# Current Time Service (CTS)

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

- **Revision:** CTS.ICS.p4
- **Revision Date:** 2024-07-01
- **Prepared By:** BTI
- **Published during TCRL:** TCRL.2024-1

# Contents

# 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 | CTS v1.0** | [2] | Deprecated 2022-02-01. Withdrawn 2023-02-01. |
| 2 | CTS v1.1 | [3] | C.1 |

C.1:     Mandatory.

## 1.3     Transports

**Table 1: Transport Requirements**

| Item | Transport | Reference | Status |
|---|---|---|---|
| 1 | Service supported over BR/EDR | [3] 1.5 | C.3 |
| 2 | Service supported over LE | [3] 1.5 | C.3 |

C.1–C.2:          No longer used.

C.3:     Mandatory to support at least one.

## 1.4     Sources that can Change Server's Local Time

**Table 2: Sources that can Change Server's Local Time**

| Item | Capability | Reference | Status |
|---|---|---|---|
| 1 | Manual setting | [3] 3.1.2 | C.1 |
| 2 | External Reference Time update | [3] 3.1.2 | C.1 |
| 3 | Time Zone change | [3] 3.1.2 | C.1 |
| 4 | DST offset change | [3] 3.1.2 | C.1 |

C.1:     Mandatory to support at least one.

## 1.5     Service requirements

**Table 3: Service Requirements – Current Time Service**

| Item | Capability | Reference | Status |
|---|---|---|---|
| 1 | Current Time Service | [3] 2 | M |
| 2 | Current Time Characteristic | [3] 3 | M |
| 3 | Client Characteristic Configuration Descriptor for Current Time | [3] 3.1 | M |
| 4 | Read Current Time | [3] 3.1.1 | M |
| 5 | Local Time Information Characteristic | [3] 3.2 | O |
| 6 | Read Local Time Information Characteristic | [3] 3.2.1 | C.1 |

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** Deprecated versions may not appear in the Bluetooth SIG qualification tool after the deprecation date. TCRLs published after this date will not allow the use of deprecated versions.

| Item | Capability | Reference | Status |
|------|-----------|-----------|--------|
| 7 | Reference Time Information Characteristic | [3]3.3 | O |
| 8 | Read Reference Time Information Characteristic | [3] 3.3 | C.2 |
| 9 | Current Time Characteristic, Configure to enable/disable Notification | [3] 3.1.2 | M |
| 10 | Current Time Characteristic, Notify disabled | [3] 3.1.2 | M |
| 11 | Current Time Characteristic, Notify by Manual Change | [3] 3.1.2.1 | C.3 |
| 12 | Current Time Characteristic, Notify by Time Zone Change | [3] 3.1.2.3 | C.4 |
| 13 | Current Time Characteristic, Notify by DST Change | [3] 3.1.2.4 | C.5 |
| 14 | Current Time Characteristic, Notify by Reference Time Change | [3] 3.1.2.2 | C.6 |
| 15 | Current Time Characteristic, Notify by "Get Reference Update" command, Reference Time Change with the Reference Time Update service | [3] 3.1.2.2 | C.8 |
| 16 | Current Time Characteristic Write | [3] 3.1.3 | O |
| 17 | Local Time Information Characteristic Write | [3] 3.2.2 | O |

C.1:   Mandatory IF CTS 3/5 "Local Time Information Characteristic", otherwise Excluded.

C.2:   Mandatory IF CTS 3/7 "Reference Time Information Characteristic", otherwise Excluded.

C.3:   Mandatory IF CTS 2/1 "Manual setting", otherwise Excluded.

C.4:   Mandatory IF CTS 2/3 "Time Zone change", otherwise Excluded.

C.5:   Mandatory IF CTS 2/4 "DST offset change", otherwise Excluded.

C.6:   Mandatory IF CTS 2/2 "External Reference Time update", otherwise Excluded.

C.7:   No longer used.

C.8:   Optional IF CTS 2/2 "External Reference Time update", otherwise Excluded.

## 1.6    GATT requirements

**Table 4: GATT Requirements**

| Item | Capability | Reference | Status | Inter-Layer Dependency |
|------|-----------|-----------|--------|------------------------|
| 1 | No longer used | N/A | N/A | N/A |
| 1a | GATT Server over BR/EDR | [3] 1.4 | C.1 | [1] GATT 1a/4 |
| 1b | GATT Server over LE | [3] 1.4 | C.2 | [1] GATT 1a/3 |
| 2 | Notifications | [3] 1.4 | M | [1] GATT 4/17 |
| 3 | Read Characteristic Descriptors | [3] 1.4 | M | [1] GATT 4/19 |
| 4 | Write Characteristic Descriptors | [3] 1.4 | M | [1] GATT 4/21 |
| 5 | Write Characteristic Value | [3] 1.4 | O | [1] GATT 4/14 |

C.1:   Mandatory IF CTS 1/1 "Service supported over BR/EDR", otherwise not defined.

C.2:   Mandatory IF CTS 1/2 "Service supported over LE", otherwise not defined.

## 1.7    SDP requirements

**Table 5: SDP Requirements**

*Prerequisite: CTS 1/1 "Service supported over BR/EDR"*

| Item | Capability | Reference | Status |
|------|-----------|-----------|--------|
| 1 | SDP record present for CTS | [3] 4 | M |
| 2–3 | No longer used | N/A | N/A |

# 2   References

[1]    ICS Proforma for Generic Attribute Profile (GATT)

[2]    Current Time Service Specification, Version 1.0

[3]    Current Time Service Specification, Version 1.1

# 3   Revision history and acknowledgments

*Revision History*

| Publication Number | Revision Number | Date | Comments |
|---|---|---|---|
| 0 | 1.0.0 | 2011-09-15 | Adopted by the Bluetooth SIG Board of Directors |
| | 1.0.1r0 | 2011-12-13 | TSE 4549: Table 1, Table 2 updates<br>TSE 4574: Table 3 footnote updates |
| 1 | 1.0.1 | 2012-03-30 | Prepare for publication |
| 2 | 1.1.0 | 2014-10-07 | BoD Approval of CTS 1.1 |
| | 1.1.1r00 | 2015-05-10 | TSE 6128: Added new conditional C.8 to Table 3 and updated item 15 to point to it. |
| 3 | 1.1.1 | 2015-07-14 | Prepared for TCRL 2015-1 publication. |
| | 1.1.1 edition 2r00 | 2018-11-21 | Editorial changes only. Template updated. Revision History and Contributors tables moved to the end of the document. |
| | 1.1.1 edition 2 | 2019-11-25 | 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. |
| | 1.1.1ed3 r00–r03 | 2021-03-24 – 2021-05-25 | TSE 16011 (rating 1): Added deprecation and withdrawal information to Table 0, cleaned up conditionals in Table 3 for consistency, and added Inter-Layer Dependency columns to Tables 4 and 5 (and minor consistency fixes).<br>Editorials to better align with the latest ICS template. Added a Publication Number column and assigned publication number 3 to the previous v1.1.1. Consistency checker fixes. |
| | 1.1.1 edition 3 | 2021-05-26 | Approved by BTI on 2021-05-06. Prepared for edition 3 publication. |
| | 1.1.1ed4r00 | 2021-10-12 | TSE 17486 (rating 1): Added "otherwise" to C.1 of Table 1. |
| | 1.1.1 edition 4 | 2021-11-24 | Approved by BTI on 2021-11-08. Prepared for edition 4 publication. |
| | p4r00–r01 | 2023-09-20 – 2023-12-11 | TSE 23662 (rating 2): Resolved GATT and SDP inter-layer dependencies. In Table 0, updated the Status value for Item 1, updated C.2, and deleted C.3. In Table 1, updated the Reference values for Items 1 and 2, marked C.1 and C.2 as no longer used, and updated C.3. In Table 2, updated the Reference values for Items 1–4 and updated C.1. In Table 3, deleted the introductory note, updated the Reference values throughout, updated the Status value for Items 16–17, and marked C.7 as no longer used. In Table 4, marked Item 1 as no longer used, added Items 1a and 1b, updated the Reference values throughout, updated the Status value for Item 5, and updated the conditionals. In Table 5, deleted the ILD column, updated the Capability and Reference values for |

| Publication Number | Revision Number | Date | Comments |
|---|---|---|---|
| | | | Item 1 and marked Items 2–3 as no longer used. Updated the references.<br><br>Made editorial edits to align the document with the latest ICS template. Updated the copyright page to align with v2 of the DNMD. |
| 4 | p4 | 2024-07-01 | Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication. |

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