

# Running Speed and Cadence Service (RSCS)

## **Bluetooth® Test Suite**

---

- **Revision:** RSCS.TS.p7
- **Revision Date:** 2024-10-08
- **Prepared By:** BTI
- **Published during TCRL:** TCRL.2024-2-addition



This document, regardless of its title or content, is not a Bluetooth Specification as defined in the Bluetooth Patent/Copyright License Agreement (“PCLA”) and Bluetooth Trademark License Agreement. Use of this document by members of Bluetooth SIG is governed by the membership and other related agreements between Bluetooth SIG Inc. (“Bluetooth SIG”) and its members, including the PCLA and other agreements posted on Bluetooth SIG’s website located at [www.bluetooth.com](http://www.bluetooth.com).

THIS DOCUMENT IS PROVIDED “AS IS” AND BLUETOOTH SIG, ITS MEMBERS, AND THEIR AFFILIATES MAKE NO REPRESENTATIONS OR WARRANTIES AND DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY, TITLE, NON-INFRINGEMENT, FITNESS FOR ANY PARTICULAR PURPOSE, THAT THE CONTENT OF THIS DOCUMENT IS FREE OF ERRORS.

TO THE EXTENT NOT PROHIBITED BY LAW, BLUETOOTH SIG, ITS MEMBERS, AND THEIR AFFILIATES DISCLAIM ALL LIABILITY ARISING OUT OF OR RELATING TO USE OF THIS DOCUMENT AND ANY INFORMATION CONTAINED IN THIS DOCUMENT, INCLUDING LOST REVENUE, PROFITS, DATA OR PROGRAMS, OR BUSINESS INTERRUPTION, OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, INCIDENTAL OR PUNITIVE DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, AND EVEN IF BLUETOOTH SIG, ITS MEMBERS, OR THEIR AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This document is proprietary to Bluetooth SIG. This document may contain or cover subject matter that is intellectual property of Bluetooth SIG and its members. The furnishing of this document does not grant any license to any intellectual property of Bluetooth SIG or its members.

This document is subject to change without notice.

Copyright © 2013–2024 by Bluetooth SIG, Inc. The Bluetooth word mark and logos are owned by Bluetooth SIG, Inc. Other third-party brands and names are the property of their respective owners.



# Contents

<b>1</b>	<b>Scope</b>	<b>5</b>
<b>2</b>	<b>References, definitions, and abbreviations</b>	<b>6</b>
2.1	References	6
2.2	Definitions	6
2.3	Acronyms and abbreviations	6
<b>3</b>	<b>Test Suite Structure (TSS)</b>	<b>7</b>
3.1	Overview	7
3.2	Test Strategy	7
3.3	Test groups	8
<b>4</b>	<b>Test cases (TC)</b>	<b>9</b>
4.1	Introduction	9
4.1.1	Test case identification conventions	9
4.1.2	Conformance	9
4.1.3	Pass/Fail verdict conventions	10
4.2	Setup preambles	10
4.2.1	ATT Bearer on LE Transport	10
4.2.2	ATT Bearer on BR/EDR Transport	10
4.2.3	SC Control Point	11
4.3	Generic GATT Integrated Tests	12
	RSCS/SEN/SGGIT/SER/BV-01-C [Service GGIT – Running Speed and Cadence]	12
	RSCS/SEN/SGGIT/SDP/BV-01-C [SDP Record]	12
	RSCS/SEN/SGGIT/CHA/BV-01-C [Characteristic GGIT – RSC Measurement]	12
	RSCS/SEN/SGGIT/CHA/BV-02-C [Characteristic GGIT – RSC Feature]	12
	RSCS/SEN/SGGIT/CHA/BV-03-C [Characteristic GGIT – Sensor Location]	12
	RSCS/SEN/SGGIT/CHA/BV-04-C [Characteristic GGIT – SC Control Point]	12
	RSCS/SEN/SGGIT/CHA/BV-05-C [Characteristic GGIT – RSC Feature]	12
4.3.1	Generic GATT Indication Supported Features Characteristic	12
	RSCS/SEN/SGGIT/ISFC/BV-01-C [Characteristic GGIT – RSC Feature]	12
4.4	Characteristic Read	13
	RSCS/SEN/CR/BV-01-C [Characteristic Read – RSC Feature]	13
	RSCS/SEN/CR/BV-02-C [Characteristic Read – Sensor Location]	13
4.5	Configure Indication and Notification	13
	RSCS/SEN/CON/BV-01-C [Configure Notification - RSC Measurement]	14
	RSCS/SEN/CON/BV-02-C [Configure Indication - SC Control Point]	14
4.6	Characteristic Notification	14
	RSCS/SEN/CN/BV-01-C [RSC Measurement Notifications]	14
	RSCS/SEN/CN/BV-02-C [RSC Measurement Notifications – Instantaneous Stride Length]	15
	RSCS/SEN/CN/BV-03-C [RSC Measurement Notifications – Total Distance]	16
	RSCS/SEN/CN/BV-04-C [RSC Measurement Notifications – Walking or Running Status]	17
4.7	Service Procedure – Set Cumulative Value	18
	RSCS/SEN/SPS/BV-01-C [Set Cumulative Value - Set to zero]	18
	RSCS/SEN/SPS/BV-02-C [Set Cumulative Value - Set to non-zero]	19
4.8	Service Procedure – Start Sensor Calibration	20
	RSCS/SEN/SPC/BV-01-C [Start Sensor Calibration]	20
4.9	Service Procedure – Request Supported Sensor Locations	20
	RSCS/SEN/SPL/BV-01-C [Request Supported Sensor Locations]	20



4.10	Service Procedure – Update Sensor Location .....	21
	RSCS/SEN/SPU/BV-01-C [Update Sensor Location] .....	21
4.11	Service Procedure – General Error Handling .....	22
	RSCS/SEN/SPE/BI-01-C [Op Code Not Supported].....	22
	RSCS/SEN/SPE/BI-02-C [Invalid Parameter] .....	23
	RSCS/SEN/SPE/BI-03-C [Operation Failed due to Calibration Failure] .....	23
	RSCS/SEN/SPE/BI-04-C [Client Characteristic Configuration Descriptor Improperly Configured] .....	24
	RSCS/SEN/SPE/BI-05-C [Procedure Already in Progress] .....	24
	RSCS/SEN/SPE/BI-06-C [SC Control Point Procedure Timeout] .....	25
<b>5</b>	<b>Test case mapping .....</b>	<b>27</b>
<b>6</b>	<b>Revision history and acknowledgments .....</b>	<b>29</b>



# 1 Scope

---

This Bluetooth document contains the Test Suite Structure (TSS) and test cases to test the implementation of the Bluetooth Running Speed and Cadence Service Specification 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] and [2].

- [1] Test Strategy and Terminology Overview
- [2] Bluetooth Core Specification, Version 4.0 or later
- [3] Running Speed and Cadence Service Specification, Version 1.0 or later
- [4] ICS Proforma for Running Speed and Cadence Service, RSCS.ICS
- [5] GATT Test Suite, GATT.TS
- [6] Running Speed and Cadence Service Specification, Version 1.0.1

### 2.2 Definitions

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

### 2.3 Acronyms and abbreviations

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

## 3 Test Suite Structure (TSS)

### 3.1 Overview

The Running Speed and Cadence Service requires the presence of GAP, SM (LE), SDP (BR/EDR), and GATT. This is illustrated in [Figure 3.1](#).

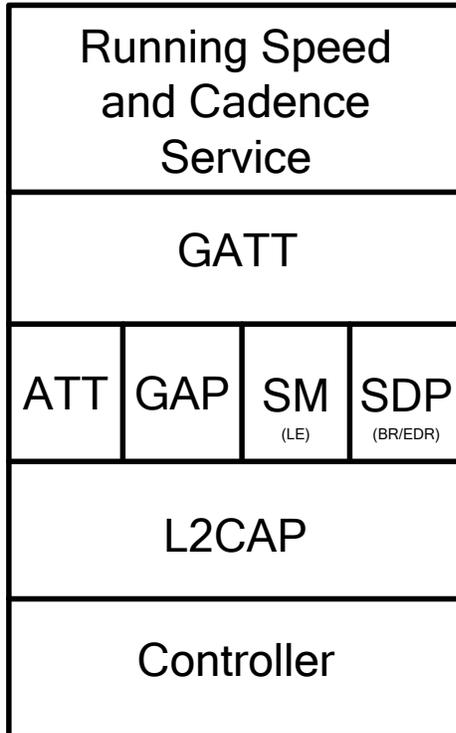


Figure 3.1: Running Speed and Cadence Service test model

### 3.2 Test Strategy

The test objectives are to verify the functionality of the Running Speed and Cadence Service 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 defined:

- Generic GATT Integrated Tests
- Characteristic Read
- Configure Notification
- Configure Indication
- Characteristic Notification
- Characteristic Indication

## 4 Test cases (TC)

### 4.1 Introduction

#### 4.1.1 Test case identification conventions

Test cases are assigned unique identifiers per the conventions in [1]. 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 GATT Test Suite [5] referred to as Generic GATT Integrated Tests (GGIT); when used, the GGIT tests are referred to through a TCID string using the following convention:

**<spec abbreviation>/<IUT role>/<GGIT test group>/< GGIT class >/<xx>-<nn>-<y>**.

Identifier Abbreviation	Spec Identifier <spec abbreviation>
RSCS	Running Speed and Cadence Service
Identifier Abbreviation	Role Identifier <IUT role>
SEN	Sensor Role
Identifier Abbreviation	Reference Identifier <GGIT test group>
SGGIT	Server Generic GATT Integrated Tests
Identifier Abbreviation	Reference Identifier <GGIT class>
CHA	Characteristic
ISFC	Indication Supported Features Characteristic
SDP	Validate SDP Record
SER	Service
Identifier Abbreviation	Feature Identifier <feat>
CN	Characteristic Notification
CON	Configure Indication or Notification
CR	Characteristic Read
CW	Characteristic Write
SPC	Service Procedure – Start Sensor Calibration
SPE	Service Procedure – Error Handling
SPL	Service Procedure – Request Supported Sensor Locations
SPS	Service Procedure – Set Cumulative Value
SPU	Service Procedure – Update Sensor Location

Table 4.1: RSCS 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, the outcome of the test is a Fail verdict.

## 4.2 Setup preambles

The procedures defined in this section are used to achieve specific conditions on the IUT and the test equipment within the tests defined in this document. The preambles here are commonly used to establish initial conditions.

### 4.2.1 ATT Bearer on LE Transport

- Preamble Procedure
  1. Establish an LE transport connection between the IUT and the Lower Tester.
  2. Establish an L2CAP channel 0x0004 between the IUT and the Lower Tester over that LE transport.

### 4.2.2 ATT Bearer on BR/EDR Transport

- Preamble Procedure
  1. Establish a BR/EDR transport connection between the IUT and the Lower Tester.
  2. Establish several L2CAP channels (PSM 0x001F) between the IUT and the Lower Tester over that BR/EDR transport.



### 4.2.3 SC Control Point

- Preamble Purpose

Follow the preamble procedure to enable the IUT for use with the SC Control Point.

- Preamble Procedure

1. Establish an ATT Bearer connection between the Lower Tester and IUT as described in Section 4.2.1, if using an LE transport, or Section 4.2.2 if using a BR/EDR transport.
2. The handle of the RSC Measurement characteristic, RSC Feature characteristic, Sensor Location and SC Control Point characteristic has been previously discovered by the Lower Tester during the test procedure in Section 4.3 or is known to the Lower Tester by other means.
3. The handle of the Client Characteristic Configuration descriptor of the RSC Measurement characteristic and SC Control Point characteristic has been previously discovered by the Lower Tester during the test procedure in Section 4.3 or is known to the Lower Tester by other means.
4. If the IUT requires bonding, then the Lower Tester performs a bonding procedure.
5. The IUT Configures the SC Control Point characteristic for indications, and if the test case requires notifications of the RSC Measurement characteristic, the IUT configures the RSC Measurement characteristic for notifications. These configurations may occur in any order

### 4.3 Generic GATT Integrated Tests

Execute the Generic GATT Integrated Tests defined in Section 6.3, Server test procedures (SGGIT), in [5] using Table 4.2 below as input:

TCID	Service / Characteristic / Descriptor	Reference	Properties	Value Length (Octets)	Service Type
RSCS/SEN/SGGIT/SER/BV-01-C [Service GGIT – Running Speed and Cadence]	Running Speed and Cadence Service	[3] 2	-	-	Primary or Secondary Service
RSCS/SEN/SGGIT/SDP/BV-01-C [SDP Record]	Running Speed and Cadence Service	[3] 4	-	-	-
RSCS/SEN/SGGIT/CHA/BV-01-C [Characteristic GGIT – RSC Measurement]	RSC Measurement Characteristic	[3] 3	0x10 (Notify)	Skip	-
RSCS/SEN/SGGIT/CHA/BV-02-C [Characteristic GGIT – RSC Feature]	RSC Feature Characteristic	[3] 3	0x02 (Read)	Skip	-
RSCS/SEN/SGGIT/CHA/BV-03-C [Characteristic GGIT – Sensor Location]	Sensor Location Characteristic	[3] 3	0x02 (Read)	Skip	-
RSCS/SEN/SGGIT/CHA/BV-04-C [Characteristic GGIT – SC Control Point]	SC Control Point Characteristic	[3] 3	0x28 (Write, Indicate)	Skip	-
RSCS/SEN/SGGIT/CHA/BV-05-C [Characteristic GGIT – RSC Feature]	RSC Feature Characteristic	[6] 3, 3.2.1	0x22 (Read, Indicate)	Skip	-

Table 4.2: Input for the GGIT Server test procedure

#### 4.3.1 Generic GATT Indication Supported Features Characteristic

Execute the Generic GATT Indication Supported Features Characteristic Tests defined in Section 6.3, Server test procedures (SGGIT), in [5] using Table 4.3 below as input:

TCID	Characteristic	Reference	TC Configuration
RSCS/SEN/SGGIT/ISFC/BV-01-C [Characteristic GGIT – RSC Feature]	RSC Feature Characteristic	[6] 3.2.1	N/A

Table 4.3: Input for the GGIT Indication Supported Features Characteristic tests



## 4.4 Characteristic Read

- Test Purpose

This test group contains test cases to read and verify that the characteristic values required by the service are compliant. The verification is done one value at a time, as enumerated in the test cases in [Table 4.4](#), using this generic test procedure.

- Reference

[3] 3.2.1

- Initial Condition

- The handle range of each characteristic referenced in the test cases below has been previously discovered by the Lower Tester during the test procedure in [Section 4.3](#) or is known to the Lower Tester by other means.
- If the IUT requires a bonding procedure then perform a bonding procedure.
- Establish an ATT Bearer connection between the Lower Tester and IUT as described in [Section 4.2.1](#), if using an LE transport, or [Section 4.2.2](#) if using a BR/EDR transport.
- If IUT permissions for the characteristic require a specific security mode or security level, establish a connection meeting those requirements.

- Test Case Configuration

Test Case	Requirements
<a href="#">RSCS/SEN/CR/BV-01-C [Characteristic Read – RSC Feature]</a>	2 octets with RFU bits set to 0. ([3] Section 3.2.1)
<a href="#">RSCS/SEN/CR/BV-02-C [Characteristic Read – Sensor Location]</a>	1 octet with a value other than RFU range. ([3] Section 3.3.1)

Table 4.4: Characteristic Read Value test cases

- Test Procedure

1. The Lower Tester sends an ATT\_Read\_Request to the IUT to read the characteristic value.
2. The IUT sends an ATT\_Read\_Response to the Lower Tester.
3. Verify that the characteristic value meets the requirements of the service.

- Expected Outcome

Pass verdict

The characteristic is successfully read and the characteristic value meets the requirements of the service.

## 4.5 Configure Indication and Notification

- Test Purpose

This test group contains test cases to verify compliant operation in response to enable and disable characteristic indication or notification. The verification is done one value at a time, as enumerated in the test cases in [Table 4.5](#), using this generic test procedure.

- Reference

[3] 3.1.2, 3.4.5



- Initial Condition
  - The handle range of each characteristic referenced in the test cases below has been previously discovered by the Lower Tester during the test procedure in Section 4.3 or is known to the Lower Tester by other means.
  - The handle of the Client Characteristic Configuration descriptor of each characteristic referenced in the test cases below has been previously discovered by the Lower Tester during the test procedure in Section 4.3 or is known to the Lower Tester by other means.
  - If the IUT requires a bonding procedure then perform a bonding procedure.
  - Establish an ATT Bearer connection between the Lower Tester and IUT as described in Section 4.2.1, if using an LE transport, or Section 4.2.2 if using a BR/EDR transport.
  - If IUT permissions for the characteristic require a specific security mode or security level, establish a connection meeting those requirements.
- Test Case Configuration

Test Case	Requirements
RSCS/SEN/CON/BV-01-C [Configure Notification - RSC Measurement]	0x01 ([3] Section 3.1.2.1)
RSCS/SEN/CON/BV-02-C [Configure Indication - SC Control Point]	0x02 ([3] Section 3.4.5.1)

Table 4.5: Configure Indication and Notification test cases

- Test Procedure
  1. Disable indication or notification by writing value 0x0000 to the client characteristic configuration descriptor of the characteristic.
  2. If the test case is for notification, enable notification by writing value 0x0001 to the client characteristic configuration descriptor of the characteristic.
  3. Otherwise, if the test case is for indication, enable indication by writing value 0x0002 to the client characteristic configuration descriptor of the characteristic.
  4. The Lower Tester reads the value of the client characteristic configuration descriptor.

- Expected Outcome

Pass verdict

The characteristic descriptor is successfully written and the value returned when read is consistent with the value written.

## 4.6 Characteristic Notification

This test group contains test cases to verify compliant operation when the IUT sends notifications of characteristic values.

### RSCS/SEN/CN/BV-01-C [RSC Measurement Notifications]

- Test Purpose
 

Verify that the IUT can send notifications of the RSC Measurement characteristic.

- Reference

[3] 3.1



- Initial Condition
  - If the IUT requires a bonding procedure then perform a bonding procedure.
  - The RSC Measurement characteristic is configured for notification.
  - Establish an ATT Bearer connection between the Lower Tester and IUT as described in Section 4.2.1, if using an LE transport, or Section 4.2.2 if using a BR/EDR transport.
  - If IUT permissions for the RSC Measurement characteristic require a specific security mode or security level, establish a connection meeting those requirements.
- Test Procedure
  1. Perform an action on the IUT that will induce it, once connected, to send notifications of the RSC Measurement characteristic.
  2. A connection is established between the Lower Tester and IUT meeting the security requirements of the IUT, if not already done so prior to step 1.
  3. The Lower Tester receives an ATT\_Handle\_Value\_Notification from the IUT containing the RSC Measurement characteristic handle and value.
  4. Verify that the characteristic value meets the requirements of the service.
  5. Repeat steps 3–4 until the Lower Tester receives one or more additional notifications.
  6. The Lower Tester configures the RSC Measurement characteristic to disable notifications.
  7. Repeat steps 1–2 with notifications disabled.
  8. Verify that the Lower Tester does not receive an ATT\_Handle\_Value\_Notification from the IUT containing the RSC Measurement characteristic.

- Expected Outcome

Pass verdict

The IUT sends more than one notification of the RSC Measurement characteristic.

The RSC Measurement characteristic contains a Flags field, and Instantaneous Speed field and Instantaneous Cadence field and may contain an Instantaneous Stride Length field and a Total Distance field.

The value of each field of the characteristic meets the requirements of the service.

The IUT stops sending notifications of the RSC Measurement characteristic after the Lower Tester configures the characteristic to disable notifications.

In all cases, ensure that the RFU bits of the flags field are set to zero.

### RSCS/SEN/CN/BV-02-C [RSC Measurement Notifications – Instantaneous Stride Length]

- Test Purpose
 

Verify that the IUT can send notifications of the RSC Measurement characteristic that include Instantaneous Stride Length value.
- Reference
 

[3] 3.1
- Initial Condition
  - If the IUT requires a bonding procedure then perform a bonding procedure.
  - The RSC Measurement characteristic is configured for notification.



- Establish an ATT Bearer connection between the Lower Tester and IUT as described in Section 4.2.1, if using an LE transport, or Section 4.2.2 if using a BR/EDR transport.
- If IUT permissions for the RSC Measurement characteristic require a specific security mode or security level, establish a connection meeting those requirements.
- Test Procedure
  1. Perform an action on the IUT that will induce it, once connected, to send notifications of the RSC Measurement characteristic along with Instantaneous Stride Length value.
  2. A connection is established between the Lower Tester and IUT meeting the security requirements of the IUT, if not already done so prior to step 1.
  3. The Lower Tester reads the RSC Feature characteristic (e.g., by executing test case [RSCS/SEN/CR/BV-01-C \[Characteristic Read – RSC Feature\]](#) or by other means).
  4. The Lower Tester receives one or more ATT\_Handle\_Value\_Notifications from the IUT containing the RSC Measurement characteristic handle and value along with Instantaneous Stride Length.
  5. Verify that the characteristics value meet the requirements of the service.

- Expected Outcome

Pass verdict

The IUT sends one or more notifications of the RSC Measurement characteristic and at least one includes the Instantaneous Stride Length value with the appropriate flag set in the Flags field.

The value of the characteristic meets the requirements of the service.

The value of the Instantaneous Stride Length Measurement Supported bit of the RSC Feature characteristic is set to 1.

Ensure that the RFU bits of the flags field are set to zero.

### **RSCS/SEN/CN/BV-03-C [RSC Measurement Notifications – Total Distance]**

- Test Purpose
 

Verify that the IUT can send notifications of the RSC Measurement characteristic that include Total Distance value.
- Reference
 

[\[3\]](#) 3.1
- Initial Condition
  - If the IUT requires a bonding procedure then perform a bonding procedure.
  - The RSC Measurement characteristic is configured for notification.
  - Establish an ATT Bearer connection between the Lower Tester and IUT as described in Section 4.2.1, if using an LE transport, or Section 4.2.2 if using a BR/EDR transport.
  - If IUT permissions for the RSC Measurement characteristic require a specific security mode or security level, establish a connection meeting those requirements.
- Test Procedure
  1. Perform an action on the IUT that will induce it, once connected, to send notifications of the RSC Measurement characteristic along with Total Distance value.
  2. A connection is established between the Lower Tester and IUT meeting the security requirements of the IUT, if not already done so prior to step 1.



3. The Lower Tester receives one or more ATT\_Handle\_Value\_Notifications from the IUT containing the RSC Measurement characteristic handle and value along with Total Distance.
4. Verify that the characteristic value meets the requirements of the service.

- Expected Outcome

Pass verdict

The IUT sends one or more notifications of the RSC Measurement characteristic and at least one includes the Total Distance values with the appropriate flag set in the Flags field.

The value of the characteristic meets the requirements of the service.

The value of the Total Distance Measurement Supported bit of the RSC Feature characteristic is set to 1.

Ensure that the RFU bits of the flags field are set to zero.

### RSCS/SEN/CN/BV-04-C [RSC Measurement Notifications – Walking or Running Status]

- Test Purpose

Verify that the IUT can send notifications of the RSC Measurement characteristic along with Walking or Running information.

- Reference

[3] 3.1

- Initial Condition

- If the IUT requires a bonding procedure then perform a bonding procedure.
- The RSC Measurement characteristic is configured for notification.
- Establish an ATT Bearer connection between the Lower Tester and IUT as described in Section 4.2.1, if using an LE transport, or Section 4.2.2 if using a BR/EDR transport.
- If IUT permissions for the RSC Measurement characteristic require a specific security mode or security level, establish a connection meeting those requirements.

- Test Procedure

1. Perform an action on the IUT that will induce it, once connected, to send notifications of the RSC Measurement characteristic along with Walking or Running information in the Flags field.
2. A connection is established between the Lower Tester and IUT meeting the security requirements of the IUT, if not already done so prior to step 1.
3. The Lower Tester receives an ATT\_Handle\_Value\_Notification from the IUT containing the RSC Measurement characteristic handle and value.
4. Perform an action on the IUT that will induce a change to the Walking or Running Status bit (e.g., user is walking, user is running).
5. The Lower Tester receives an ATT\_Handle\_Value\_Notification from the IUT containing the RSC Measurement characteristic handle and value.
6. Verify that the characteristic value meets the requirements of the service.

- Expected Outcome

Pass verdict

The IUT sends notifications of the RSC Measurement characteristic that include Walking or Running information in the Flags field.



As the user is walking or running, the Walking or Running Status bit in the Flags field toggles appropriately: when the user is walking, bit 2 of the flags field is 0 and when the user is running, bit 2 of the flags field is 1.

The value of the characteristic meets the requirements of the service.

The value of the Walking or Running Status Supported bit of the RSC Feature characteristic is set to 1.

Ensure that the RFU bits of the flags field are set to zero.

## 4.7 Service Procedure – Set Cumulative Value

This test group contains test cases to verify compliant operation when the Lower Tester uses SC Control Point Set Cumulative Value procedure.

### RSCS/SEN/SPS/BV-01-C [Set Cumulative Value - Set to zero]

- Test Purpose

Verify that the IUT can perform the Set Cumulative Value procedure to set a zero value to Total Distance.

- Reference

[3] 3.4.2.1

- Initial Condition

- Perform the preamble described in Section 4.2.3.
- The value of Total Distance in the IUT is not set to a known non-zero value.

- Test Procedure

1. A connection is established between the Lower Tester and IUT.
2. The IUT sends one or more notifications of the RSC Measurement characteristic.
3. The Lower Tester writes the Set Cumulative Value Op Code (0x01) to the SC Control Point with a Parameter Value of 0x00000000.
4. The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x01) followed by the Response Value for 'success' (0x01) without Response Parameter.
5. The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
6. The Lower Tester sends an ATT\_Handle\_Value\_Confirmation to the IUT.
7. Verify that the characteristic value meets the requirements of the service.

- Expected Outcome

Pass verdict

The IUT sends one or more notifications of the RSC Measurement characteristic with the Total Distance field set to a non-zero value.

The IUT sends one indication of the SC Control Point characteristic with the Response Code Op Code containing a valid Parameter Value.



After setting the value to zero, the IUT sends the next notification of the RSC Measurement characteristic with the Total Distance field set to 0 (or slightly higher in case of movement).

The value of the Total Distance Measurement Supported bit of the RSC Feature characteristic is set to 1.

### RSCS/SEN/SPS/BV-02-C [Set Cumulative Value - Set to non-zero]

- Test Purpose

Verify that the IUT can perform the Set Cumulative Value procedure to set a non-zero value to Total Distance.

- Reference

[3] 3.4.2.1

- Initial Condition

- Perform the preamble described in Section 4.2.3.
- The value of Total Distance in the IUT is not set to a known non-zero value.

- Test Procedure

1. A connection is established between the Lower Tester and IUT.
2. The IUT sends one or more notifications of the RSC Measurement characteristic.
3. The Lower Tester writes the Set Cumulative Value Op Code (0x01) to the SC Control Point with a Parameter Value that is different from the initial values (e.g., 0x0000FFFF).
4. The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x01) followed by the Response Value for 'success' (0x01) without Response Parameter.
5. The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
6. The Lower Tester sends an ATT\_Handle\_Value\_Confirmation to the IUT.
7. Verify that the characteristic value meets the requirements of the service.

- Expected Outcome

#### Pass verdict

The IUT sends one or more notifications of the RSC Measurement characteristic with the Total Distance field set to a non-zero value.

The IUT sends one indication of the SC Control Point characteristic with the Response Code Op Code containing a valid Parameter Value.

After setting the value, the IUT sends the next notification of the RSC Measurement characteristic with the Total Distance field set to the specified value (or slightly higher in case of movement).

The value of the Total Distance Measurement Supported bit of the RSC Feature characteristic is set to 1.

## 4.8 Service Procedure – Start Sensor Calibration

This test group contains test cases to verify compliant operation when the Lower Tester uses SC Control Point Start Sensor Calibration procedure.

### RSCS/SEN/SPC/BV-01-C [Start Sensor Calibration]

- Test Purpose
 

Verify that the IUT can perform the Start Sensor Calibration procedure.
- Reference
 

[3] 3.4.2.2
- Initial Condition
  - Perform the preamble described in Section 4.2.3.
- Test Procedure
  1. A connection is established between the Lower Tester and IUT.
  2. The lower tester writes the Start Sensor Calibration Op Code (0x02) to the SC Control Point without any Parameter Value.
  3. The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x02) followed by the Response Value for 'success' (0x01) without Response Parameter.
  4. The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
  5. The Lower Tester sends an ATT\_Handle\_Value\_Confirmation to the IUT.
  6. Verify that the characteristic value meets the requirements of the service.
- Expected Outcome
 

Pass verdict

The IUT sends one indication of the SC Control Point characteristic with the Response Code Op Code containing a valid Parameter Value.

The value of the Calibration Procedure Supported bit of the RSC Feature characteristic is set to 1.

## 4.9 Service Procedure – Request Supported Sensor Locations

This test group contains test cases to verify compliant operation when the Lower Tester uses SC Control Point Request Supported Sensor Locations procedure.

### RSCS/SEN/SPL/BV-01-C [Request Supported Sensor Locations]

- Test Purpose
 

Verify that the IUT can perform the Request Supported Sensor Location procedure.
- Reference
 

[3] 3.4.2.4
- Initial Condition
  - Perform the preamble described in Section 4.2.3.



- Test Procedure
  1. A connection is established between the Lower Tester and IUT.
  2. The Lower Tester writes the Request Supported Sensor Locations Op Code (0x04) to the SC Control Point without any Parameter Value.
  3. The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x04) followed by the Response Value for 'success' (0x01) followed with the list of the supported sensor locations.
  4. The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
  5. The Lower Tester sends an ATT\_Handle\_Value\_Confirmation to the IUT.
  6. Verify that the characteristic value meets the requirements of the service.

- Expected Outcome

Pass verdict

The IUT sends one indication of the SC Control Point characteristic with the Response Code Op Code containing a valid Parameter Value.

The value of the Multiple Sensor Locations Supported bit of the RSC Feature characteristic is set to 1.

## 4.10 Service Procedure – Update Sensor Location

This test group contains test cases to verify compliant operation when the Lower Tester uses SC Control Point Update Sensor Location procedure.

### RSCS/SEN/SPU/BV-01-C [Update Sensor Location]

- Test Purpose
 

Verify that the IUT can perform the Update Sensor Location procedure.
- Reference
 

[3] 3.4.2.3
- Initial Condition
  - Perform the preamble described in Section 4.2.3.
- Test Procedure
  1. A connection is established between the Lower Tester and IUT.
  2. The Lower Tester reads the Sensor Location characteristic to determine the present value.
  3. For each supported Sensor Location value (known by executing [RSCS/SEN/SPL/BV-01-C \[Request Supported Sensor Locations\]](#) or by other means), perform the following:
    - The Lower Tester writes the Update Sensor Location Op Code (0x03) to the SC Control Point with a Parameter Value set to a supported sensor location.
    - The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x03) followed by the Response Value for 'success' (0x01) without Response Parameter.
    - The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
    - The Lower Tester sends an ATT\_Handle\_Value\_Confirmation to the IUT.



- Verify that the characteristic value meets the requirements of the service.
  - The Lower Tester reads the Sensor Location characteristic and verifies that the characteristic value meets the requirements of the service.
- Expected Outcome

Pass verdict

For each supported Sensor Location value, verify the following:

- The IUT sends one indication of the SC Control Point characteristic with the Response Code Op Code containing a valid Parameter Value.
- The Sensor Location value is set to the value written as a Parameter to the SC Control Point.
- The value of the Multiple Sensor Locations Supported bit of the RSC Feature characteristic is set to 1.

## 4.11 Service Procedure – General Error Handling

This test group contains test cases to verify compliant operation when the Lower Tester uses SC Control Point procedure and an error results.

### RSCS/SEN/SPE/BI-01-C [Op Code Not Supported]

- Test Purpose
 

Verify that the IUT responds appropriately when a Client writes an unsupported Op Code to the SC Control Point.
- Reference
 

[3] 3.4.3
- Initial Condition
  - Perform the preamble described in Section 4.2.3.
- Test Procedure
  1. A connection is established between the Lower Tester and IUT.
  2. The Lower Tester writes an Op Code Value of 0x00 to the SC Control Point without Parameter Value.
  3. Verify that the IUT response meets the requirements of the service.
  4. The Lower Tester writes an Op Code value from the Reserved for Future Use range other than 0x00 to the SC Control Point without Parameter Value.
  5. Verify that the IUT response meets the requirements of the service.
- Expected Outcome
 

Pass verdict

For both cases, the IUT sends a Write Response followed by an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (i.e., 0x00 for step 2 and the RFU value written for step 4) followed by the Response Value for 'Op Code not supported' (0x02) and without Response Parameter.

### RSCS/SEN/SPE/BI-02-C [Invalid Parameter]

- Test Purpose

Verify that the IUT responds appropriately when a Client writes a supported Op Code followed by an invalid Parameter Value to the SC Control Point.

- Reference

[3] 3.4.3

- Initial Condition

- Perform the preamble described in Section 4.2.3.

- Test Procedure

1. A connection is established between the Lower Tester and IUT.
2. The Lower Tester writes the Update Sensor Location Op Code (0x03) to the SC Control Point with a Parameter Value set to a sensor location from the RFU range.
3. Verify that the IUT response meets the requirements of the service.

- Expected Outcome

Pass verdict

The IUT sends a Write Response followed by an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x03) followed by the Response Value for 'Invalid Parameter' (0x03) and without Response Parameter.

### RSCS/SEN/SPE/BI-03-C [Operation Failed due to Calibration Failure]

- Test Purpose

Verify that the IUT responds appropriately when a Client writes the Start Sensor Calibration Op Code to the SC Control Point and the calibration operation fails.

- Reference

[3] 3.4.3

- Initial Condition

- Perform the preamble described in Section 4.2.3.

- Test Procedure

1. A connection is established between the Lower Tester and IUT.
2. Perform an action on the IUT that will induce a calibration error at the point when calibration is requested by the Lower Tester (e.g., excessive movement during the calibration or sensor mounted upside down).
3. The Lower Tester writes the Start Sensor Calibration Op Code (0x02) to the SC Control Point without any Parameter Value.
4. The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x02) followed by the Response Value for 'Operation Failed' (0x04) without Response Parameter.
5. The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
6. The Lower Tester sends an ATT\_Handle\_Value\_Confirmation to the IUT.



- Expected Outcome

Pass verdict

The IUT sends a Write Response followed by an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing Request Op Code (0x02) followed by the Response Value for 'Operation Failed' (0x04) and without Response Parameter.

### RSCS/SEN/SPE/BI-04-C [Client Characteristic Configuration Descriptor Improperly Configured]

- Test Purpose

Verify that the IUT responds appropriately when a Client attempts to perform an SC Control Point procedure with a Client Characteristic Configuration descriptor that is improperly configured.

- Reference

[3] 1.6, 3.4.3

- Initial Condition

- Perform the preamble described in Section 4.2.3.

- Test Procedure

1. A connection is established between the Lower Tester and IUT.
2. The Lower Tester resets to 0 the Client Characteristic Configuration descriptor of the SC Control Point characteristic.
3. The Lower Tester writes a valid Op Code to the SC Control Point.
4. Verify that the IUT response meets the requirements of the service.

- Expected Outcome

Pass verdict

The IUT rejects the Write Request by sending an Error Response with an Attribute Protocol Application Error Code set to Client Characteristic Configuration Descriptor Improperly Configured (0x81).

### RSCS/SEN/SPE/BI-05-C [Procedure Already in Progress]

- Test Purpose

Verify that the IUT responds appropriately when a Client attempts to perform an SC Control Point procedure when a procedure is already in progress.

- Reference

[3] 1.6, 3.4.3

- Initial Condition

- Perform the preamble described in Section 4.2.3.

- Test Procedure

1. A connection is established between the Lower Tester and IUT.
2. The Lower Tester sets to 1 the Client Characteristic Configuration descriptor of the SC Control Point characteristic.



3. The Lower Tester writes a valid Op Code (e.g., by executing test case [RSCS/SEN/CR/BV-01-C \[Characteristic Read – RSC Feature\]](#) or by other means) to the SC Control Point without Parameter Value.
  4. The Lower Tester receives one Indication of the SC Control Point to acknowledge the first request. The Lower Tester does not send any Confirmation to acknowledge this Indication.
  5. The Lower Tester sends five consecutive write requests all with valid Op Codes to the SC Control Point without Parameter value.
  6. There are two alternatives (a or b):
    - a. The Lower Tester receives an Error Response with an Attribute Protocol Application Error Code set to Procedure Already in Progress (0x80).
    - b. The Lower Tester receives five indications of the SC Control Point to acknowledge each request sent by the Lower Tester in Step 5.
  7. Verify that the IUT response(s) meet the requirements of the service.
- Expected Outcome
 

Pass verdict

The IUT acknowledges the first write request with appropriate Response Value.

The IUT successfully performs one of the following alternatives (a or b):

    - a. Rejects a Write Request in Step 5 by sending an Error Response with an Attribute Protocol Application Error Code set to Procedure Already in Progress (0x80).
    - b. Acknowledges all five write requests with appropriate Response Values.

### **RSCS/SEN/SPE/BI-06-C [SC Control Point Procedure Timeout]**

- Test Purpose
 

Verify that the IUT stops sending indications related to the operation after an ATT Transaction Timeout.
- Reference
 

[\[3\] 3.4.4](#)
- Initial Condition
  - Perform the preamble described in Section [4.2.3](#).
- Test Procedure
  1. A connection is established between the Lower Tester and IUT.
  2. The Lower Tester sends write request for any of the supported Op Codes supported by the IUT (Set Cumulative Value or Start Calibration or Update Sensor Location or Request Supported Sensor Locations) to the SC Control Point using an appropriate Parameter for the Op Code.
  3. The IUT sends an indication of the SC Control Point characteristic with the Response Code Op Code (0x10), a Parameter Value representing the Request Op Code (0x01 or 0x02 or 0x03 or 0x04) followed by the Response Value for 'success' (0x01) without Response Parameter or followed with the list of the supported sensor locations (if Request Supported Sensor Locations)
  4. The Lower Tester receives an ATT\_Handle\_Value\_Indication from the IUT containing the SC Control Point characteristic handle and value.
  5. The Lower Tester receives the indication, but does not send a handle/value confirmation for an ATT Transaction Timeout plus several seconds.



6. After the ATT Transaction Timeout, the IUT does not send any further notifications and considers the procedure to have failed.

- Expected Outcome

Pass verdict

The IUT stops sending any further notifications after the ATT Transaction Timeout.

The IUT returns to a stable state and may disconnect based on implementation.

## 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 Running Speed and Cadence Service (RSCS) [4].

**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 [1].

For the purpose and structure of the ICS/IXIT, refer to [1].

Item	Feature	Test Case(s)
RSCS 3/1	Running Speed and Cadence Service - Service Definition	RSCS/SEN/SGGIT/SER/BV-01-C
RSCS 1/1 AND RSCS 3/1	Running Speed and Cadence Service - SDP Record	RSCS/SEN/SGGIT/SDP/BV-01-C
RSCS 3/2	RSC Measurement Characteristic	RSCS/SEN/SGGIT/CHA/BV-01-C RSCS/SEN/CON/BV-01-C RSCS/SEN/CN/BV-01-C
RSCS 2/1 AND RSCS 3/5	Instantaneous Stride Length field of RSC Measurement Characteristic	RSCS/SEN/CN/BV-02-C
RSCS 2/2 AND RSCS 3/6	Total Distance field of RSC Measurement Characteristic	RSCS/SEN/CN/BV-03-C
RSCS 3/7	RSC Feature Characteristic	RSCS/SEN/CR/BV-01-C
RSCS 3/7 AND NOT RSCS 3a/2	RSC Feature Characteristic	RSCS/SEN/SGGIT/CHA/BV-02-C
RSCS 3a/2	RSC Feature Indication	RSCS/SEN/SGGIT/CHA/BV-05-C RSCS/SEN/SGGIT/ISFC/BV-01-C
RSCS 3/8	Sensor Location Characteristic	RSCS/SEN/SGGIT/CHA/BV-03-C RSCS/SEN/CR/BV-02-C
RSCS 3/9	SC Control Point Characteristic	RSCS/SEN/SGGIT/CHA/BV-04-C RSCS/SEN/CON/BV-02-C RSCS/SEN/SPE/BI-01-C RSCS/SEN/SPE/BI-04-C RSCS/SEN/SPE/BI-05-C RSCS/SEN/SPE/BI-06-C
RSCS 2/2	Total Distance Measurement Supported	RSCS/SEN/SPS/BV-01-C
RSCS 2/2 AND RSCS 3/11	Total Distance Measurement Supported - Set Cumulative Value Procedure – Set to non-zero	RSCS/SEN/SPS/BV-02-C
RSCS 2/3	Walking or Running Status Supported	RSCS/SEN/CN/BV-04-C

Item	Feature	Test Case(s)
RSCS 2/4	Sensor Calibration Procedure Supported	RSCS/SEN/SPC/BV-01-C RSCS/SEN/SPE/BI-03-C
RSCS 2/5	Multiple Sensor Locations Supported	RSCS/SEN/SPL/BV-01-C RSCS/SEN/SPU/BV-01-C RSCS/SEN/SPE/BI-02-C

Table 5.1: Test case mapping

## 6 Revision history and acknowledgments

### Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2012-08-07	Adopted by the Bluetooth SIG Board of Directors
	1.0.1r1	2012-09-06	TSE 4940: Rewording in section 4.8.1 from “one or more” to “more than one”
1	1.0.1	2012-10-30	Prepare for Publication
	1.0.2r1	2013-04-23	TSE 5031: Revision of step 4 of SC Control Point preamble. TSE 5022: Revision of step 5 and 6 of the SC Control Point preamble TSE 5058: Revision of test procedure and pass verdict of TP/SPE/BI-05-C. TSE 5130: Revision of the test procedure for TP/SPE/BI-05-C. Fixed bullet levels in Test Cases.
	1.0.2r2	2013-05-13	Updated TSE 5058 implementation, updated test procedure and pass verdict to match TSE 5075 changes in CSCS.
	1.0.2r3	2013-05-16	Updated TSE 5058 implementation, added back step 4 that was removed in the original CR.
2	1.0.2	2013-07-02	Prepare for Publication
	1.0.3r1	2013-08-16	TCRL 2013-2 TSE 5238: Edited Step 2 of the test procedure and updated the MSC for TP/SD/BV-01-C.
3	1.0.3	2013-12-03	Prepare for Publication
	1.0.4r00	2016-05-26	Converted to new Test Case ID conventions as defined in TSTO v4.1.
	1.0.4r01	2016-06-10	Converted to current test specification template
4	1.0.4	2016-07-14	Prepared for TCRL 2016-1 publication.
	1.0.4 edition 2r00	2018-11-29	Editorial changes only. Template updated. Revision History and contributors moved to the end of the document.
	1.0.4 edition 2	2020-01-09	Updated copyright page and confidentiality markings to support new Documentation Marking Requirements, performed minor formatting updates, and accepted all tracked changes to prepare for edition 2 publication.
	p5r00–r03	2022-03-22 – 2022-05-19	TSE 17268 (rating 2): Converted the following test cases to GGIT: RSCS/SEN/SD/BV-01-C and -02-C, RSCS/SEN/DEC/BV-01-C – -04-C, and RSCS/SEN/DES/BV-01-C and -02-C. The new GGIT converted TCIDs are: RSCS/SEN/SGGIT/SER/BV-01-C, RSCS/SEN/SGGIT/SDP/BV-01-C, and RSCS/SEN/SGGIT/CHA/BV-01-C – -04-C. Updated the TCMT accordingly. Updated the test groups and test case identification conventions sections. Updated cross-references in the initial condition for

Publication Number	Revision Number	Date	Comments
			RSCS/SEN/CR/BV-01-C and -02-C and RSCS/SEN/CON/BV-01-C and -02-C. TSE 18418 (rating 1): Removed direct references to GATT TS sections from the ATT Bearer preambles and replaced them with preamble procedure text. Removed direct references to GATT test cases from the test procedures for RSCS/SEN/CR/BV-01-C and -02-C and RSCS/SEN/CON/BV-01-C and -02-C. TSE 18725 (rating 1): Editorials to align the document with the latest TS template in anticipation of a future .Z release. Editorials, including assigning publication number 4 to previous v1.0.4, consistency checker fixes, and aligning the copyright page with v2 of the DNMD.
5	p5	2022-06-28	Approved by BTI on 2022-05-31. Prepared for TCRL 2022-1 publication.
	p6r00	2022-08-19	TSE 19012 (rating 2): Corrected the value length for GGIT test RSCS/SEN/SGGIT/CHA/BV-04-C.
6	p6	2023-02-07	Approved by BTI on 2022-12-28. Prepared for TCRL 2022-2 publication.
	p7r00–r01	2024-08-01 – 2024-08-22	TSE 17245 (rating 4): Per E16650, added new TCs RSCS/SEN/SGGIT/CHA/BV-05-C and RSCS/SEN/SGGIT/ISFC/BV-01-C, and updated the TCMT accordingly. Updated the TCMT for RSCS/SEN/SGGIT/CHA/BV-02-C. Updated the references list and the TCID conventions table.
7	p7	2024-10-08	Approved by BTI on 2024-09-11. RSCS v1.0.1 adopted by the BoD on 2024-10-01. Prepared for TCRL 2024-2-addition publication.

### Acknowledgments

Name	Company
Dejan Berec	Bluetooth SIG, Inc.
Jawid Mirani	Bluetooth SIG, Inc.
Bob Hughes	Intel
Leif-Alexandre Aschehoug	Nordic
Guillaume Schatz	Polar

