Object Push Profile (OPP)

***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 1b: X.Y Versions (Object Push Client)

Prerequisite: OPP 1/1 "Object Push Client"

Item	Version	Reference	Status
1	OPP v1.1	[1]	C.1
2	OPP v1.2	[2]	C.1, C.2

C.1: Mandatory to support one and only one.

C.2: Can only be supported with an active X.Y.Z version after Deprecation or Withdrawal. Deprecated 2021-02-01. Withdrawn 2024-02-01.

Table 1c: X.Y.Z Versions (Object Push Client)

Prerequisite: OPP 1/1 "Object Push Client"

Item	Version	Reference	Status
1	OPP v1.2.1	[2]	C.1

C.1: Mandatory IF OPP 1b/2 "OPP v1.2", otherwise Excluded.

Table 2b: X.Y Versions (Object Push Client)

Prerequisite: OPP 1/2 "Object Push Server"

Item	Version	Reference	Status
1	OPP v1.1	[1]	C.1
2	OPP v1.2	[2]	C.1, C.2

C.1: Mandatory to support one and only one.

C.2: Can only be supported with an active X.Y.Z version after Deprecation or Withdrawal. Deprecated 2021-02-01. Withdrawn 2024-02-01.

Table 2c: X.Y.Z Versions (Object Push Client)

Prerequisite: OPP 1/2 "Object Push Server"

Item	Version	Reference	Status
1	OPP v1.2.1	[2]	C.1

C.1: Mandatory IF OPP 2b/2 "OPP v1.2", otherwise Excluded.

2.2 Core Configuration

Table 0b: Core Configuration Requirements

Item	Core Configuration	Reference	Status
1	Profile supported over BR/EDR	[1] 2.1	C.1, C.3
2	Profile supported over LE	[1] 2.1	C.2

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.
C.3: Mandatory for this Profile.

2.3 Roles

Table 1: Role Requirements

Item	Role	Reference	Status
1	Object Push Client	[1] 2.2	C.1
2	Object Push Server	[1] 2.2	C.1

C.1: Mandatory to support at least one.

2.4 Object Push Client role

2.4.1 Client Application Features

Table 2: Client Application Features

Prerequisite: OPP 1/1 “Object Push Client”

Item	Capability	Reference	Status
	Service Discovery		
1	Perform SD Request	[1] 3.2, 6.1	M
	Authentication		
2	Authentication/PIN exchange supported	[1] 2.4 [2] 2.3	M
2a	Require Authentication/PIN by default	[1] 2.4 [2] 2.3	O
	Object Push		
3	Object Push	[1] 4.2	M
	Content Format		
4	vCard 2.1	[1] 4.2.1	C.3
5	vCalendar 1.0	[1] 4.2.1	O
6	vMSG as defined in IrMC 1.1	[1] 4.2.1	O
7	vNote as defined in IrMC 1.1	[1] 4.2.1	O
8	Support content formats other than those declared in OPP 2/4 through OPP 2/7	[1] 4.2.1	O
8a	Support specific set of other content formats (please specify below)	[1] 4.2.1	C.4
8b	Support all content formats	[1] 4.2.1	C.4
9	Push multiple vCard objects	[1] 4.2	O
9a	Push multiple vCard objects using different PUT operations.	[1] 4.2	C.5
9b	Multiple vCard objects using the same PUT operation.	[1] 4.2	C.5
10	Push multiple vCalendar objects	[1] 4.2	O
10a	Push multiple vCalendar objects using different PUT operations.	[1] 4.2	C.6

Item	Capability	Reference	Status
10b	Push multiple vCalendar objects using the same PUT operation.	[1] 4.2	C.6
11	Push multiple vMsg objects	[1] 4.2	O
11a	Push multiple vMsg objects using different PUT operations.	[1] 4.2	C.7
11b	Push multiple vMsg objects using the same PUT operation.	[1] 4.2	C.7
12	Push multiple vNote objects	[1] 4.2	O
12a	Multiple vNote objects using different PUT operations.	[1] 4.2	C.8
12b	Push multiple vNote objects using the same PUT operation.	[1] 4.2	C.8
	Business Card Pull		
13	Pull business card	[1] 4.3	O
	Content Format		
14	vCard 2.1	[1] 4.3	C.1
	Business Card Exchange		
15	Exchange business card	[1] 4.4	O
	Content Format		
16	vCard 2.1	[1] 4.4	C.2
	OPP v1.2 Features		
17	GOEP v2.0 or later	[3]	C.9
18	GOEP v2.0 or later Backwards Compatibility	[3] 6.2	C.9
19	OBEX over L2CAP	[4]	C.9
20	OBEX Reliable Session	[3] 4.7	C.10
21	OBEX SRM	[3] 4.6	C.10
22	Send OBEX SRMP header	[3] 4.6	C.10
23	Receive OBEX SRMP header	[3] 4.6	C.11

C.1: Mandatory IF OPP 2/13 “Pull business card”, otherwise Excluded.

C.2: Mandatory IF OPP 2/15 “Exchange business card”, otherwise Excluded.

C.3: Note: vCard 2.1 support is required for devices containing phonebook applications. vCard 2.1 support Optional for other devices.

C.4: Mandatory to support at least one IF OPP 2/8 “Support content formats other than those declared in OPP 2/4 through OPP 2/7”, otherwise Excluded.

C.5: Mandatory to support at least one IF OPP 2/9 “Push multiple vCard objects”, otherwise Excluded.

C.6: Mandatory to support at least one IF OPP 2/10 “Push multiple vCalendar objects”, otherwise Excluded.

C.7: Mandatory to support at least one IF OPP 2/11 “Push multiple vMsg objects”, otherwise Excluded.

C.8: Mandatory to support at least one IF OPP 2/12 “Push multiple vNote objects”, otherwise Excluded.

C.9: Mandatory IF OPP 1b/2 “OPP v1.2”, otherwise Excluded.

C.10: Optional IF OPP 1b/2 “OPP v1.2”, otherwise Excluded.

C.11: Mandatory IF OPP 2/17 “GOEP v2.0 or later” AND OPP 2/21 “OBEX SRM”, otherwise Excluded.

2.5 Object Push Server role

2.5.1 Server Application Features

Table 3: Server Application Features

Prerequisite: OPP 1/2 "Object Push Server"

Item	Capability	Reference	Status
	Service Discovery		
1	Provide information on supported content types on SD request	[1] 3.2, 6.1	M
	Authentication		
2	Authentication/PIN exchange supported	[1] 2.4 [2] 2.3	M
	Object Push		
3	Object Push	[1] 4.2	M
3a	Receive multiple objects during a single OBEX connection within the same PUT operation	[1] 4.2.2	O
	Content Format		
4	vCard 2.1	[1] 4.2.1	C.3
5	vCalendar 1.0	[1] 4.2.1	O
6	vMSG as defined in IrMC 1.1	[1] 4.2.1	O
7	vNote as defined in IrMC 1.1	[1] 4.2.1	O
8	Support content formats other than those declared in OPP 3/4 through OPP 3/7	[1] 4.2.1	O
8a	Support specific set of other content formats (please specify below)	[1] 4.2.1	C.4
8b	Support all content formats	[1] 4.2.1	C.4
9	Object Push vCard reject	[1] 3.3.1	O
10	Object Push vCal reject	[1] 3.3.1	O
11	Object Push vMsg reject	[1] 3.3.1	O
12	Object Push vNote reject	[1] 3.3.1	O
	Business Card Pull		
13	Business card pull	[1] 4.3	C.8
	Content Format		
14	vCard 2.1	[1] 4.3.1	C.1
15	Business card pull reject	[1] 3.3.2	O
	Business Card Exchange		
16	Exchange business card	[1] 4.4	C.9
	Content Format		
17	vCard 2.1	[1] 4.4.1	C.2
18	Business card exchange reject	[1] 3.3.3	O
	OPP v1.2 Features		
19	GOEP v2.0 or later	[3]	C.5
20	GOEP v2.0 or later Backwards Compatibility	[3] 6.2	C.5

Item	Capability	Reference	Status
21	OBEX over L2CAP	[4]	C.5
22	OBEX Reliable Session	[3] 4.7	C.6
23	OBEX SRM	[3] 4.6	C.6
24	Send OBEX SRMP header	[3] 4.6	C.6
25	Receive OBEX SRMP header	[3] 4.6	C.7

C.1: Mandatory IF OPP 3/13 “Business card pull”, otherwise Excluded.

C.2: Mandatory IF OPP 3/16 “Exchange business card”, otherwise Excluded.

C.3: Note: vCard 2.1 support is required for devices containing phonebook applications. vCard 2.1 support Optional for other devices.

C.4: Mandatory to support at least one IF OPP 3/8 “Support content formats other than those declared in OPP 3/4 through OPP 3/7”, otherwise Excluded.

C.5: Mandatory IF OPP 2b/2 “OPP v1.2”, otherwise Excluded.

C.6: Optional IF OPP 2b/2 “OPP v1.2”, otherwise Excluded.

C.7: Mandatory IF OPP 3/19 “GOEP v2.0 or later” AND OPP 3/23 “OBEX SRM”, otherwise Excluded.

C.8: Note: If not supported, an error message must be sent on request for Business Card Pull.

C.9: Note: If not supported, an error message must be sent on request for Business Card Exchange.

2.6 Supplementary Interoperability Verification

It is recommended but not required to support any of the capabilities defined below. The Bluetooth license grant obtained through Qualification is not predicated on passing any test that is linked to support of these capabilities.

Table 4: Additional Object Push Capabilities

Item	Capability	Reference	Status
1	Abort-Push Operation	N/A	O
2	No longer used	N/A	N/A
3	Multiple vCards transferred as a single vObject	N/A	C.1
4	Multiple vCards transfer	N/A	C.1
5	vCards with multiple Phone Number Fields	N/A	C.1
6	Push vCal to Different Time Zone Server	N/A	C.1

C.1: Optional IF OPP 1/2 “Object Push Server”, otherwise Excluded.

2.7 GAP requirements

Table 5: GAP Requirements – OPP Server

Prerequisite: OPP 1/2 “Object Push Server”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Bondable mode	[1] 2.3	M	[5] GAP 1/7

Table 6: GAP Requirements – OPP Client

Prerequisite: OPP 1/1 "Object Push Client"

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Bondable mode	[1] 2.3	M	[5] GAP 1/7

3 References

[1] Object Push Profile (OPP) Specification, Version 1.1 or later

[2] Object Push Profile (OPP) Specification, Version 1.2 and Version 1.2.1

[3] Generic Object Exchange Profile (GOEP), Version 2.0 or later

[4] IrDA Interoperability, Version 2.0

[5] ICS Proforma for Generic Access Profile (GAP)

4 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	1.1	2001-07	First version for Specification 1.1
1	1.1.0	2004-12-07	Incorporate editorial changes and format changes. Incorporate March, 2004 Addendum: TSE 434 for Table OPP 2 and Table OPP 3.
	1.1.1r0	2006-11	TSE 1765: Table 2 and Table 3: Add two rows and footnote C4
	1.1.1r1	2006-11-22	Corrected wording from TSE 1765 for 2/8b and 3/8b; changed wording in 2.8b to exclude 2/4 to 2/7.
2	1.1.1	2007-01-10	Prepare for publication.
3	1.1.2	2007-09-04	TSE 1927: Table 2: Modify line 2; add line 2a
	1.1.3r0	2008-09-18	TSE2570: Add eight rows to Table 2, one row to Table 3
4	1.1.3	2008-12-04	Prepare for publication.
5	1.1.4r0	2009-04-29	TSE 2846: Change 3/3a to O
	1.1.5	2010-01-15	Add new features OPP 1.2 (for GOEP v2 support)
	1.1.6	2010-03-19	Updates following OBEX WG review (add refs, correct conditional PICS)
	1.1.7	2010-03-22	Clarified that IrOBEX 1.5 features can only be supported in OPP 1.2
	1.1.8	2010-04-01	Fixed incorrect PICS items in table 3, and associated Conditionals
	1.2.0r0	2010-07-08	Renumbered to match incrementing of spec version number
6	1.2.0	2010-07-30	Prepare for publication.
	1.2.1r0	2012-02-20	TSE 4686: New ICS table for Supplementary Interoperability Verification/Category-X test case mapping.
7	1.2.1	2012-03-30	Prepare for publication.
	1.2.2r1	2012-09-06	TSE 4942: Change to table 3, “Feature” replaces “Role” and Table 4, 4/2 is “Intentionally Left Blank” and status “N/A”
8	1.2.2	2012-11-01	Prepare for Publication
	1.2.3r00	2014-10-05	Template conversion. TSE 5956: Reference fixes. Update conditionals in Table 3 to update O.x to C.x per the current ICS standards. Editorial changes.
9	1.2.3	2014-12-08	Prepare for TCRL 2014-2 publication
	1.2.4r00	2015-04-24	TSE 5995: Updated Capability description for 3/3a
	1.2.4r01	2015-05-12	Editorial correction to Table 3 C.7 following review by Nerissa Green
	1.2.4r02	2015-06-05	Deleted Section 1.2 (Global Statement of Conformance) per current template standards.

Publication Number	Revision Number	Date	Comments
10	1.2.4	2015-07-14	Prepared for TCRL 2015-1 publication
	1.2.1.0r00	2015-10-28	Updated version numbering to align with Specification version change from 1.2 to 1.2.1 for ESR09. With the specification taking a third identifying number, the ICS version identifier moves to the fourth number and starts again at 0.
	1.2.1.0r01	2015-11-03	Added items 1b/3 and 2b/3 for new profile version 1.2.1 (ESR09).
	1.2.1.0r02	2015-11-24	Added Tables 1c and 2c for minor profile versions.
	1.2.1.0r03	2015-11-25	Reviewed by Alicia Courtney.
11	1.2.1.0	2015-12-22	Prepared for TCRL 2015-2 publication.
	1.2.1.1r00	2018-04-02	TSE 10555 (rating 1): Template Conversion.
12	1.2.1.1	2018-07-01	Approved by BTI. Prepared for TCRL 2018-1 publication.
	1.2.1.2 r00–r02	2019-04-02 – 2019-06-21	TSE 11227 (rating 1): Updated “GOEP v2” references to “GOEP 2.0 or later.”
13	1.2.1.2	2019-07-28	Approved by BTI. Prepared for TCRL 2019-1 publication.
	1.2.1.2ed2r00	2021-01-15	TSE 15985 (rating 1): Changes for deprecation.
	1.2.1.2 edition 2	2021-02-01	Approved by BTI on 2021-01-18. Prepared for edition 2 publication.
	1.2.1.2ed3 r00–r01	2021-10-18 – 2021-10-29	TSE 17686 (rating 1): Updated to cover the latest deprecation and withdrawal dates, and other consistency checker and template-related editorials.
	1.2.1.2 edtion 3	2021-11-24	Approved by BTI on 2021-11-08. Prepared for edition 3 publication.
	1.2.1.2ed4 r00–r02	2023-02-07 – 2023-02-23	TSE 22625 (rating 1): Adjusted the Withdrawal date from February 2023 to February 2024 for OPP 1.2. Moved Versions tables to the beginning of the document. Editorials to align the document with the latest ICS template.
	1.2.1.2 edition 4	2023-02-27	Approved by BTI on 2023-02-23. Prepared for edition 4 publication.
	p14r00	2023-10-18	TSE 23942 (rating 2): Resolved GAP inter-layer dependencies. Added Table 5 (GOEP Server) and Table 6 (GOEP Client). Updated the references.
14	p14	2024-07-01	Approved by BTI on 2024-05-22. Prepared for TCRL 2024-1 publication.
	p15r00	2024-10-15	TSE 25009 (rating 2): Updated item 3a for Table 3, and updated table spacing to current guidelines.
15	p15	2025-02-18	Approved by BTI on 2024-12-25. Prepared for TCRL 2025-1 publication.
	p16r00	2025-02-27	TSE 27011 (rating 2): Updated conditional C.2 for Tables 1b and 2b. Added “Core Configuration” section and Table 0b. Updated “References” section.
16	p16	2025-07-08	Approved by BTI on 2025-05-30. Prepared for TCRL pkg100 publication.

Publication Number	Revision Number	Date	Comments
	p17r00–r01	2025-12-05 – 2026-01-14	TSE 28346 (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.
17	p17	2026-02-17	Approved by BTI on 2026-01-22. Prepared for TCRL pkg102 publication.

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