

Running Speed and Cadence Profile (RSCP)

Bluetooth® Implementation Conformance Statement (ICS) Proforma

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



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1 Identification of the implementation

1.1 Implementation Under Test (IUT) identification

Identification of the Implementation Under Test (IUT) is to be filled in to provide as much detail as possible regarding version numbers and configuration options.

An ICS contact person to respond to queries regarding information supplied in this ICS proforma is named in the Declaration of Compliance: Summary of Selected Specifications in Implementation.

1.2 Versions

Table 0: X.Y Versions

Item	Version	Reference	Status
1	RSCP v1.0	[1]	M

Table 0a: X.Y.Z Versions

Item	Version	Reference	Status
1	RSCP v1.0.1	[6]	O

1.3 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	RSC Sensor	[1] 2.1	C.1
2	Collector	[1] 2.1	C.1

C.1: Mandatory to support at least one.

1.4 Transport requirements

Table 2: Transport Requirements

Item	Transport	Reference	Status
1	Profile supported over BR/EDR	[1] 2.5	C.1
2	Profile supported over LE	[1] 2.5	C.1

C.1: Mandatory to support at least one.

1.5 RSC Sensor role

1.5.1 Services – RSC Sensor role

Table 3: Services - RSC Sensor Role

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Running Speed and Cadence Service	[1] 3	M	[2] RSCS 3/1
2	Running Speed and Cadence Service UUID in AD in GAP Discoverable Mode	[1] 3.1.1.1	C.1	N/A
3	Local Name in AD or Scan Response	[1] 3.1.1.2	C.1	N/A

Item	Capability	Reference	Status	Inter-Layer Dependency
4	Appearance in AD or Scan Response	[1] 3.1.1.4	C.1	N/A
5	Device Information Service	[1] 3	O	N/A

C.1: Optional IF RSCP 2/2 “Profile supported over LE”, otherwise Excluded.

1.5.2 DIS requirements – RSC Sensor role

Table 4: DIS Requirements - RSC Sensor Role

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Manufacturer Name String Characteristic	[1] 3.2	C.1	[5] DIS 2/2
2	Model Number String Characteristic	[1] 3.2	C.1	[5] DIS 2/3

C.1: Optional IF RSCP 3/5 “Device Information Service”, otherwise not defined.

1.5.3 GAP requirements – RSC Sensor role

Table 5: GAP Requirements - RSC Sensor Role

Prerequisite: RSCP 1/1 “RSC Sensor”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4	C.1	[4] GAP 5/3 OR GAP 38/3
2	LE security mode 1	[1] 6.1	C.1	[4] GAP 25/1
3	General discoverable mode (BR/EDR)	[1] 5.3.1.1	C.2	[4] GAP 1/3
4	No security requirements	[1] 6.1	C.3	[4] GAP 27b/4
5	Unauthenticated no MITM protection	[1] 6.1	C.3	[4] GAP 27b/3
6	Authenticated MITM protection	[1] 6.1	C.3	[4] GAP 27b/2

C.1: Mandatory IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

C.2: Mandatory IF RSCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.3: Mandatory to support at least one IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

Table 6: No longer used

1.6 RSC Collector role

1.6.1 Service Support – RSC Collector role

Table 7: Service Support – RSC Collector Role

Prerequisite: RSCP 1/2 “Collector”

Item	Capability	Reference	Status
1	Discover Running Speed and Cadence Service	[1] 4	M
2	Discover Device Information Service	[1] 4	O

1.6.2 Discover Services and Characteristics – RSC Collector role

Table 8: Discover RSC Services and Characteristics – RSC Collector Role

Prerequisite: RSCP 1/2 “Collector”

Item	Capability	Reference	Status
1	Discover Running Speed and Cadence Service	[1] 4.2.1	M
2	Discover RSC Measurement characteristic	[1] 4.3.1.1	M
3	Discover RSC Measurement - Client Characteristic Configuration Descriptor	[1] 4.3.1.1	M
4	Discover RSC Feature characteristic	[1] 4.3.1.2	M
5	Discover Sensor Location	[1] 4.3.1.3	O
6	Discover SC Control Point characteristic	[1] 4.3.1.4	O
7	Discover SC Control Point - Client Characteristic Configuration Descriptor	[1] 4.3.1.4	C.1
8	Discover RSC Feature characteristic – Client Configuration Characteristic Descriptor	[6] 4.3.1.2	C.2

C.1: Mandatory IF RSCP 8/6 “Discover SC Control Point characteristic”, otherwise Excluded.

C.2: Optional IF RSCP 0/1 “RSCP v1.0” AND NOT RSCP 0a/1 “RSCP v1.0.1”, otherwise Mandatory.

Table 9: Discover DIS Services and Characteristics – RSC Collector Role

Prerequisite: RSCP 1/2 “Collector”

Item	Capability	Reference	Status
1	Discover Device Information Service	[1] 4, 4.2.2	C.1
2	Discover Manufacturer Name String Characteristic	[1] 4.3.2	C.2
3	Read Manufacturer Name String Characteristic	[1] 4.8	O
4	Discover Model Number String Characteristic	[1] 4.3.2	C.2
5	Read Model Number String Characteristic	[1] 4.8	O

C.1: Mandatory IF RSCP 9/2 “Discover Manufacturer Name String Characteristic” OR RSCP 9/4 “Discover Model Number String Characteristic”, otherwise Optional.

C.2: Mandatory IF RSCP 9/3 “Read Manufacturer Name String Characteristic” OR RSCP 9/5 “Read Model Number String Characteristic”, otherwise Optional.

1.6.3 Features – Collector role

Table 10: SC Control Point Procedures – RSC Collector Role

Prerequisite: RSCP 1/2 “Collector”

Item	Capability	Reference	Status
1	Set Cumulative Value – Set to zero	[1] 4.7.1	O
2	Set Cumulative Value – Set to non-zero	[1] 4.7.1	O
3	Start Calibration	[1] 4.7.1	O
4	Update Sensor Location	[1] 4.7.1	C.1
5	Request Supported Sensor Locations	[1] 4.7.1	C.1

C.1: Mandatory to support none or all.

Table 11: Features – RSC Collector Role

Prerequisite: RSCP 1/2 “Collector”

Item	Capability	Reference	Status
1	Configure RSC Measurement characteristic for notifications	[1] 4.4	M
2	Receive RSC Measurement characteristic notifications	[1] 4.4	C.1
3	Read RSC Feature characteristic	[1] 4.5	M
4	Read Sensor Location characteristic	[1] 4.6	O
5	Configure SC Control Point characteristic for indications	[1] 4.7	C.1
6	Receive SC Control Point characteristic indications	[1] 4.7.2, 4.7.3	C.1
7	Write to SC Control Point characteristic	[1] 4.7	C.1
8	SC Control Point Characteristic - Set Cumulative Value Op Code	[1] 4.7.2.1	C.2
9	SC Control Point Characteristic - Start Calibration Op Code	[1] 4.7.2.2	C.3
10	SC Control Point Characteristic - Update Sensor Location Op Code	[1] 4.7.2.3	C.4
11	SC Control Point Characteristic - Request Supported Sensor Locations Op Code	[1] 4.7.2.4	C.4
12	SC Control Point Characteristic – Procedure Time Out	[1] 4.7.4	C.1
13	Verify Bond Status on Reconnection	[1] 5.2.2	C.5
14	Configure characteristic for indications to determine supported features	[6] 4.5	C.6

C.1: Mandatory IF RSCP 10/1 “Set Cumulative Value – Set to zero” OR RSCP 10/2 “Set Cumulative Value – Set to non-zero” OR RSCP 10/3 “Start Calibration” OR RSCP 10/4 “Update Sensor Location” OR RSCP 10/5 “Request Supported Sensor Locations”, otherwise Excluded.

C.2: Mandatory IF RSCP 10/1 “Set Cumulative Value – Set to zero” OR RSCP 10/2 “Set Cumulative Value – Set to non-zero”, otherwise Excluded.

C.3: Mandatory IF RSCP 10/3 “Start Calibration”, otherwise Excluded.

C.4: Mandatory IF RSCP 10/4 “Update Sensor Location” AND RSCP 10/5 “Request Supported Sensor Locations”, otherwise Excluded.

C.5: Mandatory IF RSCP 13/3 “Bondable mode (LE)”, otherwise Excluded.

C.6: Optional IF RSCP 0/1 “RSCP v1.0” AND NOT RSCP 0a/1 “RSCP v1.0.1”, otherwise Mandatory.



Table 11a: Determining Supported Features – Configure Characteristic for Indications*Prerequisite: RSCP 11/14 “Configure characteristic for indications to determine supported features”*

Item	Capability	Reference	Status
1	Configure and receive RSC Feature characteristic indications	[6] 4.5	C.1
2	Read RSC Feature characteristic on reconnection	[6] 4.5	C.1

C.1: Mandatory to support at least one IF RSCP 13/3 “Bondable mode (LE)” OR RSCP 13/7 “Bondable mode (BR/EDR)”, otherwise Excluded.

1.6.4 GATT requirements – Collector role

Table 12: GATT Requirements – Collector Role*Prerequisite: RSCP 1/2 “Collector”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
2	GATT Client over BR/EDR	[1] 4.2	C.4	[3] GATT 1a/2
3	GATT Client over LE	[1] 4.2	C.5	[3] GATT 1a/1
4	Discover All Primary Services	[1] 4.2	C.1	[3] GATT 3/2
5	Discover Primary Services by Service UUID	[1] 4.2	C.1	[3] GATT 3/3
6	Discover All Characteristics of a Service	[1] 4.3.1	C.2	[3] GATT 3/5
7	Discover Characteristics by UUID	[1] 4.3.1	C.2	[3] GATT 3/6
8	Discover All Characteristic Descriptors	[1] 4.3.1	M	[3] GATT 3/7
9	Read Characteristic Value	[1] 4.1	M	[3] GATT 3/8
10	Notifications	[1] 4.1, 4.4, 5.2.1	M	[3] GATT 3/17
11	Write Characteristic Value	[1] 4.1, 4.7.2	C.3	[3] GATT 3/14
12	Read Characteristic Descriptors	[1] 4.1	M	[3] GATT 3/19
13	Write Characteristic Descriptors	[1] 4.1	M	[3] GATT 3/21

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

C.3: Mandatory IF RSCP 10/1 “Set Cumulative Value – Set to zero” OR RSCP 10/2 “Set Cumulative Value – Set to non-zero” OR RSCP 10/3 “Start Calibration” OR RSCP 10/4 “Update Sensor Location”, otherwise not defined.

C.4: Mandatory IF RSCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

C.5: Mandatory IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

1.6.5 GAP requirements – Collector role

Table 13: GAP Requirements – Collector Role

Prerequisite: RSCP 1/2 “Collector”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4	C.1	[4] GAP 5/4 OR GAP 38/4
2	LE security mode 1	[1] 6.2	C.1	[4] GAP 35/1
3	Bondable mode (LE)	[1] 5.2	C.2	[4] GAP 34/2
4	No security requirements	[1] 6.1	C.1	[4] GAP 37b/4
5	Unauthenticated no MITM protection	[1] 6.1	C.1	[4] GAP 37b/3
6	Authenticated MITM protection	[1] 6.1	C.1	[4] GAP 37b/2
7	Bondable mode (BR/EDR)	[1] 5.3	C.3	[4] GAP 1/7

C.1: Mandatory IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

C.2: Optional IF RSCP 2/2 “Profile supported over LE”, otherwise not defined.

C.3: Optional IF RSCP 2/1 “Profile supported over BR/EDR”, otherwise not defined.

Table 14: No longer used

2 References

- [1] Running Speed and Cadence Profile Specification, Version 1.0 or later
- [2] ICS Proforma for Running Speed and Cadence Service (RSCS)
- [3] ICS Proforma for Generic Attribute Profile (GATT)
- [4] ICS Proforma for Generic Access Profile (GAP)
- [5] ICS Proforma for Device Information Service (DIS)
- [6] Running Speed and Cadence Profile Specification, Version 1.0.1

3 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2013-08-07	Prepare for Publication
	1.0.1r01	2013-09-30	TSE 5295: Updated item 11/2 status to C.1 instead of M.
1	1.0.1	2013-12-03	Prepare for Publication
	1.0.2r00	2014-10-20	TSE 5799: Updated 11/12 from M to C.1.
2	1.0.2	2014-12-05	Prepare for TCRL 2014-2 publication
	1.0.3r00	2015-10-01	TSE 6555: Added item 13/3 for Bondable Mode in Table 13 and made item 11/13 (Verify Bond Status) in Table 11 dependent on it.
	1.0.3r01	2015-10-22	Converted to new document template.
3	1.0.3	2015-12-22	Prepared for TCRL 2015-2 publication.
	1.0.4r00	2017-10-08	TSE 9952 (rating 1): Updated ICS template. Added a table 0 for version.
4	1.0.4	2018-06-27	Approved by BTI. Prepared for TCRL 2018-1 publication.
	p5r00–r02	2022-03-18 – 2022-05-04	<p>TSE 18600 (rating 2): Updated the prerequisite for Tables 6 and 14. Updated the status for items 1 and 2 and the reference and inter-layer dependency for item 3 in Table 13. Added C.1 for Table 13.</p> <p>TSE 18724 (rating 1): Editorials to align the document with the latest ICS template in anticipation of a future .Z release.</p> <p>Editorials, including assigning publication number 4 to previous v1.0.4, consistency checker fixes, and aligning the copyright page with v2 of the DNMD.</p>
5	p5	2022-06-28	Approved by BTI on 2022-05-31. Prepared for TCRL 2022-1 publication.
	p6r00	2023-10-10	<p>TSE 23177 (rating 2): Resolved GAP and SM inter-layer dependencies. Updated C.1 for Tables 1, 2, and 10. In Table 5, added Items 4–6 and C.3. Marked Tables 6 and 14 as no longer used. In Table 76, updated the Capability value for Items 1 and 2. In Table 12, marked Item 1 as no longer used, updated the Capability and ILD values for Items 2 and 3, and updated conditionals C.1 and C.2. Added Items 4–6 to Table 13. Made editorial edits to align the document with the latest ICS template, including updates to section and table titles and line spacing. Updated the references.</p> <p>Deleted draft revision history comments prior to p0.</p>
6	p6	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.

Publication Number	Revision Number	Date	Comments
	p7r00–r03	2024-08-02 – 2024-09-05	<p>TSE 17244 (rating 4): Per E17171, added new Tables 0a and 11a. Added Item 8/8 and conditional C.2 to Table 8. Added Item 11/14 and conditional C.6 to Table 11. In Table 13, updated the capability for Item 13/3 and added Item 13/7. Updated the references list and acknowledgments.</p> <p>TSE 25593 (rating 1): Per E15810, E17171, and E18756, added a version table for RSCP v1.0.1 as part of the .Z release. Updated the references list. Incorporated consistency checker updates.</p>
7	p7	2024-10-08	Approved by BTI on 2024-09-11. RSCP 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.
Laurence Richardson	CSR
Robert D. Hughes	Intel
Guillaume Schatz	Polar