Object Transfer Profile (OTP)

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

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Contents

1 General principles

1.1 Implementation Under Test (IUT) identification

Using the Bluetooth SIG qualification tool, the implementer is expected to declare details about what will be implemented.

1.2 Enforcement of inter-layer dependencies

This ICS includes one or more tables with inter-layer dependencies (ILDs). ILDs are used for specification requirements that are dependent on other supporting specifications. ILDs can refer to an individual ICS item in a separate layer (individual ILD), or it can refer to the full layer (full-layer ILD).

ILDs residing in an X2Core layer will be enforced from the Bluetooth SIG qualification tool in the following conditions, depending on where the referred ILD is residing:

Referred ILD resides in	Individual ILD	Full-layer ILD
Controller layer	Core-Complete configuration, or Referred layer is supported	N/A
Lower HCI layer	HCI is supported	N/A
Upper HCI layer	Core-Host configuration, or UHCI is supported	N/A
Host layer	Core-Host configuration, or Core-Complete configuration, or Referred layer is supported	N/A
X2Core layer	Core-Host configuration, or Core-Complete configuration, or Referred layer is supported	Core-Host configuration, or Core-Complete configuration

Table 1.1: Enforcement of an ILD within the Bluetooth SIG qualification tool

2   ICS declarations

2.1   Versions

Table 0: X.Y Versions

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

Table 1: No longer used

2.2   Roles

Table 2: Role Requirements

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

C.1:   Mandatory to support at least one.

2.3   Transports

Table 3: Transport Requirements

Item	Transport	Reference	Status
1	Profile supported over BR/EDR	[1] 2.5	C.1, C.3
2	Profile supported over LE	[1] 2.5	C.2, C.3

C.1:   Excluded for this Profile IF CORE 41/2 "LE Core Configuration" OR CORE 40/1 "Core-Controller".

C.2:   Excluded for this Profile IF CORE 41/1 "BR/EDR Core Configuration" OR CORE 40/1 "Core-Controller".

C.3:   Mandatory to support at least one.

2.4   Object Server role

2.4.1   Services (Object Server)

Table 4: Service Requirements (Object Server)

Prerequisite: OTP 2/1 "Object Server"

Item	Service Requirements	Reference	Status	Inter-Layer Dependency
1	Object Transfer Service	[1] 3	M	[4] OTS
2	Object Transfer Service UUID in AD Type field of Advertising Data	[1] 3.1.1	C.1	N/A

C.1:   Optional IF OTP 3/2 "Profile supported over LE", otherwise Excluded.

2.5 Object Client role

2.5.1 Service support (Object Client)

Table 5: Service Support (Object Client)

Prerequisite: OTP 2/2 "Object Client"

Item	Service	Reference	Status
1	Discover Object Transfer Service	[1] 4.2	M

2.5.2 Discover characteristics (Object Client)

Table 6: Discover Object Transfer Characteristics (Object Client)

Prerequisite: OTP 2/2 "Object Client"

Item	Characteristic / Descriptor	Reference	Status
1	Discover OTS Feature characteristic(s)	[1] 4.3	M
2	Discover Object Name characteristic	[1] 4.3	M
3	Discover Object Type characteristic	[1] 4.3	M
4	Discover Object Size characteristic	[1] 4.3	C.1
5	Discover Object First-Created characteristic	[1] 4.3	O
6	Discover Object Last-Modified characteristic	[1] 4.3	C.2
7	Discover Object ID characteristic	[1] 4.3	C.3
8	Discover Object Properties characteristic	[1] 4.3	O
9	Discover Object Action Control Point (OACP) characteristic	[1] 4.3	M
10	Discover Object Action Control Point (OACP) - Client Configuration Characteristic Descriptor	[1] 4.3	M
11	Discover Object List Control Point (OLCP) characteristic	[1] 4.3	M
12	Discover Object List Control Point (OLCP) - Client Configuration Characteristic Descriptor	[1] 4.3	M
13	Discover Object List Filter characteristic	[1] 4.3	M
14	Discover Object Changed characteristic	[1] 4.3	O

C.1: Mandatory IF OTP 8/19 "Read Object – Read Object Contents" OR OTP 8/21 "Write Object – Write Object Contents", otherwise Optional.

C.2: Mandatory, IF OTP 8/21 "Write Object – Write Object Contents", otherwise Optional.

C.3: Mandatory, IF OTP 8/17 "Select Object – Select by Object ID", otherwise Optional.

2.5.3 Property features (Object Client)

Table 7: Object Transfer Service Property Feature Requirements (Object Client)

Prerequisite: OTP 2/2 "Object Client"

Item	Property Feature	Reference	Status
1	Read OTS Feature characteristic	[1] 4.5.1	M
2	Read Object Name characteristic	[1] 4.5.4.1	M
3	Read Long Object Name characteristic	[1] 4.5.4.1	M

Item	Property Feature	Reference	Status
4	Write Object Name characteristic	[1] 4.5.5.1	C.1
5	Write Long Object Name characteristic	[1] 4.5.5.1	O
6	Read Object Type characteristic	[1] 4.5.4.1	M
7	Read Object Size characteristic	[1] 4.5.4.2	C.2
8	Read Object First-Created characteristic	[1] 4.5.4.1	O
9	Write Object First-Created characteristic	[1] 4.5.5.1, 4.5.7	O
10	Read Object Last-Modified characteristic	[1] 4.4.3	O
11	Write Object Last-Modified characteristic	[1] 4.5.5.1	O
12	Read Object ID characteristic	[1] 4.5.7	C.3
13	Read Object Properties characteristic	[1] 4.5.4.1	O
14	Write Object Properties characteristic	[1] 4.5.5.1	O
15	Write Object Action Control Point (OACP) characteristic	[1] 4.4.1	M
16	Object Action Control Point (OACP) - Client Configuration Characteristic Descriptor	[1] 4.4.1	M
17	Write Object List Control Point (OLCP) characteristic	[1] 4.4.2	M
18	Object List Control Point (OLCP) - Client Configuration Characteristic Descriptor	[1] 4.4.2	M
19	Read Object List Filter characteristic	[1] 4.5.2.1, 4.5.2.2	M
20	Write Object List Filter characteristic	[1] 4.5.2.1, 4.5.2.2	M
21	Write Long Object List Filter characteristic	[1] 4.5.2.2	O
22	Read Long Object List Filter characteristic	[1] 4.5.2.2	O
23	Object Changed characteristic	[1] 4.4.3	O
24	Object Changed characteristic - Client Configuration Characteristic Descriptor	[1] 4.4.3	O

C.1: Mandatory IF OTP 8/25 "Create Object", otherwise Optional.

C.2: Mandatory IF OTP 8/19 "Read Object – Read Object Contents" OR OTP 8/21 "Write Object – Write Object Contents", otherwise Optional.

C.3: Mandatory IF OTP 8/17 "Select Object – Select by Object ID", otherwise Optional.

2.5.4   Procedures (Object Client)

Table 8: Object Transfer Service Procedure Requirements (Object Client)

Prerequisite: OTP 2/2 "Object Client"

Item	Procedure	Reference	Status
1	Feature Discovery	[1] 4.5.1	M
2	Object Discovery – Discover All Objects	[1] 4.5.2.1	C.1
3	Object Discovery – Search for Specific Object	[1] 4.5.2.3	C.1
4	Object Discovery – Discover by Filter	[1] 4.5.2.2	C.1
5	Object Discovery - Discover by Filter - Name Starts With	[1] 4.5.2.2	C.2
6	Object Discovery - Discover by Filter - Name Ends With	[1] 4.5.2.2	C.2

Item	Procedure	Reference	Status
7	Object Discovery - Discover by Filter - Name Contains	[1] 4.5.2.2	C.2
8	Object Discovery - Discover by Filter - Name is Exactly	[1] 4.5.2.2	C.2
9	Object Discovery - Discover by Filter - Object Type	[1] 4.5.2.2	C.2
10	Object Discovery - Discover by Filter - Created between	[1] 4.5.2.2	C.2
11	Object Discovery - Discover by Filter - Modified between	[1] 4.5.2.2	C.2
12	Object Discovery - Discover by Filter - Current Size between	[1] 4.5.2.2	C.2
13	Object Discovery - Discover by Filter - Allocated Size between	[1] 4.5.2.2	C.2
14	Object Discovery - Discover by Filter - Marked Objects	[1] 4.5.2.2	C.2
15	Object Discovery – Discover by Directory Listing Object	[1] 4.5.2.4	O
16	Select Object – Select by Object Discovery	[1] 4.5.3.1	C.3
17	Select Object – Select by Object ID	[1] 4.5.3.2	C.3
18	Read Object – Read Object Metadata	[1] 4.5.4.1	M
19	Read Object – Read Object Contents	[1] 4.5.4.2	C.4
20	Write Object – Write Object Metadata	[1] 4.5.5.1	C.5
21	Write Object – Write Object Contents	[1] 4.5.5.2	C.4
22	Resume Reading Object Contents	[1] 4.5.6.1	O
23	Resume Writing Object Contents – Current Size Method	[1] 4.5.6.2.1	O
24	Resume Writing Object Contents – Data Integrity Method	[1] 4.5.6.2.2	O
25	Create Object	[1] 4.5.7	O
26	Delete Object	[1] 4.5.8	O
27	Calculate Checksum	[1] 4.5.9	C.6
28	Execute Object	[1] 4.5.9	O
29	Abort Object Read	[1] 4.5.4.2	C.7
30	Open Object Transfer Channel	[1] 4.5.10	M
31	Truncate Object Contents	[1] 4.5.5.2	O

C.1: Mandatory to support at least one.

C.2: Optional IF OTP 8/4 "Object Discovery – Discover by Filter", otherwise Excluded.

C.3: Mandatory to support at least one.

C.4: Mandatory to support at least one.

C.5: Mandatory IF OTP 8/25 "Create Object", otherwise Optional.

C.6: Mandatory IF OTP 8/22 "Resume Reading Object Contents" OR OTP 8/24 "Resume Writing Object Contents – Data Integrity Method", otherwise Optional.

C.7: Optional IF OTP 8/19 "Read Object – Read Object Contents", otherwise Excluded.

2.5.5 GATT requirements (Object Client)

Table 9: GATT Requirements (Object Client)

Prerequisite: OTP 2/2 "Object Client"

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.1	[2] GATT 1a/2

Item	Capability	Reference	Status	Inter-Layer Dependency
3	GATT Client over LE	[1] 4.2	C.2	[2] GATT 1a/1
4	Discover All Primary Services	[1] 4.2	C.3	[2] GATT 3/2
5	Discover Primary Service by Service UUID	[1] 4.2	C.3	[2] GATT 3/3
6	Find Included Services	[1] 4.2	C.3	[2] GATT 3/4
7	No longer used	N/A	N/A	N/A
8	Discover All Characteristics of a Service	[1] 4.3	C.4	[2] GATT 3/5
9	Discover Characteristics by UUID	[1] 4.3	C.4	[2] GATT 3/6
10	Discover All Characteristic Descriptors	[1] 4.3	M	[2] GATT 3/7
11	Read Characteristic Value	[1] 4.1	M	[2] GATT 3/8
12	Write Characteristic Value	[1] 4.1	M	[2] GATT 3/14
13	Read Characteristic Descriptor	[1] 4.1, 4.4.1, 4.4.2, 4.4.3	M	[2] GATT 3/19
14	Write Characteristic Descriptor	[1] 4.1, 4.4.1, 4.4.2, 4.4.3	M	[2] GATT 3/21
15	Indication	[1] 4.4.1, 4.4.2, 4.4.3	M	[2] GATT 3/18
16	Read Long Characteristic Value	[1] 4.1	C.5	[2] GATT 3/10
17	Write Long Characteristic Value	[1] 4.1	C.6	[2] GATT 3/15
18	Service Changed Characteristic	[1] 4.6	M	[2] GATT 3/23

C.1: Mandatory IF OTP 3/1 "Profile supported over BR/EDR", otherwise not defined.

C.2: Mandatory IF OTP 3/2 "Profile supported over LE", otherwise not defined.

C.3: Mandatory to support at least one.

C.4: Mandatory to support at least one.

C.5: Mandatory IF OTP 7/3 "Read Long Object Name characteristic" OR OTP 7/22 "Read Long Object List Filter characteristic", otherwise Optional.

C.6: Mandatory IF OTP 7/5 "Write Long Object Name characteristic" OR OTP 7/21 "Write Long Object List Filter characteristic", otherwise Optional.

2.5.6   L2CAP requirements (Object Client)

Table 10: L2CAP Requirements (Object Client)

Prerequisite: OTP 2/2 "Object Client"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE Credit Based Flow Control Mode	[1] 2.1	C.1	[3] L2CAP 2/46

C.1: Mandatory IF OTP 3/2 "Profile supported over LE", otherwise Optional.

3 References

[1]   Object Transfer Profile Specification, Version 1.0

[2]   ICS Proforma for Generic Attribute Profile (GATT.ICS)

[3]   ICS Proforma for Logical Link Control and Adaptation Protocol (L2CAP.ICS)

[4]   ICS Proforma for Object Transfer Service (OTS)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.0.0	2015-11-17	Specification adopted by BoD; prepared for publication.
	1.0.0 edition 2r00	2018-11-26	Editorial changes only. Template updated. Revision History and contributors moved to the end of the document.
	1.0.0 edition 2	2020-01-07	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.
	p1r00–r02	2022-03-23 – 2022-05-02	TSE 18596 (rating 2): Removed the Core spec table and updated 3/2 and C.2 of Table 3 to remove reference to the Core spec. Corrected C.2 of Table 7. TSE 18722 (rating 1): Editorials to align the document with the latest ICS template in anticipation of a future .Z release. Editorials, including assigning publication number 0 to previous v1.0.0 and aligning the copyright page with v2 of the DNMD.
1	p1	2022-06-28	Approved by BTI on 2022-05-31. Prepared for TCRL 2022-1 publication.
	p2r00–r01	2025-01-28 – 2025-02-18	TSE 26837 (rating 2): Updated Table 2 title and conditional C.1. Updated Table 3 C.1. Added an Inter-Layer Dependency column to Table 4. Updated Table 8 C.1, C.3, and C.4. Updated Table 9 items 1–3 and 7 and conditionals C.3 and C.4. Updated a reference in Table 10. Updated References section. Updated headings and Table 0 title and Version entry to current ICS template.
2	p2	2025-07-08	Approved by BTI on 2025-06-15. Prepared for TCRL pkg100 publication.
	p2ed2r00	2025-07-08	TSE 27376 (rating 1): Updated the Status for OTP 3/1 and OTP 3/2, added conditions C.1 and C.2, and renumbered the previous C.1 as C.3.
	p2 edition 2	2025-08-05	Approved by BTI on 2025-08-05. Prepared for edition 2 publication.
	p3r00–r01	2025-12-04 – 2026-01-09	TSE 28169 (rating 1): Updated the conditions in the transport table to make sure the layer is excluded when the design is an implementation of the Core-Controller Configuration by adding "OR CORE 40/1 "Core-Controller"" to an already excluded transport based on Core Configuration support.
3	p3	2026-02-17	Approved by BTI on 2026-01-21. Prepared for TCRL pkg102 publication.

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