Synchronization Profile (SYNC)

***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 Synchronization Profile 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 [1], [2], and [4].

[1] Specification of the Bluetooth System, Core System, Version 2.0 or later

[2] Synchronization Profile

[3] Infrared Data Association, IrMC Specification

[4] Test Strategy and Terminology Overview

[5] ICS Proforma for Synchronization Profile

[6] SDP Test Suite, SDP.TS

2.2 Definitions

In this Bluetooth document, the definitions from [1], [2], and [4] apply.

2.3 Acronyms and abbreviations

In this Bluetooth document, the definitions, acronyms, and abbreviations from [1], [2], and [4] apply.

3 Test Suite Structure (TSS)

3.1 Overview

The Bluetooth Synchronization Profile is based on IrDA's Infrared Mobile Communication (IrMC) specification [3].

IrMC is specifying the format of four different object types:

- Business cards, calendar entries, messages, and notes

The Bluetooth Synchronization Profile is requesting that the object types are supported with exactly the same format as defined by IrMC.

3.1.1 Object formats and features

Each Bluetooth Profile defines a series of features and the way they should be implemented using the available protocol stack. Within the Synchronization Profile, the features are synchronization, synchronization command, and automatic synchronization.

The Synchronization Profile is based on the Generic Object Exchange (OBEX) profile, which uses the predefined object formats **vcard**, **vcal**, **vmsg**, and **vnote**.

From an interoperability testing point of view, features and object formats must be de-correlated. That means that all the possible combinations (feature, and object format to which it is applied) are covered by test cases.

3.2 Test Strategy

The test objectives are to verify the functionality of the Synchronization Profile 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 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.

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.

3.3 Test groups

The following test groups have been identified:

- Generic SDP Integrated Tests
- Synchronization
- Synchronization Command
- Automatic Synchronization

4 Test cases (TC)

4.1 Introduction

4.1.1 Test case identification conventions

Test cases are assigned unique identifiers per the conventions in [4]. 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 [6] 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>**
SYNC	Synchronization Profile
Identifier Abbreviation	**Role Identifier <IUT role>**
CL	IrMC Client
SR	IrMC Server
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>**
ASY	Automatic Synchronization
SYC	Synchronization Command
SYN	Synchronization

Table 4.1: SYNC 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 Creating sample items

4.1.3.1 Mandatory and optional fields

For testing of each of the four predefined formats, the complete list of all the supported fields must be provided, including the following mandatory fields:

- For vCards, Name, Version, and Telephone Number
- For vCals, the event fields Version, Description, and Start Date/Time plus the ToDo fields Version, Categories, Date/Time Completed, Description, Priority, Status, and Summary
- For vMsgs, Version and Message Body
- For vNotes, Version and Body

4.1.3.2 Preparing the items for first-time synchronization

The following inputs are required to get the initial conditions:

- For vCard, at least three different business cards on the client and server side
- For vCal, at least three different event/ToDo items on the client and server side
- For vMsg, at least three different messages on the client and server side
- For vNote, at least three different Notes on the client and server side

By building sample items that include both mandatory supported fields and jointly supported optional fields, it can be verified that these fields are properly processed, and optional fields that are only supported by one of the two devices are not altered or erased upon reception by the other device, i.e., are properly discarded.

4.1.3.3 Preparing items for subsequent time synchronization

The sample items must be built to check the following changes of the fields for each format:

- Add at least one item on the client and server side.
- Delete at least one item on the client and server side.
- Client: Modify all client supported fields of at least one item.
- Server: Modify all server supported fields of at least one item.

To reduce the overall number of tests, the modifications are combined for each format; e.g., in the case of vCards, the following modifications are required to satisfy the initial conditions:

- At least one different business card is added on the IUT and on the Lower Tester.
- At least one different business card is deleted on the IUT and on the Lower Tester.
- Client: The name, version, and phone number fields and additional client supported fields of at least one business card are modified.
- Server: The name, version, and phone number fields and additional server supported fields of at least one business card are modified.

Note: Due to User Interface (UI) limitations, it may not be possible to delete or modify items on the Sync Server. In this situation, all Client side initial conditions are to be met. These conditions only apply when the Sync Server is the IUT. When testing a Sync Client, all conditions of this section are to be met.

4.1.4 Synchronization settings and verdicts

Depending on the user settings on the client and server, the steps of the procedures and the result of the synchronization operation can differ. This must be taken into account when analyzing the results to get the verdict. Different settings can be, for example:

- Acceptance of the client's, the server's, or the latest modification of an identical field on both sides
- Hard- or soft-delete of an item deleted by the peer device
- The time interval between two pages in the Automatic Synchronization scenario

If it is not possible for the user to select the formats to be synchronized (e.g., because these are already preselected due to the initial synchronization), it is allowed to run several synchronization test cases in parallel to perform synchronization of different formats in one step.

The general Pass verdict that applies for all synchronization tests is as follows:

Client/Server:

Synchronization must be performed correctly:

- All client/server deleted items must be deleted correctly according to the synchronization settings.
- All client/server added items must be added correctly according to the synchronization settings.
- All client/server modified items must be modified correctly according to the synchronization settings.
- All mandatory fields of the item must be modified correctly.
- All optional fields supported by both must be modified correctly.

Optional fields supported by only one side must not be erased or altered when synchronizing with another side that does not support the optional field.

4.1.5 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 Synchronization Profile – Synchronization Service

Execute the Generic SDP Integrated Tests defined in Section 6.3, Server test procedures (SGSIT), in [6] 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)
SYNC/SR/SGSIT/SERR/BV-01-C [Service record GSIT – SYNC Synchronization Service]	[2] 7.1.1	ServiceClassIDList	Universal	"IrMCSync" (UUID)	Present for Server
SYNC/SR/SGSIT/ATTR/BV-01-C [Attribute GSIT – Protocol Descriptor List]	[2] 7.1.1	ProtocolDescriptorList	Universal	"L2CAP" (UUID), "RFCOMM" (UUID): Channel – skip (Uint8), "OBEX" (UUID)	Present for Server
SYNC/SR/SGSIT/ATTR/BV-02-C [Attribute GSIT – Bluetooth Profile Descriptor List]	[2] 7.1.1	BluetoothProfileDescriptorList	Universal	"IrMCSync" (UUID): Version – "0x0102" (Uint16)	Optionally present
SYNC/SR/SGSIT/ATTR/BV-03-C [Attribute GSIT – Supported Data Stores List]	[2] 7.1.1	Supported Data Stores List	Profile	skip (Data Element Sequence)	Present for Server

Table 4.2: Input for the Synchronization Service SGSIT SDP test procedure

4.2.1.2 Synchronization Profile – Sync Command

Execute the Generic SDP Integrated Tests defined in Section 6.3, Server test procedures (SGSIT), in [6] using Table 4.3 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)
SYNC/CL/SGSIT/SERR/BV-02-C [Service record GSIT – SYNC Sync Command]	[2] 7.1.2	ServiceClassIDList	Universal	"IrMCSyncCommand" (UUID)	Present for Client

TCID	Reference	Attribute ID name	Attribute ID definition source (Universal, Profile)	Value/secondary value	Attribute presence (Present/Present for [role], Optionally present, TCMT defined)
SYNC/CL/SGSIT/ATTR/BV-04-C [Attribute GSIT – Protocol Descriptor List]	[2] 7.1.2	ProtocolDescriptorList	Universal	"L2CAP" (UUID), "RFCOMM" (UUID): Channel – skip (Uint8), "OBEX" (UUID)	Present for Client
SYNC/CL/SGSIT/ATTR/BV-05-C [Attribute GSIT – Bluetooth Profile Descriptor List]	[2] 7.1.2	BluetoothProfileDescriptorList	Universal	"IrMCSync" (UUID): Version – "0x0102" (Uint16)	Optionally present

Table 4.3: Input for the Sync Command SGSIT SDP test procedure

4.2.1.3 Synchronization Profile – Attribute ID Offset String tests

Execute the Generic SDP Integrated Tests defined in Section 6.3, Server test procedures (SGSIT), in [6] using Table 4.4 below as input:

TCID	Reference	ServiceSearchPattern	Attribute ID name	Attribute ID Offset	Attribute presence (Present/Present for [role], Optionally present, TCMT defined)
SYNC/SR/SGSIT/OFFS/BV-01-C [Attribute ID Offset String GSIT – Service Name]	[2] 7.1.1	IrMCSync	ServiceName	0x0000	Optionally present
SYNC/CL/SGSIT/OFFS/BV-02-C [Attribute ID Offset String GSIT – Service Name]	[2] 7.1.2	IrMCSyncCommand	ServiceName	0x0000	Optionally present

Table 4.4: Input for the Synchronization 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 [6] using Table 4.5 below as input:

TCID	Reference	Service Record Service Class UUID description	Lower Tester SDP record initial conditions
SYNC/CL/CGSIT/SFC/BV-01-C [SDP Future Compatibility – IUT is SYNC Client]	[2] 7.1.1	IrMCSync	The Lower Tester exposes a SYNC Server SDP record. The version in the Bluetooth Profile Descriptor List is greater than the most recently adopted version.

Table 4.5: Input for the Client CGSIT SDP future compatibility tests

4.3 Synchronization test cases

4.3.1 Initialization (first time) Synchronization

4.3.1.1 Bonding

- Test Purpose

  Verify that the PIN code is requested from the user and handled correctly prior to initial synchronization.

- Reference

  [2] 3.2.1

- Initial Condition

  - Bonding is not required to have already been performed.
  - The synchronization application is activated on the IrMC client.
  - Initialization Sync mode is set on the IrMC server.
  - The items to be synchronized are prepared.
  - An IrMC server to perform initial synchronization with is selectable.

- Test Case Configuration

Test Case
SYNC/CL/SYN/BV-02-C [PIN Check]
SYNC/SR/SYN/BV-02-C [PIN Check]

Table 4.6: PIN Check test cases

- Test Procedure

  1. Select the Server to be connected and synchronized with on the IrMC client.
  2. A Bluetooth PIN code is requested.
  3. Enter the same PIN code on both devices.

- Expected Outcome

  Pass verdict

  The Bluetooth PIN code is requested from the user prior to initial synchronization.

  The entered PIN code is treated correctly and the application steps to the next state.

4.3.1.2 OBEX password

- Test Purpose

  Verify that the OBEX password is requested from the user and handled correctly prior to initial synchronization.

- Reference

  [2] 3.2.1

- Initial Condition
  - The synchronization application is activated on the IrMC client.
  - Initialization Sync mode is set on the IrMC server.
  - The items to be synchronized are prepared.
  - An IrMC server to perform initial synchronization with has been selected by the IrMC client.
  - The Bluetooth PIN code has been accepted.
- Test Case Configuration

Test Case
SYNC/CL/SYN/BV-03-C [OBEX password]
SYNC/SR/SYN/BV-03-C [OBEX password]

Table 4.7: OBEX password test cases

- Test Procedure

  1. The OBEX password is requested.
  2. Enter the same password on both devices.

- Expected Outcome

  Pass verdict

  The OBEX password is requested from the user prior to initial synchronization.

  The entered password is treated correctly and the application steps to the next state.

4.3.1.3 Initial Sync

- Test Purpose

  Verify that the Initial Synchronization of objects is performed successfully.

- Reference

  [2] 3.2.1

- Initial Condition
  - The synchronization application is activated on the IrMC client.
  - Initialization Sync mode is set on the IrMC server.
  - The objects for initial synchronization are prepared with the content format from Table 4.8 (see Section 4.1.3.2).
  - The IrMC server can be selected from a list on the IrMC client.
- Test Case Configuration

Test Case	Content Format
SYNC/CL/SYN/BV-04-C [Initial Sync – vCard]	vCard
SYNC/SR/SYN/BV-04-C [Initial Sync – vCard]	vCard
SYNC/CL/SYN/BV-06-C [Initial Sync – vCal]	vCal
SYNC/SR/SYN/BV-06-C [Initial Sync – vCal]	vCal

Test Case	Content Format
SYNC/CL/SYN/BV-08-C [Initial Sync – vMsg]	vMsg
SYNC/SR/SYN/BV-08-C [Initial Sync – vMsg]	vMsg
SYNC/CL/SYN/BV-10-C [Initial Sync – vNote]	vNote
SYNC/SR/SYN/BV-10-C [Initial Sync – vNote]	vNote

Table 4.8: Initial Sync test cases

- Test Procedure

  1. Select the IrMC server to perform initial synchronization with on the IrMC client.
  2. Perform Bluetooth PIN exchange.
  3. Perform OBEX authentication if used.
  4. Start the synchronization.

- Expected Outcome

  Pass verdict

  The initial synchronization of objects with the content format from Table 4.8 is processed correctly (see Section 4.1.4).

  The IrMC client may be notified that the initial synchronization was successful.

4.3.1.4 Initial Sync – object content format not supported

- Test Purpose

  Verify that if the IrMC server does not support the Synchronization of items of a specific content format, this is correctly handled and gets notified on the IrMC client.

- Reference

  [2] 3.2.1

- Initial Condition

  - The synchronization application is activated on the IrMC client.
  - Initialization Sync mode is set on the IrMC server.
  - The objects for initial synchronization are prepared with the content format from Table 4.9 (see Section 4.1.3.2).
  - The IrMC server can be selected from a list on the IrMC client.

- Test Case Configuration

Test Case	Content Format
SYNC/CL/SYN/BV-05-C [Initial Sync – vCard not supported]	vCard
SYNC/SR/SYN/BV-05-C [Initial Sync – vCard not supported]	vCard
SYNC/CL/SYN/BV-07-C [Initial Sync – vCal not supported]	vCal
SYNC/SR/SYN/BV-07-C [Initial Sync – vCal not supported]	vCal
SYNC/CL/SYN/BV-09-C [Initial Sync – vMsg not supported]	vMsg
SYNC/SR/SYN/BV-09-C [Initial Sync – vMsg not supported]	vMsg
SYNC/CL/SYN/BV-11-C [Initial Sync – vNote not supported]	vNote

Test Case	Content Format
SYNC/SR/SYN/BV-11-C [Initial Sync – vNote not supported]	vNote

Table 4.9: Initial Sync – object content format not supported test cases

- Test Procedure

  1. Select the IrMC server to perform initial synchronization with on the IrMC client.
  2. Perform Bluetooth PIN exchange.
  3. Perform OBEX authentication if used.
  4. Start the synchronization.

- Expected Outcome

  Pass verdict

  The IrMC client is notified that Synchronization of the objects with the content format from Table 4.9 is not supported on the IrMC server.

  There may be an error message on the IrMC server side. There is no disruption of server operation.

4.3.2 Subsequent time Synchronization

4.3.2.1 Sync objects

- Test Purpose

  Verify that the Synchronization of objects is performed successfully.

- Reference

  [2] 3.2.1

- Initial Condition

  - Initial synchronization has been performed.
  - General Sync mode is set on the IrMC server.
  - The IrMC server to synchronize with is selected on the IrMC client.
  - The objects to synchronize are prepared with the content format from Table 4.10 (see Section 4.1.3.3).

- Test Case Configuration

Test Case	Content Format
SYNC/CL/SYN/BV-12-C [Sync – vCard]	vCard
SYNC/SR/SYN/BV-12-C [Sync – vCard]	vCard
SYNC/CL/SYN/BV-13-C [Sync – vCal]	vCal
SYNC/SR/SYN/BV-13-C [Sync – vCal]	vCal
SYNC/CL/SYN/BV-14-C [Sync – vMsg]	vMsg
SYNC/SR/SYN/BV-14-C [Sync – vMsg]	vMsg
SYNC/CL/SYN/BV-15-C [Sync – vNote]	vNote
SYNC/SR/SYN/BV-15-C [Sync – vNote]	vNote

Table 4.10: Sync objects test cases

- Test Procedure

  1. Start the synchronization on the IrMC client.

- Expected Outcome

  Pass verdict

  The synchronization of objects with the content format from Table 4.10 is processed correctly (see Section 4.1.4).

4.4 Sync Command test cases

4.4.1 Sync Command

- Test Purpose

  Verify that the IrMC server can initiate and perform synchronization of objects by Sync Command and that the IrMC client accepts.

- Reference

  [2] 3.2.2

- Initial Condition

  - Initial synchronization has been performed.
  - General Sync mode is set on the IrMC client.
  - The objects to synchronize are prepared with the content format from Table 4.11 (see Section 4.1.3.3).
  - The IrMC client is selected on the IrMC server.

- Test Case Configuration

Test Case	Content Format
SYNC/CL/SYC/BV-01-C [Sync Cmd – vCard]	vCard
SYNC/SR/SYC/BV-01-C [Sync Cmd – vCard]	vCard
SYNC/CL/SYC/BV-02-C [Sync Cmd – vCal]	vCal
SYNC/SR/SYC/BV-02-C [Sync Cmd – vCal]	vCal
SYNC/CL/SYC/BV-03-C [Sync Cmd – vMsg]	vMsg
SYNC/SR/SYC/BV-03-C [Sync Cmd – vMsg]	vMsg
SYNC/CL/SYC/BV-04-C [Sync Cmd – vNote]	vNote
SYNC/SR/SYC/BV-04-C [Sync Cmd – vNote]	vNote

Table 4.11: Sync Command test cases

- Test Procedure

  1. Start the synchronization on the IrMC server.

- Expected Outcome

  Pass verdict

  The synchronization of objects with the content format from Table 4.11 is processed correctly (see Section 4.1.4).

4.5 Automatic Synchronization test cases

4.5.1 Automatic Synchronization

- Test Purpose

  Verify that the IrMC client and server perform automatic Synchronization of objects successfully.

- Reference

  [2] 3.2.3

- Initial Condition

  - Initial synchronization has been performed.
  - General Sync mode is set on the IrMC client and server.
  - The objects to synchronize are prepared with the content format from Table 4.12 (see Section 4.1.3.3).

- Test Case Configuration

Test Case	Content Format
SYNC/CL/ASY/BV-01-C [Auto Sync – vCard]	vCard
SYNC/SR/ASY/BV-01-C [Auto Sync – vCard]	vCard
SYNC/CL/ASY/BV-02-C [Auto Sync – vCal]	vCal
SYNC/SR/ASY/BV-02-C [Auto Sync – vCal]	vCal
SYNC/CL/ASY/BV-03-C [Auto Sync – vMsg]	vMsg
SYNC/SR/ASY/BV-03-C [Auto Sync – vMsg]	vMsg
SYNC/CL/ASY/BV-04-C [Auto Sync – vNote]	vNote
SYNC/SR/ASY/BV-04-C [Auto Sync – vNote]	vNote

Table 4.12: Automatic Synchronization test cases

- Test Procedure

  1. Ensure that the IrMC client is out of the communication range of the IrMC server.
  2. Activate the automatic synchronization feature on the IrMC client.
  3. After the automatic synchronization feature is activated on the IrMC client, enter the communication range of the IrMC client with the IrMC server.

- Expected Outcome

  Pass verdict

  The synchronization of objects with the content format from Table 4.12 is processed correctly (see Section 4.1.4).

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 Synchronization Profile [5].

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 [4].

For the purpose and structure of the ICS/IXIT, refer to [4].

Item	Feature	Test Case(s)
SDP Service Records		
SYNC 1/1	SYNC Client SDP Service	SYNC/CL/SGSIT/SERR/BV-02-C SYNC/CL/SGSIT/ATTR/BV-04-C SYNC/CL/SGSIT/ATTR/BV-05-C SYNC/CL/SGSIT/OFFS/BV-02-C SYNC/CL/CGSIT/SFC/BV-01-C
SYNC 1/2	SYNC Server SDP Service	SYNC/SR/SGSIT/SERR/BV-01-C SYNC/SR/SGSIT/ATTR/BV-01-C SYNC/SR/SGSIT/ATTR/BV-02-C SYNC/SR/SGSIT/ATTR/BV-03-C SYNC/SR/SGSIT/OFFS/BV-01-C
Authentication		
SYNC 2/2	Use of Authentication / Bluetooth PIN exchange	SYNC/CL/SYN/BV-02-C
SYNC 3/2	Use of Authentication / Bluetooth PIN exchange	SYNC/SR/SYN/BV-02-C
SYNC 2/3	Use of OBEX authentication	SYNC/CL/SYN/BV-03-C
SYNC 3/3	Use of OBEX authentication	SYNC/SR/SYN/BV-03-C
Synchronization		
SYNC 2/5	Synchronization vCard	SYNC/CL/SYN/BV-04-C SYNC/CL/SYN/BV-12-C
SYNC 3/5	Synchronization vCard	SYNC/SR/SYN/BV-04-C SYNC/SR/SYN/BV-12-C
SYNC 2/6	Synchronization vCal	SYNC/CL/SYN/BV-06-C SYNC/CL/SYN/BV-13-C
SYNC 3/6	Synchronization vCal	SYNC/SR/SYN/BV-06-C SYNC/SR/SYN/BV-13-C

Item	Feature	Test Case(s)
SYNC 2/7	Synchronization vMsg	SYNC/CL/SYN/BV-08-C SYNC/CL/SYN/BV-14-C
SYNC 3/7	Synchronization vMsg	SYNC/SR/SYN/BV-08-C SYNC/SR/SYN/BV-14-C
SYNC 2/8	Synchronization vNote	SYNC/CL/SYN/BV-10-C SYNC/CL/SYN/BV-15-C
SYNC 3/8	Synchronization vNote	SYNC/SR/SYN/BV-10-C SYNC/SR/SYN/BV-15-C
SYNC 2/5	Synchronization vCard not support	SYNC/CL/SYN/BV-05-C
SYNC 1/2 AND NOT SYNC 3/5	Synchronization vCard not support	SYNC/SR/SYN/BV-05-C
SYNC 2/6	Synchronization vCal not support	SYNC/CL/SYN/BV-07-C
SYNC 1/2 AND NOT SYNC 3/6	Synchronization vCal not support	SYNC/SR/SYN/BV-07-C
SYNC 2/7	Synchronization vMsg not support	SYNC/CL/SYN/BV-09-C
SYNC 1/2 AND NOT SYNC 3/7	Synchronization vMsg not support	SYNC/SR/SYN/BV-09-C
SYNC 2/8	Synchronization vNote not support	SYNC/CL/SYN/BV-11-C
SYNC 1/2 AND NOT SYNC 3/8	Synchronization vNote not support	SYNC/SR/SYN/BV-11-C
Sync Command		
SYNC 2/11	Sync Command vCard	SYNC/CL/SYC/BV-01-C
SYNC 3/11	Sync Command vCard	SYNC/SR/SYC/BV-01-C
SYNC 2/12	Sync Command vCal	SYNC/CL/SYC/BV-02-C
SYNC 3/12	Sync Command vCal	SYNC/SR/SYC/BV-02-C
SYNC 2/13	Sync Command vMsg	SYNC/CL/SYC/BV-03-C
SYNC 3/13	Sync Command vMsg	SYNC/SR/SYC/BV-03-C
SYNC 2/14	Sync Command vNote	SYNC/CL/SYC/BV-04-C
SYNC 3/14	Sync Command vNote	SYNC/SR/SYC/BV-04-C
Automatic Synchronization		
SYNC 2/16	Automatic Synchronization vCard	SYNC/CL/ASY/BV-01-C
SYNC 3/16	Automatic Synchronization vCard	SYNC/SR/ASY/BV-01-C
SYNC 2/17	Automatic Synchronization vCal	SYNC/CL/ASY/BV-02-C
SYNC 3/17	Automatic Synchronization vCal	SYNC/SR/ASY/BV-02-C
SYNC 2/18	Automatic Synchronization vMsg	SYNC/CL/ASY/BV-03-C
SYNC 3/18	Automatic Synchronization vMsg	SYNC/SR/ASY/BV-03-C
SYNC 2/19	Automatic Synchronization vNote	SYNC/CL/ASY/BV-04-C
SYNC 3/19	Automatic Synchronization vNote	SYNC/SR/ASY/BV-04-C

Table 5.1: Test case mapping

6 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.1	2001-02-07	First version for Specification 1.1
	1.2.0r1	2006-01-05	Updated to conform to specification 1.2 or later and to updated test spec template Removed E as a test case type.
1	1.2.0	2006-06-20	Prepare for publication.
	1.2.1r0	2006-11-16	Add § 3.2.3 Conformance
	1.2.1r1	2006-11-30	TSE 1794: Update Section 4.1.3.3 for TP/SYN/BV-12-I,TP/SYN/BV-15-I,TP/SYN/BV-13-I,TP/SYN/BV-14-I Input reviewer's comments
2	1.2.1	2007-01-09	Prepare for publication.
	1.2.2r00	2014-10-25	TSE 5752: Updated TCMT mapping for TP/SYN/BV-05-I, TP/SYN/BV-07-I, TP/SYN/BV-09-I, and TP/SYN/BV-11-I.
3	1.2.2	2014-12-08	Prepare for TCRL 2014-2 publication
	1.2.1.0r00	2015-10-28	Updated version numbering to align with Specification version change from 1.2 to 1.2.1 for ESR09. With the specification taking a third identifying number, the TS version identifier moves to the fourth number and starts again at 0.
4	1.2.1.0	2015-12-22	Prepared for TCRL 2015-2 publication
	1.2.1.1r01	2017-01-25	Converted test specification template.
	1.2.1.1r02	2017-04-27	Converted to new Test Case ID conventions as defined in TSTO v4.1.
5	1.2.1.1	2017-07-03	Approved by BTI. Prepared for TCRL 2017-1 publication.
	p6r00–r04	2023-10-24 – 2024-04-11	TSE 23890 (rating 1): Converted -I tests to -C tests as appropriate; updated the TCMT and TCRL accordingly. TSE 24537 (rating 4): Added new GSIT section with new TCs SYNC/CL/CGSIT/SFC/BV-01-C, SYNC/CL/SGSIT/SERR/BV-02-C, SYNC/CL/SGSIT/OFFS/BV-02-C SYNC/CL/SGSIT/ATTR/BV-04-C and -05-C, SYNC/SR/SGSIT/SERR/BV-01-C, SYNC/SR/SGSIT/OFFS/BV-01-C, and SYNC/SR/SGSIT/ATTR/BV-01-C – -03-C. Deleted TCs SYNC/CL/SYN/BV-01-C and SYNC/SR/SYN/BV-01-C. Updated the TCMT accordingly. Added a reference to the SDP TS. Updated the Test Overview, Test Groups, and TC Conventions sections. Modernized test language/setup globally, including combining TCs into common Test Case Config tables and resetting heading levels as necessary. Editorials to align the document with the latest TS template, including setting the previous v1.2.1.1 to p5,

Publication Number	Revision Number	Date	Comments
			aligning the disclaimer and footer text with the latest DNMD and logo, adding boilerplate Test Strategy text and updating all other boilerplate text, simplifying the test groups section, and setting all TCIDs into TC Config tables.
6	p6	2024-07-01	Approved by BTI on 2024-05-22. Prepared for TCRL 2024-1 publication.

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