test Case
SAP/CL/POF/BV-01-C [Power SIM Off]
SAP/SR/POF/BV-01-C [Power SIM Off]

Table 4.12: Power SIM Off test cases

- Test Procedure

  1. The Client requests the Server to power off the SIM card in the Server.
  2. 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.

4.5.2 Power SIM On

- Test Purpose

  Verify that the Client can request the Server to power the SIM in the Server on. 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 Case Configuration

Test Case
SAP/CL/PON/BV-01-C [Power SIM On]
SAP/SR/PON/BV-01-C [Power SIM On]

Table 4.13: Power SIM On test cases

- Test Procedure

  1. A SIM card is inserted in the Server; the Server reports this to the Client.
  2. The Client requests the Server to power on the SIM card.
  3. 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.

4.6 Reset SIM

Verify that the Client can request the Server to reset the SIM. Verify that the Server can reset the SIM and send the Client a response.

4.6.1 Reset SIM

- Test Purpose

  Verify that the Client can request the Server to reset the SIM. 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 Case Configuration

Test Case
SAP/CL/RST/BV-01-C [Reset SIM]
SAP/SR/RST/BV-01-C [Reset SIM]

Table 4.14: Reset SIM test cases

- Test Procedure

  1. The Client requests the Server to reset the SIM card in the Server.

- Expected Outcome

  Pass verdict

  The Server has reset the SIM card.

4.7 Report Status

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

4.7.1 Report Status – Card Not Accessible

- Test Purpose

  Verify that the Server can report a SIM card that is no longer accessible to the Client. 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 Case Configuration

Test Case
SAP/CL/RPS/BV-01-C [Report Status – Card Not Accessible]
SAP/SR/RPS/BV-01-C [Report Status – Card Not Accessible]

Table 4.15: Report Status – Card Not Accessible test cases

- Test Procedure

  1. 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.

4.7.1.1 Report Status – Removed Card

- Test Purpose

  Verify that the Server can report to the Client and that the SIM card has been removed. 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 Case Configuration

Test Case
SAP/CL/RPS/BV-02-C [Report Status – Removed Card]
SAP/SR/RPS/BV-02-C [Report Status – Removed Card]

Table 4.16: Report Status – Removed Card test cases

- Test Procedure

  1. 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.

4.8 Transfer Card Read Status

Verify that the Client can request the Card Reader Status from the Server. Verify that the Server can answer this request.

4.8.1 Transfer Card Reader Status

- Test Purpose

  Verify that the Client can request the Card Reader Status from the Server. 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 Case Configuration

Test Case
SAP/CL/CRS/BV-01-C [Transfer Card Reader Status]
SAP/SR/CRS/BV-01-C [Transfer Card Reader Status]

Table 4.17: Transfer Card Reader Status test cases

- Test Procedure

  1. The Client requests the Card Reader Status from the Server.
  2. The Server sends the Card Reader Status to the Client.

- Expected Outcome

  Pass verdict

  The correct Card Reader Status is passed to the Client.

4.9 Set Transport Protocol

Verify that the client can request to change the used transport protocol. Verify that the server can handle this request.

4.9.1 Set Transport Protocol

- Test Purpose

  Verify that the client can request the use of a non-GSM (T=0) Transport Protocol. 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 Case Configuration

Test Case
SAP/CL/STP/BV-01-C [Set Transport Protocol]
SAP/SR/STP/BV-01-C [Set Transport Protocol]

Table 4.18: Set Transport Protocol test cases

- Test Procedure

1. Establish SIM Access Profile connection between Client and Server.
2. 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 IUT is 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 logical expression based on specific entries from the associated ICS document. Contains a logical expression (using the operators AND, OR, NOT as needed) based on specific entries from the applicable ICS document(s). The entries are in the form of y/x references, where y corresponds to the table number and x corresponds to the feature number as defined in the ICS document for SIM Access Profile (SAP) [9].

Feature: A brief, informal description of the feature being tested.

Test Case(s): The applicable test case identifiers are required for Bluetooth Qualification if the corresponding y/x references defined in the Item column are supported. Further details about the function of the TCMT are elaborated in [10].

For the purpose and structure of the ICS/IXIT, refer to [10].

Item	Feature	Test Case(s)
SAP 1/2	SAP Server SDP Service	SAP/SR/SGSIT/SERR/BV-01-C SAP/SR/SGSIT/ATTR/BV-01-C SAP/SR/SGSIT/ATTR/BV-02-C SAP/SR/SGSIT/OFFS/BV-01-C
SAP 1/1	Successful Connection with future SDP Record value – SAP Client	SAP/CL/CGSIT/SFC/BV-01-C
SAP 2/1 AND NOT SAP 2/1b	Connection Management	SAP/CL/CSU/BI-01-C
SAP 3/1 AND NOT SAP 3/1b	Connection Management	SAP/SR/CSU/BI-01-C
SAP 2/1	Connection Management	SAP/CL/DCN/BV-01-C SAP/CL/DCN/BV-02-C SAP/CL/DCN/BV-03-C
SAP 3/1	Connection Management	SAP/SR/DCN/BV-01-C SAP/SR/DCN/BV-02-C SAP/SR/DCN/BV-03-C
SAP 2/1 AND NOT SAP 2/1b	Passkey length – Devices are bonded	SAP/CL/CSU/BI-02-C
SAP 3/1 AND NOT SAP 3/1b	Passkey length – Devices are bonded	SAP/SR/CSU/BI-02-C
SAP 2/1 AND SAP 2/1b	Connection Setup with SSP	SAP/CL/CSU/BV-02-C
SAP 3/1 AND SAP 3/1b	Connection Setup with SSP	SAP/SR/CSU/BV-02-C
SAP 2/1	Connection Setup without SSP	SAP/CL/CSU/BV-01-C
SAP 3/1	Connection Setup without SSP	SAP/SR/CSU/BV-01-C
SAP 2/4	Power SIM off	SAP/CL/POF/BV-01-C
SAP 3/4	Power SIM off	SAP/SR/POF/BV-01-C

Item	Feature	Test Case(s)
SAP 2/5a AND SAP 2/7a	Power SIM on Report Status – Card inserted	SAP/CL/PON/BV-01-C
SAP 3/5 AND SAP 3/8	Power SIM on Report Status – Card inserted	SAP/SR/PON/BV-01-C
SAP 2/6	Reset SIM	SAP/CL/RST/BV-01-C
SAP 3/7	Reset SIM	SAP/SR/RST/BV-01-C
SAP 2/7a OR SAP 2/7b	Report Status – Card not accessible	SAP/CL/RPS/BV-01-C
(SAP 3/8 OR SAP 3/9) AND NOT SAP 3/9a	Report Status – Card not accessible	SAP/SR/RPS/BV-01-C
SAP 2/7a OR SAP 2/7b	Report Status – Card removed	SAP/CL/RPS/BV-02-C
SAP 3/8	Report Status – Card removed	SAP/SR/RPS/BV-02-C
SAP 2/8	Transfer Card Reader Status	SAP/CL/CRS/BV-01-C
SAP 3/10	Transfer Card Reader Status	SAP/SR/CRS/BV-01-C
SAP 2/9	Set Transport Protocol	SAP/CL/STP/BV-01-C
SAP 3/11	Set Transport Protocol	SAP/SR/STP/BV-01-C

Table 5.1: Test case mapping

6 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.00	2005-01-25	Incorporate TSE 692 removed requirements for calls as of TSE 685 For release with SIM Access Profile 1.00
	1.0.1r1	2005-01-26	Changes from review of CWG Update.
	1.0.1r2	2005-01-27	Changes after CWG review
	1.0.1r3	2005-01-27	Remove specific requirement of proactive SIM card
	1.0.1r4	2005-01-31	Minor update after CWG review
	1.0.1r5	2005-03-08	Update after BTI review
1	1.0.1	2005-03-29	Prepare for publication
	1.0.1r0	2006-04-10	Editorial updates for 1.2 or later specs Removed page breaks, 'Uncertainties' and 'Inconclusive Verdict' sections (all were N/A)
	1.0.1	2006-05-16	Prepare for publication.
	1.0.2r1	2007-08-02	Add test for secure simple pairing
	1.0.2r2	2008-07-14	Updates from initial BTI review
	1.0.2r3	2008-07-29	Correction to TCMT from Anna S. Added version number on title page Corrected version number on title page and Revision History from 1.2.x to 1.0.x (needs TSE)
2	1.0.2, 1.1.2	2008-11-26	Corrected Document ID to 1.1.2 (should have been 1.1.1 in previous release, not 1.2.1). New test case SAP/CL/CSU/BV-02-I and SAP/SR/CSU/BV-02-I (legacy test case ID TP/CSU/BV-02-I) as indicated by SAP 1.1 profile updates
	1.1.3r0	2010-09-09	TSE 2905: SAP/CL/CSU/BI-02-I, SAP/SR/CSU/BI-02-I (legacy test case ID TP/CSU/BI-02-I):TCMT
3	1.1.3	2011-07-21	Prepare for publication.
	1.1.4r0	2012-09-06	TSE 4825: Change to Report Status- Card not accessible in TCMT.
	1.1.4r1	2012-09-22	Updated Copyright notice to 2012
4	1.1.4	2012-11-01	Prepare for Publication
	1.1.5r1	2013-05-01	TSE 5037: Updated TCMT mapping for SAP/CL/CSU/BI-01-I, SAP/SR/CSU/BI-01-I (legacy test case ID TP/CSU/BI-01-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/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)"

Publication Number	Revision Number	Date	Comments
			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, SAP/SR/CSU/BV-01-I (legacy test case ID TP/CSU/BV-01-I) to “SAP 2/1 OR SAP 3/1” and updated description Updated TCMT mapping for SAP/CL/PON/BV-01-I, SAP/SR/PON/BV-01-I (legacy test case ID TP/PON/BV-01-I) to “(SAP 2/5a AND SAP 2/7a) OR (SAP 3/5 AND SAP 3/8) 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”
5	1.1.5	2013-07-02	Prepare for Publication
	1.1.1.0r00	2015-10-28	Updated version numbering to align with Specification version change from 1.1 to 1.1.1 for ESR09. With the specification taking a third identifying number, the TS version identifier moves to the fourth number and starts again at 0.
6	1.1.1.0	2015-12-22	Prepared for TCRL 2015-2 publication
	1.1.1.1r00	2016-08-15	Converted to new Test Case ID conventions as defined in TSTO v4.1.
	1.1.1.1r01	2016-11-06	Converted test specification template.
7	1.1.1.1	2016-12-13	Approved by BTI. Prepared for TCRL 2016-2 publication.
	p8r00–r05	2023-10-19 – 2024-04-08	TSE 23002 (rating 2): Corrected the initial condition, test steps, and Pass verdict for SAP/CL/CSU/BI-01-C and -02-C and corrected the initial condition, test steps, and Pass verdict and added a Fail verdict for SAP/SR/CSU/BI-01-C and -02-C. TSE 23891 (rating 1): Converted -I tests to -C tests as appropriate; updated the TCMT and TCRL accordingly. TSE 24535 (rating 4): Added new GSIT section with new TCs SAP/CL/CGSIT/SFC/BV-01-C, SAP/SR/SGSIT/SERR/BV-01-C, SAP/SR/SGSIT/ATTR/BV-01-C and -02-C, and SAP/SR/SGSIT/OFFS/BV-01-C. Updated the TCMT accordingly. Added a reference to the SDP TS. Updated the Test Groups and TC Conventions sections. Editorial updates, including setting previous v1.1.1.1 to p7 and removing draft rev history entries. Updated the disclaimer text and footers to align with the latest DNMD and logo. Simplified the test groups section and replaced all boilerplate text per the latest TS template. Moved TCIDs into TC Config tables.

Publication Number	Revision Number	Date	Comments
8	p8	2024-07-01	Approved by BTI on 2024-05-22. Prepared for TCRL 2024-1 publication.

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