

# Device Time Profile (DTP)

## **Bluetooth® Implementation Conformance Statement (ICS) Proforma**

---

- **Revision:** DTP.ICS.p1
- **Revision Date:** 2024-07-01
- **Prepared By:** Medical Devices Working Group
- **Published during TCRL:** TCRL.2024-1



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 © 2018–2024 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

- 1 Identification of the implementation..... 4**
  - 1.1 Implementation Under Test (IUT) identification ..... 4
  - 1.2 Roles..... 5
  - 1.3 Transports ..... 5
  - 1.4 Device Time Server role..... 5
    - 1.4.1 Service requirements.....5
    - 1.4.2 GAP requirements ..... 6
  - 1.5 Device Time Client role ..... 6
    - 1.5.1 Service requirements.....6
    - 1.5.2 GATT requirements ..... 8
    - 1.5.3 GAP requirements .....9
- 2 References..... 10**
- 3 Revision history and acknowledgments ..... 11**



# 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 Roles

**Table 1: Role Requirements**

Item	Role	Reference	Status
1	Server	[1] 2.1	C.1
2	Client	[1] 2.1	C.1

C.1: Mandatory to support at least one.

## 1.3 Transports

**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.

## 1.4 Device Time Server role

**Table 3: X.Y Versions (Server)**

*Prerequisite: DTP 1/1 "Server"*

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

**Table 4: X.Y.Z Versions (Server)**

Table number reserved but not yet in use

### 1.4.1 Service requirements

**Table 5: Service Requirements**

*Prerequisite: DTP 1/1 "Server"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Device Time Service	[1] 3	M	[5] DTS

**Table 6: No longer used**



## 1.4.2 GAP requirements

**Table 7: GAP Requirements**

*Prerequisite: DTP 1/1 “Server” AND DTP 2/2 “Profile supported over LE”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Peripheral	[1] 2.4.1	M	[4] GAP 5/3 OR GAP 38/3
2–4	No longer used	N/A	N/A	N/A

## 1.5 Device Time Client role

**Table 8: X.Y Versions (Client)**

*Prerequisite: DTP 1/2 “Client”*

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

**Table 9: X.Y.Z Versions (Client)**

Table number reserved but not yet in use

### 1.5.1 Service requirements

**Table 10: Discovery of Service and Characteristics**

*Prerequisite: DTP 1/2 “Client”*

Item	Capability	Reference	Status
1	No longer used	N/A	N/A
2	Discover Device Time Service	[1] 4, 4.2	M
3	Discover Device Time Service characteristics	[1] 4, 4.3.1	M
4	Discover Device Time Feature characteristic and Client Characteristic Configuration descriptor (CCCD)	[1] 4, 4.3.1.1	M
5	Discover Device Time Parameters characteristic and CCCD	[1] 4, 4.3.1.2	M
6	Discover Device Time characteristic and CCCD	[1] 4, 4.3.1.3	M
7	Discover DTCP characteristic and CCCD	[1] 4, 4.3.1.4	O
8	Discover RACP characteristic and CCCD	[1] 4, 4.3.1.6	O
9	Discover Time Change Log Data characteristic and CCCD	[1] 4, 4.3.1.5	C.1

C.1: Mandatory IF DTP 10/8 “Discover RACP characteristic and CCCD”, otherwise Excluded.

**Table 11: Device Time Features***Prerequisite: DTP 1/2 “Client”*

Item	Capability	Reference	Status
1	E2E-CRC	[1] 4.5.2.1	M
2	Base Time Second-Fractions	[1] 4.5.2.3	O
3	Read DT Parameters characteristic	[1] 4.6	O
4	Configure and receive DT Parameters characteristic indications	[1] 4.6	O
5	Read DT characteristic	[1] 4.7	O
6	Configure and receive DT characteristic indications	[1] 4.7	O
7	Configure and receive DT Feature characteristic indications	[1] 4.5.2	O

**Table 12: Device Time Control Point Procedures***Prerequisite: DTP 10/7 “Discover DTCP characteristic and CCCD”*

Item	Capability	Reference	Status
1	Propose Time Update	[1] 4.9.4	M
2	Force Time Update	[1] 4.9.5	O
3	Propose Non-Logged Time Adjustment Limit	[1] 4.9.7	O
4	Retrieve Active Time Adjustments	[1] 4.9.8	O

**Table 13: Record Access Control Point Procedures***Prerequisite: DTP 10/8 “Discover RACP characteristic and CCCD”*

Item	Capability	Reference	Status
1	Combined Report	[1] 4.10.4.2	M
2	Report Stored Records	[1] 4.10.4.3	O
3	Report Number of Stored Records	[1] 4.10.4.4	M
4	Abort Operation	[1] 4.10.4.5	O

**Table 14: RACP – Report Stored Records Operators***Prerequisite: DTP 13/2 “Report Stored Records”*

Item	Capability	Reference	Status
1	All records Operator	[1] 4.10.4 [2] 3.8.2	O
2	First record Operator	[1] 4.10.4 [2] 3.8.2	O
3	Last record Operator	[1] 4.10.4 [2] 3.8.2	O



Item	Capability	Reference	Status
4	Greater than or equal to Operator with Sequence Number Operand	[1] 4.10.4 [2] 3.8.2	O
5	Less than or equal to Operator with Sequence Number Operand	[1] 4.10.4 [2] 3.8.2	O
6	Within range of (inclusive) Operator with Sequence Number Operand	[1] 4.10.4 [2] 3.8.2	O

## 1.5.2 GATT requirements

**Table 15: GATT Requirements**

*Prerequisite: DTP 1/2 “Client”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	No longer used	N/A	N/A	N/A
2	GATT Client over LE	[1] 2.1	C.5	[3] GATT 1a/1
2a	GATT Client over BR/EDR	[1] 2.1	C.6	[3] GATT 1a/2
3	Discover All Primary Services	[1] 4.1	C.1	[3] GATT 3/2
4	Discover Primary Services by Service UUID	[1] 4.1	C.1	[3] GATT 3/3
5	Discover All Characteristics of a Service	[1] 4.1	C.2	[3] GATT 3/5
6	Discover Characteristics by UUID	[1] 4.1	C.2	[3] GATT 3/6
7	Discover All Characteristic Descriptors	[1] 4.1	M	[3] GATT 3/7
8	Notifications	[1] 4.1	C.3	[3] GATT 3/17
9	Indications	[1] 4.1	M	[3] GATT 3/18
10	Read Characteristic Value	[1] 4.1	M	[3] GATT 3/8
11	Write Characteristic Value	[1] 4.1	C.4	[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
14	Exchange MTU	[1] 4.1	C.3	[3] GATT 3/1

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

C.3: Mandatory IF DTP 10/8 “Discover RACP characteristic and CCCD”, otherwise Optional.

C.4: Mandatory IF DTP 10/7 “Discover DTCP characteristic and CCCD” OR DTP 10/8 “Discover RACP characteristic and CCCD”, otherwise Optional.

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

C.6: Mandatory IF DTP 2/1 “Profile supported over BR/EDR”, otherwise not defined.



### 1.5.3 GAP requirements

**Table 16: GAP Requirements**

*Prerequisite: DTP 1/2 "Client" AND DTP 2/2 "Profile supported over LE"*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Central	[1] 2.4.1	M	[4] GAP 5/4 OR GAP 38/4
2	Bondable mode	[1] 5.2	O	[4] GAP 34/2
3	Bonding procedure	[1] 5.2	O	[4] GAP 34/3
4-5	No longer used	N/A	N/A	N/A

## 2 References

---

- [1] Device Time Profile Specification, Version 1.0
- [2] Device Time Service Specification, Version 1.0
- [3] ICS Proforma for Generic Attribute Profile (GATT)
- [4] ICS Proforma for Generic Access Profile (GAP)
- [5] ICS Proforma for Device Time Service (DTS)

### 3 Revision history and acknowledgments

#### Revision History

Publication Number	Revision Number	Date	Comments
0	p0	2020-12-22	Approved by BTI on 2020-12-02. DTS v1.0 adopted by the BoD on 2020-12-15. Prepared for publication.
	p1r00–r01	2023-09-21 – 2023-09-26	TSE 23949 (rating 2): Resolved GATT and GAP inter-layer dependencies. Made editorial edits to align the document with the latest ICS template, including updates to the Section 1 introduction; the titles of Tables 1, 3, 4, 8, and 9; and C.1 of Tables 1, 2, and 10. Marked Tables 6 (GATT Requirements) as no longer used. In Table 7, updated the prerequisite and the Status value for Item 1, marked Items 2–4 as no longer used, and deleted C.1–C.3. In Table 10, marked Item 1 as no longer used. In Table 15, marked Item 1 as no longer used; updated the Capability, Status, and ILD values for Item 2; added Item 2a; updated Items C.1, C.2, and C.4; and added C.5 and C.6. In Table 16, updated the prerequisite and the Status values for Items 1–3, marked Items 4 and 5 as no longer used, and deleted C.1–C.4. Removed “is supported” language.  Updated the copyright page to align with v2 of the DNMD. Deleted draft revision history comments prior to p0.
1	p1	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.

#### Acknowledgments

Name	Company
Jörg Brakensiek	Bluetooth SIG, Inc.
Ismail Mohamud	Bluetooth SIG, Inc.
Craig Carlson	F. Hoffman-La Roche AG