

Telephony and Media Audio Profile (TMAP)

Bluetooth® Implementation Conformance Statement (ICS) Proforma

- **Revision:** TMAP.ICS.p3
- **Revision Date:** 2025-11-04
- **Prepared By:** Audio, Telephony, and Automotive Working Group
- **Published during TCRL:** TCRL.pkg101



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.

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 © 2021–2025 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	General principles	5
1.1	Implementation Under Test (IUT) identification	5
1.2	Enforcement of inter-layer dependencies	5
2	ICS declarations.....	6
2.1	Roles	6
2.2	Transports.....	6
2.3	Host configurations	6
3	Profile support requirements	7
3.1	CAP Initiator/Commander roles	7
3.1.1	Call Gateway (CG).....	7
3.1.1.1	CG versions.....	7
3.1.1.2	CG profile and service dependencies.....	7
3.1.1.3	Role discovery requirements	7
3.1.1.4	CG requirements	8
3.1.2	Unicast Media Sender (UMS)	10
3.1.2.1	UMS versions	10
3.1.2.2	UMS profile and service dependencies	11
3.1.2.3	Role discovery requirements	11
3.1.2.4	UMS requirements.....	11
3.1.3	Broadcast Media Sender (BMS)	15
3.1.3.1	BMS versions	15
3.1.3.2	BMS Profile and Service Dependencies.....	15
3.1.3.3	Role discovery requirements	15
3.1.3.4	BMS requirements.....	15
3.2	CAP Acceptor/Commander roles.....	18
3.2.1	Call Terminal (CT).....	18
3.2.1.1	CT versions	18
3.2.1.2	CT profile and service dependencies	18
3.2.1.3	Role discovery requirements	19
3.2.1.4	CT requirements.....	19
3.2.2	Unicast Media Receiver (UMR)	21
3.2.2.1	UMR versions.....	21
3.2.2.2	UMR profile and service dependencies	22
3.2.2.3	Role discovery requirements	22
3.2.2.4	UMR requirements	22
3.2.3	Broadcast Media Receiver (BMR).....	25
3.2.3.1	BMR versions	25
3.2.3.2	BMR profile and service dependencies	25
3.2.3.3	Role discovery requirements	26
3.2.3.4	BMR requirements.....	26
4	Audio, Link Layer and HCI features.....	30
4.1	Audio, Link Layer and HCI features.....	30
5	Content control.....	31
5.1	MCP Server function.....	31



6	Telephony and Media Audio Client and Server	32
6.1	Telephony and Media Audio Client requirements	32
6.1.1	Client service requirements	32
6.1.2	Client GATT requirements	32
6.2	Telephony and Media Audio Server requirements	32
6.2.1	Service requirements	32
6.2.2	Server GATT requirements	33
6.2.3	SDP requirements	33
6.3	GAP requirements	33
7	References	34
8	Revision history and acknowledgments	35

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 Roles

Table 1: Role Requirements

Item	Profile Role	Reference	Status
1	Call Gateway (CG)	[2] 3.1	C.1
2	Call Terminal (CT)	[2] 3.1	C.1
3	Unicast Media Sender (UMS)	[2] 3.1	C.1
4	Unicast Media Receiver (UMR)	[2] 3.1	C.1
5	Broadcast Media Sender (BMS)	[2] 3.1	C.1
6	Broadcast Media Receiver (BMR)	[2] 3.1	C.1, C.2
7	TMA Client	[2] 3.8	O
8	TMA Server	[2] 3.8	C.3

C.1: Mandatory to support at least one.

C.2: Mandatory IF TMAP 1/4 “Unicast Media Receiver (UMR)”, otherwise Optional.

C.3: Excluded IF TMAP 1/5 “Broadcast Media Sender (BMS)” AND NOT GATT 1/2 “Generic Attribute Profile (GATT) Server”, otherwise Mandatory.

2.2 Transports

Table 2: Transport Requirements

Item	Transport	Reference	Status
1	Profile supported over BR/EDR	[2] 2.3	C.1
1a	Service TMAPS supported over BR/EDR	[2] 4.3	C.2
2	Profile supported over LE	[2] 2.3	C.3, C.4
2a	Service TMAPS supported over LE	[2] 4.3	C.3, C.5

C.1: Excluded for this Profile.

C.2: Optional IF (TMAP 1/7 “TMA Client” OR TMAP 1/8 “TMA Server”) AND NOT CORE 41/2 “LE Core Configuration”, otherwise Excluded.

C.3: Excluded for this Profile IF CORE 41/1 “BR/EDR Core Configuration”.

C.4: Mandatory for this Profile.

C.5: Mandatory IF TMAP 1/7 “TMA Client” OR TMAP 1/8 “TMA Server”, otherwise Excluded.

2.3 Host configurations

Table 3: GAP Host Configuration Requirements

Item	Device Configuration	Reference	Status	Inter-Layer Dependency
1	GAP LE Host	[2] 4.3	M	[1] GAP 0b/2
2	GAP BR/EDR Host	[2] 4.9	O	[1] GAP 0b/1

Note: A TMAP BR/EDR/LE Host will need to select TMAP 3/1 and TMAP 3/2.

3 Profile support requirements

3.1 CAP Initiator/Commander roles

3.1.1 Call Gateway (CG)

3.1.1.1 CG versions

Table 10: X.Y Versions

Prerequisite: TMAP 1/1 “Call Gateway (CG)”

Item	Version	Reference	Status
1	TMAP v1.0	[2]	M

Table 11: X.Y.Z Versions

Prerequisite: TMAP 1/1 “Call Gateway (CG)”

Item	Version	Reference	Status
1	TMAP v1.0.1	[2][10]	C.1

C.1: Optional IF TMAP 10/1 “TMAP v1.0”, otherwise Excluded.

3.1.1.2 CG profile and service dependencies

Table 12: Call Gateway Profile and Service Dependencies

Prerequisite: TMAP 1/1 “Call Gateway (CG)”

Item	Service	Reference	Status	Inter-Layer Dependency
1	Common Audio Profile	[2] 3.1	M	[3] CAP
2	Basic Audio Profile	[2] 3.1	M	[4] BAP
3	Call Control Profile	[2] 3.1	M	[7] CCP

3.1.1.3 Role discovery requirements

Table 13: Role Discovery Requirements

Prerequisite: TMAP 1/1 “Call Gateway (CG)”

Item	Service	Reference	Status
1	Advertise Call Gateway Support	[2] 3.4	O

3.1.1.4 CG requirements

Table 14: CG Inter-Layer Dependency Role Requirements

Prerequisite: TMAP 1/1 "Call Gateway (CG)"

Item	External Roles	Reference	Status	Inter-Layer Dependency
CAP Roles				
1	CAP Initiator	[2] 3.1	M	[3] CAP 1/2
2	CAP Commander	[2] 3.1	M	[3] CAP 1/3
Content Control				
3	CCP Call Control Server	[2] 3.1	M	[3] CAP 16/5
Capture and Rendering Control				
4	VCP Volume Controller	[2] 3.1	M	[3] CAP 26/4
CAP Initiator Unicast Client Role Requirements				
5	Audio Source	[2] 3.1	M	[3] CAP 18/1
6	Audio Sink	[2] 3.1	M	[3] CAP 18/2
7	BAP Unicast Client	[2] 3.1	M	[3] CAP 16/3
Context Type Support Requirements				
8	Conversational (CAP Initiator)	[10] 3.5.1.1	C.1	[3] CAP 22/2

C.1: Mandatory IF TMAP 11/1 "TMAP v1.0.1", otherwise Optional.

Table 15: Call Gateway Config Codec Operation Parameters

Prerequisite: TMAP 1/1 "Call Gateway (CG)"

Item	Settings	Reference	Status	Inter-Layer Dependency
1	16_1 LC3: 16 kHz Sampling Frequency, 7.5 ms Frame Duration, 30 Octets (Audio Source)	[2] 3.5.1.4.2	O	[4] BAP 37/3
2	32_1 LC3: 32 kHz Sampling Frequency, 7.5 ms Frame Duration, 60 Octets (Audio Source)	[2] 3.5.1.4.2	O	[4] BAP 37/7
3	32_2 LC3: 32 kHz Sampling Frequency, 10 ms Frame Duration, 80 Octets (Audio Source)	[2] 3.5.1.4.1	M	[4] BAP 37/8
4	16_1 LC3: 16 kHz Sampling Frequency, 7.5 ms Frame Duration, 30 Octets (Audio Sink)	[2] 3.5.1.4.2	O	[4] BAP 36/3
5	32_1 LC3: 32 kHz Sampling Frequency, 7.5 ms Frame Duration, 60 Octets (Audio Sink)	[2] 3.5.1.4.2	O	[4] BAP 36/7
6	32_2 LC3: 32 kHz Sampling Frequency, 10 ms Frame Duration, 80 Octets (Audio Sink)	[2] 3.5.1.4.1	M	[4] BAP 36/8

Table 16: Call Gateway QoS Settings Requirements*Prerequisite: TMAP 1/1 “Call Gateway (CG)”*

Item	Audio Location Values	Reference	Status	Inter-Layer Dependency
1	16_1_1 LC3: 7500 SDU Interval, unframed, 30 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Source)	[2] 3.5.1.4.2	C.1	[4] BAP 39/3
2	32_1_1 LC3: 7500 SDU Interval, unframed, 60 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Source)	[2] 3.5.1.4.2	C.2	[4] BAP 39/7
3	32_2_1 LC3: 10000 SDU Interval, unframed, 80 Max SDU Size, 2 RTN, 10 Max_Transport_Latency (Audio Source)	[2] 3.5.1.4.2	M	[4] BAP 39/8
4	16_1_1 LC3: 7500 SDU Interval, unframed, 30 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Sink)	[2] 3.5.1.4.2	C.3	[4] BAP 38/3
5	32_1_1 LC3: 7500 SDU Interval, unframed, 60 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Sink)	[2] 3.5.1.4.2	C.4	[4] BAP 38/7
6	32_2_1 LC3: 10000 SDU Interval, unframed, 80 Max SDU Size, 2 RTN, 10 Max_Transport_Latency (Audio Sink)	[2] 3.5.1.4.2	M	[4] BAP 38/8

C.1: Mandatory IF TMAP 15/1 “16_1 LC3: 16 kHz Sampling Frequency, 7.5 ms Frame Duration, 30 Octets (Audio Source)”, otherwise not defined.

C.2: Mandatory IF TMAP 15/2 “32_1 LC3: 32 kHz Sampling Frequency, 7.5 ms Frame Duration, 60 Octets (Audio Source)”, otherwise not defined.

C.3: Mandatory IF TMAP 15/4 “16_1 LC3: 16 kHz Sampling Frequency, 7.5 ms Frame Duration, 30 Octets (Audio Sink)”, otherwise not defined.

C.4: Mandatory IF TMAP 15/5 “32_1 LC3: 32 kHz Sampling Frequency, 7.5 ms Frame Duration, 60 Octets (Audio Sink)”, otherwise not defined.

Table 17: Number of Concurrent Unicast Audio Streams, Channels, and Devices*Prerequisite: TMAP 1/1 “Call Gateway (CG)”*

Item	Configuration	Reference	Status
1	Configuration A: 1 bidirectional stream between CG and CT	[2] 3.5.1.5	M
2	Configuration B: 1 stream with 1 channel from CG to CT, 1 stream with 1 channel from 2nd CT to CG.	[2] 3.5.1.5	M
3	Configuration C: 1 stream with 1 channel from CG to CT, 1 bidirectional stream between CG and a 2nd CT	[2] 3.5.1.5	M
4	Configuration D: 1 stream with 1 channel from CG to CT, 1 bidirectional stream between CG and same CT	[2] 3.5.1.5	M
5	Configuration E: 1 bidirectional stream with 2 channels from CG to CT	[2] 3.5.1.5	O
6	Configuration F: 2 bidirectional streams between CG and CT	[2] 3.5.1.5	O
7	Configuration G: 1 bidirectional stream from CG to CT, 1 bidirectional stream between CG and a 2nd CT	[2] 3.5.1.5	O

Table 18: Call Gateway PACS Characteristic Support Requirements*Prerequisite: TMAP 1/1 “Call Gateway (CG)”*

Item	Characteristics	Reference	Status	Inter-Layer Dependency
1	Sink Audio Locations characteristic	[2] 3.5.1.2	M	[4] BAP 32/2
2	Source Audio Locations characteristic	[2] 3.5.1.2	M	[4] BAP 32/4

Table 19: Call Gateway Audio Channel Allocation Audio Location Values*Prerequisite: TMAP 1/1 “Call Gateway (CG)”*

Item	Audio Location Values	Reference	Status
1	Front Left Audio Location	[2] 3.5.1.4.1	O
2	Front Right Audio Location	[2] 3.5.1.4.1	O
3	Front Right and Front Left Audio Locations	[2] 3.5.1.4.1	C.1

C.1: Mandatory IF TMAP 17/5 “Configuration E: 1 bidirectional stream with 2 channels from CG to CT”, otherwise Excluded.

Table 20: Call Gateway Audio Input Features*Prerequisite: TMAP 1/1 “Call Gateway (CG)”*

Item	Features	Reference	Status
1	CG Audio Source accepts external mono input	[2] 3.5.1.5	O

3.1.2 Unicast Media Sender (UMS)

3.1.2.1 UMS versions

Table 30: X.Y Versions*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Version	Reference	Status
1	TMAP v1.0	[2]	M

Table 31: X.Y.Z Versions*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Version	Reference	Status
1	TMAP v1.0.1	[2][10]	C.1

C.1: Optional IF TMAP 30/1 “TMAP v1.0”, otherwise Excluded.

3.1.2.2 UMS profile and service dependencies

Table 32: UMS Profile and Service Dependencies

Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”

Item	Service	Reference	Status	Inter-Layer Dependency
1	Common Audio Profile	[2] 3.1	M	[3] CAP
2	Basic Audio Profile	[2] 3.1	M	[4] BAP
3	Media Control Profile	[2] 3.1	M	[6] MCP

3.1.2.3 Role discovery requirements

Table 33: Role Discovery Requirements

Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”

Item	Service	Reference	Status
1	Advertise Unicast Media Sender Support	[2] 3.4	O

3.1.2.4 UMS requirements

Table 34: UMS Inter-Layer Dependency Role Requirements

Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”

Item	External Roles	Reference	Status	Inter-Layer Dependency
CAP Roles				
1	CAP Initiator	[2] 3.1	M	[3] CAP 1/2
2	CAP Commander	[2] 3.1	M	[3] CAP 1/3
Content Control				
3	MCP Media Control Server	[2] 3.1	M	[3] CAP 16/6
Capture and Rendering Control				
4	VCP Volume Controller	[2] 3.1	M	[3] CAP 26/4
CAP Initiator Unicast Client Role Requirements				
5	Audio Source	[2] 3.1	M	[3] CAP 18/1
6	BAP Unicast Client	[2] 3.1	M	[3] CAP 16/3
Context Type Support Requirements				
7	Media (CAP Initiator)	[10] 3.5.1.1	C.1	[3] CAP 22/3

C.1: Mandatory IF TMAP 31/1 “TMAP v1.0.1”, otherwise Optional.

Table 35: Unicast Media Sender Config Codec Operation Parameters*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Settings	Reference	Status	Inter-Layer Dependency
1	48_1 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 75 Octets	[2] 3.5.1.4.2	O	[4] BAP 37/11
2	48_2 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 100 Octets	[2] 3.5.1.4.1	M	[4] BAP 37/12
3	48_3 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 90 Octets	[2] 3.5.1.4.2	O	[4] BAP 37/13
4	48_4 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 120 Octets	[2] 3.5.1.4.1	C.1	[4] BAP 37/14
5	48_5 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 117 Octets	[2] 3.5.1.4.2	O	[4] BAP 37/15
6	48_6 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 155 Octets	[2] 3.5.1.4.1	C.1	[4] BAP 37/16
7	441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets	[2] 3.5.1.4.2	O	[4] BAP 37/9
8	441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets	[2] 3.5.1.4.2	O	[4] BAP 37/10

C.1: Mandatory to support at least one.

Table 36: Unicast Media Sender QoS Settings Requirements*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Settings	Reference	Status	Inter-Layer Dependency
Low Latency Media				
1	48_1_1 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 5 RTN, 15 Max_Transport_Latency	[2] 3.5.1.4.2	C.1	[4] BAP 39/11
2	48_2_1 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 5 RTN, 20 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 39/12
3	48_3_1 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 5 RTN, 15 Max_Transport_Latency	[2] 3.5.1.4.2	C.2	[4] BAP 39/13
4	48_4_1 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 5 RTN, 20 Max_Transport_Latency	[2] 3.5.1.4.2	C.3	[4] BAP 39/14
5	48_5_1 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 5 RTN, 15 Max_Transport_Latency	[2] 3.5.1.4.2	C.4	[4] BAP 39/15
6	48_6_1 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 5 RTN, 20 Max_Transport_Latency	[2] 3.5.1.4.2	C.5	[4] BAP 39/16

Item	Settings	Reference	Status	Inter-Layer Dependency
7	441_1_1 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 5 RTN, 24 Max_Transport_Latency	[2] 3.5.1.4.2	C.6	[4] BAP 39/9
8	441_2_1 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 5 RTN, 31 Max_Transport_Latency	[2] 3.5.1.4.2	C.7	[4] BAP 39/10
High Reliability Media				
9	48_1_2 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 13 RTN, 75 Max_Transport_Latency	[2] 3.5.1.4.2	C.1	[4] BAP 41/11
10	48_2_2 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 13 RTN, 95 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 41/12
11	48_3_2 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 13 RTN, 75 Max_Transport_Latency	[2] 3.5.1.4.2	C.2	[4] BAP 41/13
12	48_4_2 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 13 RTN, 100 Max_Transport_Latency	[2] 3.5.1.4.2	C.3	[4] BAP 41/14
13	48_5_2 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 13 RTN, 75 Max_Transport_Latency	[2] 3.5.1.4.2	C.4	[4] BAP 41/15
14	48_6_2 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 13 RTN, 100 Max_Transport_Latency	[2] 3.5.1.4.2	C.5	[4] BAP 41/16
15	441_1_2 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 13 RTN, 80 Max_Transport_Latency	[2] 3.5.1.4.2	C.6	[4] BAP 41/9
16	441_2_2 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 13 RTN, 85 Max_Transport_Latency	[2] 3.5.1.4.2	C.7	[4] BAP 41/10

- C.1: Mandatory IF TMAP 35/1 “48_1 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 75 Octets”, otherwise not defined.
- C.2: Mandatory IF TMAP 35/3 “48_3 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 90 Octets”, otherwise not defined.
- C.3: Mandatory IF TMAP 35/4 “48_4 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 120 Octets”, otherwise not defined.
- C.4: Mandatory IF TMAP 35/5 “48_5 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 117 Octets”, otherwise not defined.
- C.5: Mandatory IF TMAP 35/6 “48_6 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 155 Octets”, otherwise not defined.
- C.6: Mandatory IF TMAP 35/7 “441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets”, otherwise not defined.
- C.7: Mandatory IF TMAP 35/8 “441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets”, otherwise not defined.

Table 37: Unicast Media Sender PACS Characteristic Support Requirements*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Characteristics	Reference	Status	Inter-Layer Dependency
1	Sink Audio Locations characteristic	[2] 3.5.1.2	M	[4] BAP 32/2

Table 38: Unicast Media Sender Audio Channel Allocation Audio Location Values*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Audio Location Values	Reference	Status
1	Front Left Audio Location	[2] 3.5.1.4.1	M
2	Front Right Audio Location	[2] 3.5.1.4.1	M
3	Front Right and Front Left Audio Locations	[2] 3.5.1.4.1	C.1

C.1: Mandatory IF TMAP 39/2 “AC 4: 1 Server, 1 Sink ASE, 2 Channels/Sink, 1 CIS, 1 Audio Stream”, otherwise Excluded.

Table 39: Unicast Media Sender BAP Audio Configuration*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Two Audio Channels	[2] 3.5.1.4.1	O	[4] BAP 30/3
2	AC 4: 1 Server, 1 Sink ASE, 2 Channels/Sink, 1 CIS, 1 Audio Stream	[2] 3.5.1.4.1	C.1	[4] BAP 44/4

C.1: Optional IF TMAP 39/1 “Two Audio Channels”, otherwise not defined.

Table 40: GMCS Generic Media Control Point Opcodes*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Sub-procedure	Reference	Status	Inter-Layer Dependency
1	Play	[2] 3.6.1	M	[9] MCS 23/1
2	Pause	[2] 3.6.1	M	[9] MCS 23/2

Table 41: Call Gateway Audio Input Features*Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)”*

Item	Features	Reference	Status
1	UMS Audio Source accepts external mono input	[2] 3.5.1.5	O

3.1.3 Broadcast Media Sender (BMS)

3.1.3.1 BMS versions

Table 50: X.Y Versions

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Version	Reference	Status
1	TMAP v1.0	[2]	M

Table 51: X.Y.Z Versions

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Version	Reference	Status
1	TMAP v1.0.1	[2][10]	C.1

C.1: Optional IF TMAP 50/1 “TMAP v1.0”, otherwise Excluded.

3.1.3.2 BMS Profile and Service Dependencies

Table 52: BMS Profile and Service Dependencies

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Service	Reference	Status	Inter-Layer Dependency
1	Common Audio Profile	[2] 3.1	M	[3] CAP
2	Basic Audio Profile	[2] 3.1	M	[4] BAP

3.1.3.3 Role discovery requirements

Table 53: Role Discovery Requirements

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)” AND TMAP 1/8 “TMA Server”

Item	Service	Reference	Status
1	Advertise Broadcast Media Sender Support	[2] 3.4	O

3.1.3.4 BMS requirements

Table 54: BMS Inter-Layer Dependency Role Requirements

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	External Roles	Reference	Status	Inter-Layer Dependency
CAP Roles				
1	CAP Initiator	[2] 3.1	M	[3] CAP 1/2
2	CAP Commander	[2] 3.1	C.1	[3] CAP 1/3
CAP Audio Stream Transition				
3	BAP Broadcast Source	[2] 3.1	M	[3] CAP 16/2

Item	External Roles	Reference	Status	Inter-Layer Dependency
4	BAP Broadcast Assistant	[2] 3.5.2.5	C.2	[3] CAP 26/2
Context Type Support Requirements				
5	Media (BAP Broadcast Source)	[10] 3.5.2.1	C.3	[4] BAP 59/3

C.1: Mandatory IF TMAP 1/3 “Unicast Media Sender (UMS)”, otherwise Optional.

C.2: Mandatory IF TMAP 1/3 “Unicast Media Sender (UMS)”, otherwise not defined.

C.3: Mandatory IF TMAP 51/1 “TMAP v1.0.1”, otherwise Optional.

Table 55: Broadcast Media Sender Codec Settings Requirements

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Settings	Reference	Status	Inter-Layer Dependency
1	48_1 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 75 Octets	[2] 3.5.2.1	M	[4] BAP 54/11
2	48_2 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 100 Octets	[2] 3.5.2.1	M	[4] BAP 54/12
3	48_3 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 90 Octets	[2] 3.5.2.1	C.1	[4] BAP 54/13
4	48_4 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 120 Octets	[2] 3.5.2.1	C.2	[4] BAP 54/14
5	48_5 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 117 Octets	[2] 3.5.2.1	C.1	[4] BAP 54/15
6	48_6 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 155 Octets	[2] 3.5.2.1	C.2	[4] BAP 54/16
7	441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets	[2] 3.5.2.3	O	[4] BAP 54/9
8	441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets	[2] 3.5.2.3	O	[4] BAP 54/10

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

Table 56: Broadcast Media Sender QoS Settings Requirements

Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Settings	Reference	Status	Inter-Layer Dependency
Low Latency Media				
1	48_1_1 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 4 RTN, 15 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 55/11
2	48_2_1 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 4 RTN, 20 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 55/12

Item	Settings	Reference	Status	Inter-Layer Dependency
3	48_3_1 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 4 RTN, 15 Max_Transport_Latency	[2] 3.5.2.3	C.1	[4] BAP 55/13
4	48_4_1 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 4 RTN, 20 Max_Transport_Latency	[2] 3.5.2.3	C.2	[4] BAP 55/14
5	48_5_1 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 4 RTN, 15 Max_Transport_Latency	[2] 3.5.2.3	C.3	[4] BAP 55/15
6	48_6_1 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 4 RTN, 20 Max_Transport_Latency	[2] 3.5.2.3	C.4	[4] BAP 55/16
7	441_1_1 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 4 RTN, 24 Max_Transport_Latency	[2] 3.5.2.3	C.5	[4] BAP 55/9
8	441_2_1 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 4 RTN, 31 Max_Transport_Latency	[2] 3.5.2.3	C.6	[4] BAP 55/10
High Reliability Media				
9	48_1_2 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 4 RTN, 50 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 56/11
10	48_2_2 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 4 RTN, 65 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 56/12
11	48_3_2 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 4 RTN, 50 Max_Transport_Latency	[2] 3.5.2.3	C.1	[4] BAP 56/13
12	48_4_2 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 4 RTN, 65 Max_Transport_Latency	[2] 3.5.2.3	C.2	[4] BAP 56/14
13	48_5_2 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 4 RTN, 50 Max_Transport_Latency	[2] 3.5.2.3	C.3	[4] BAP 56/15
14	48_6_2 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 4 RTN, 65 Max_Transport_Latency	[2] 3.5.2.3	C.4	[4] BAP 56/16
15	441_1_2 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 4 RTN, 54 Max_Transport_Latency	[2] 3.5.2.3	C.5	[4] BAP 56/9
16	441_2_2 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 4 RTN, 60 Max_Transport_Latency	[2] 3.5.2.3	C.6	[4] BAP 56/10

C.1: Mandatory IF TMAP 55/3 “48_3 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 90 Octets”, otherwise not defined.

C.2: Mandatory IF TMAP 55/4 “48_4 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 120 Octets”, otherwise not defined.

C.3: Mandatory IF TMAP 55/5 “48_5 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 117 Octets”, otherwise not defined.



- C.4: Mandatory IF TMAP 55/6 “48_6 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 155 Octets”, otherwise not defined.
- C.5: Mandatory IF TMAP 55/7 “441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets”, otherwise not defined.
- C.6: Mandatory IF TMAP 55/8 “441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets”, otherwise not defined.

Table 57: Broadcast Media Sender Audio Channel Allocation Audio Location Values*Prerequisite: TMAP 1/5 “Broadcast Media Sender (BMS)”*

Item	Audio Location Values	Reference	Status
1	Front Left Audio Location	[2] 3.5.2.2	M
2	Front Right Audio Location	[2] 3.5.2.2	M
3	Front Right and Front Left Audio Locations	[2] 3.5.2.2	O

3.2 CAP Acceptor/Commander roles

3.2.1 Call Terminal (CT)

3.2.1.1 CT versions

Table 70: X.Y Versions*Prerequisite: TMAP 1/2 “Call Terminal (CT)”*

Item	Version	Reference	Status
1	TMAP v1.0	[2]	M

Table 71: X.Y.Z Versions*Prerequisite: TMAP 1/2 “Call Terminal (CT)”*

Item	Version	Reference	Status
1	TMAP v1.0.1	[2][10]	C.1

C.1: Optional IF TMAP 70/1 “TMAP v1.0”, otherwise Excluded.

3.2.1.2 CT profile and service dependencies

Table 72: CT Profile and Service Dependencies*Prerequisite: TMAP 1/2 “Call Terminal (CT)”*

Item	Service	Reference	Status	Inter-Layer Dependency
1	Common Audio Profile	[2] 3.1	M	[3] CAP
2	Basic Audio Profile	[2] 3.1	M	[4] BAP

3.2.1.3 Role discovery requirements

Table 73: Role Discovery Requirements

Prerequisite: TMAP 1/2 “Call Terminal (CT)”

Item	Service	Reference	Status
1	Advertise Call Terminal Support	[2] 3.4	O

3.2.1.4 CT requirements

Table 74: CT Inter-Layer Dependency Role Requirements

Prerequisite: TMAP 1/2 “Call Terminal (CT)”

Item	External Roles	Reference	Status	Inter-Layer Dependency
CAP Roles				
1	CAP Acceptor	[2] 3.1	M	[3] CAP 1/1
2	CAP Commander	[2] 3.1	O	[3] CAP 1/3
Capture and Rendering Control				
3	VCP Volume Renderer	[2] 3.1	C.1	[3] CAP 6/5
BAP Unicast Server Role Requirements				
4	BAP Audio Sink	[2] 3.1	C.2	[4] BAP 8/1
5	BAP Audio Source	[2] 3.1	C.2	[4] BAP 8/2
6	BAP Unicast Server	[2] 3.1	M	[3] CAP 6/4
Context Type Support Requirements				
7	Conversational (BAP Audio Sink)	[10] 3.5.1.1	C.3	[4] BAP 21/2
8	Conversational (BAP Audio Source)	[10] 3.5.1.1	C.4	[4] BAP 22/2

C.1: Mandatory IF TMAP 74/4 “BAP Audio Sink”, otherwise not defined.

C.2: Mandatory to support at least one.

C.3: Mandatory IF TMAP 71/1 “TMAP v1.0.1” AND TMAP 74/4 “BAP Audio Sink”, otherwise Optional.

C.4: Mandatory IF TMAP 71/1 “TMAP v1.0.1” AND TMAP 74/5 “BAP Audio Source”, otherwise Optional.

Table 75: Call Terminal PAC Records

Prerequisite: TMAP 1/2 “Call Terminal (CT)”

Item	Record	Reference	Status	Inter-Layer Dependency
1	16_1 LC3: 16 kHz Sampling Frequency, 7.5 ms Frame Duration, 30 Octets (Audio Sink)	[2] 3.5.1.1	C.1	[4] BAP 12/3
2	32_1 LC3: 32 kHz Sampling Frequency, 7.5 ms Frame Duration, 60 Octets (Audio Sink)	[2] 3.5.1.1	C.1	[4] BAP 12/7
3	32_2 LC3: 32 kHz Sampling Frequency, 10 ms Frame Duration, 80 Octets (Audio Sink)	[2] 3.5.1.1	C.1	[4] BAP 12/8
4	16_1 LC3: 16 kHz Sampling Frequency, 7.5 ms Frame Duration, 30 Octets (Audio Source)	[2] 3.5.1.1	C.2	[4] BAP 13/3

Item	Record	Reference	Status	Inter-Layer Dependency
5	32_1 LC3: 32 kHz Sampling Frequency, 7.5 ms Frame Duration, 60 Octets (Audio Source)	[2] 3.5.1.1	C.2	[4] BAP 13/7
6	32_2 LC3: 32 kHz Sampling Frequency, 10 ms Frame Duration, 80 Octets (Audio Source)	[2] 3.5.1.1	C.2	[4] BAP 13/8

C.1: Mandatory IF TMAP 74/4 “BAP Audio Sink”, otherwise not defined.

C.2: Mandatory IF TMAP 74/5 “BAP Audio Source”, otherwise not defined.

Table 76: Call Terminal QoS Settings Requirements

Prerequisite: TMAP 1/2 “Call Terminal (CT)”

Item	Settings	Reference	Status	Inter-Layer Dependency
1	16_1_1 LC3: 7500 SDU Interval, unframed, 30 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Sink)	[2] 3.5.1.4.2	C.1	[4] BAP 14/3
2	32_1_1 LC3: 7500 SDU Interval, unframed, 60 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Sink)	[2] 3.5.1.4.2	C.1	[4] BAP 14/7
3	32_2_1 LC3: 10000 SDU Interval, unframed, 80 Max SDU Size, 2 RTN, 10 Max_Transport_Latency (Audio Sink)	[2] 3.5.1.4.2	C.1	[4] BAP 14/8
4	16_1_1 LC3: 7500 SDU Interval, unframed, 30 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Source)	[2] 3.5.1.4.2	C.2	[4] BAP 15/3
5	32_1_1 LC3: 7500 SDU Interval, unframed, 60 Max SDU Size, 2 RTN, 8 Max_Transport_Latency (Audio Source)	[2] 3.5.1.4.2	C.2	[4] BAP 15/7
6	32_2_1 LC3: 10000 SDU Interval, unframed, 80 Max SDU Size, 2 RTN, 10 Max_Transport_Latency (Audio Source)	[2] 3.5.1.4.2	C.2	[4] BAP 15/8

C.1: Mandatory IF TMAP 74/4 “BAP Audio Sink”, otherwise not defined.

C.2: Mandatory IF TMAP 74/5 “BAP Audio Source”, otherwise not defined.

Table 77: Number of Audio Outputs

Prerequisite: TMAP 1/2 “Call Terminal (CT)”

Item	Number	Reference	Status
1	1 audio output	[2] 3.5.1.5	M
2	2 or more audio outputs	[2] 3.5.1.5	O

Table 78: Number of Concurrent Unicast Audio Streams, Channels, and Devices*Prerequisite: TMAP 1/2 “Call Terminal (CT)”*

Item	Configuration	Reference	Status
1	Configuration D: 1 stream with 1 channel from CG to CT, 1 bidirectional stream between CG and CT	[2] 3.5.1.5	C.1
2	Configuration E: 1 bidirectional stream with 2 channels from CG to CT	[2] 3.5.1.5	C.2
3	Configuration F: 2 bidirectional streams between CG and CT	[2] 3.5.1.5	C.2

C.1: Mandatory IF TMAP 74/4 “BAP Audio Sink” AND TMAP 74/5 “BAP Audio Source” AND TMAP 77/2 “2 or more audio outputs”, otherwise Excluded.

C.2: Optional IF TMAP 74/4 “BAP Audio Sink” AND TMAP 74/5 “BAP Audio Source” AND TMAP 77/2 “2 or more audio outputs”, otherwise Excluded.

Table 79: Call Terminal Multi-Stream Configurations*Prerequisite: TMAP 1/2 “Call Terminal (CT)”*

Item	Configuration	Reference	Status
1	Case 1: Multiple CT audio sink devices each with a single ASE	[2] 3.7	C.1
2	Case 2: A single CT audio sink device with multiple ASEs	[2] 3.7	C.1, C.2

C.1: Mandatory to support at least one.

C.2: Mandatory IF TMAP 77/2 “2 or more audio outputs”, otherwise Excluded.

3.2.2 Unicast Media Receiver (UMR)

3.2.2.1 UMR versions

Table 90: X.Y Versions*Prerequisite: TMAP 1/4 “Unicast Media Receiver (UMR)”*

Item	Version	Reference	Status
1	TMAP v1.0	[2]	M

Table 91: X.Y.Z Versions*Prerequisite: TMAP 1/4 “Unicast Media Receiver (UMR)”*

Item	Version	Reference	Status
1	TMAP v1.0.1	[2][10]	C.1

C.1: Optional IF TMAP 90/1 “TMAP v1.0”, otherwise Excluded.

3.2.2.2 UMR profile and service dependencies

Table 92: UMR Profile and Service Dependencies

Prerequisite: TMAP 1/4 "Unicast Media Receiver (UMR)"

Item	Service	Reference	Status	Inter-Layer Dependency
1	Common Audio Profile	[2] 3.1	M	[3] CAP
2	Basic Audio Profile	[2] 3.1	M	[4] BAP

3.2.2.3 Role discovery requirements

Table 93: Role Discovery Requirements

Prerequisite: TMAP 1/4 "Unicast Media Receiver (UMR)"

Item	Service	Reference	Status
1	Advertise Unicast Media Receiver Support	[2] 3.4	O

3.2.2.4 UMR requirements

Table 94: UMR Inter-Layer Dependency Role Requirements

Prerequisite: TMAP 1/4 "Unicast Media Receiver (UMR)"

Item	External Roles	Reference	Status	Inter-Layer Dependency
CAP Roles				
1	CAP Acceptor	[2] 3.1	M	[3] CAP 1/1
2	CAP Commander	[2] 3.1	O	[3] CAP 1/3
Capture and Rendering Control				
3	VCP Volume Renderer	[2] 3.1	M	[3] CAP 6/5
BAP Unicast Server Role Requirements				
4	BAP Audio Sink	[2] 3.1	M	[4] BAP 8/1
5	BAP Unicast Server	[2] 3.1	M	[3] CAP 6/4
Context Type Support Requirements				
6	Media (BAP Audio Sink)	[10] 3.5.1.1	C.1	[4] BAP 21/3

C.1: Mandatory IF TMAP 91/1 "TMAP v1.0.1", otherwise Optional.

Table 95: Unicast Media Receiver PAC Records

Prerequisite: TMAP 1/4 "Unicast Media Receiver (UMR)"

Item	Record	Reference	Status	Inter-Layer Dependency
1	48_1 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 75 Octets	[2] 3.5.1.1	M	[4] BAP 12/11
2	48_2 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 100 Octets	[2] 3.5.1.1	M	[4] BAP 12/12

Item	Record	Reference	Status	Inter-Layer Dependency
3	48_3 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 90 Octets	[2] 3.5.1.1	M	[4] BAP 12/13
4	48_4 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 120 Octets	[2] 3.5.1.1	M	[4] BAP 12/14
5	48_5 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 117 Octets	[2] 3.5.1.1	M	[4] BAP 12/15
6	48_6 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 155 Octets	[2] 3.5.1.1	M	[4] BAP 12/16
7	441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets	[2] 3.5.1.4.2	O	[4] BAP 12/9
8	441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets	[2] 3.5.1.4.2	O	[4] BAP 12/10

Table 96: Unicast Media Receiver QoS Settings Requirements

Prerequisite: TMAP 1/4 "Unicast Media Receiver (UMR)"

Item	Settings	Reference	Status	Inter-Layer Dependency
Low Latency Media				
1	48_1_1 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 5 RTN, 15 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 14/11
2	48_2_1 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 5 RTN, 20 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 14/12
3	48_3_1 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 5 RTN, 15 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 14/13
4	48_4_1 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 5 RTN, 20 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 14/14
5	48_5_1 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 5 RTN, 15 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 14/15
6	48_6_1 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 5 RTN, 20 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 14/16
7	441_1_1 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 5 RTN, 24 Max_Transport_Latency	[2] 3.5.1.4.2	C.1	[4] BAP 14/9
8	441_2_1 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 5 RTN, 31 Max_Transport_Latency	[2] 3.5.1.4.2	C.2	[4] BAP 14/10
High Reliability Media				
9	48_1_2 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 13 RTN, 75 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 16/11

Item	Settings	Reference	Status	Inter-Layer Dependency
10	48_2_2 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 13 RTN, 95 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 16/12
11	48_3_2 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 13 RTN, 75 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 16/13
12	48_4_2 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 13 RTN, 100 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 16/14
13	48_5_2 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 13 RTN, 75 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 16/15
14	48_6_2 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 13 RTN, 100 Max_Transport_Latency	[2] 3.5.1.4.2	M	[4] BAP 16/16
15	441_1_2 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 13 RTN, 80 Max_Transport_Latency	[2] 3.5.1.4.2	C.1	[4] BAP 16/9
16	441_2_2 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 13 RTN, 85 Max_Transport_Latency	[2] 3.5.1.4.2	C.2	[4] BAP 16/10

C.1: Mandatory IF TMAP 95/7 “441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets”, otherwise not defined.

C.2: Mandatory IF TMAP 95/8 “441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets”, otherwise not defined.

Table 97: Unicast Media Receiver PACS Characteristic Support Requirements

Prerequisite: TMAP 1/4 “Unicast Media Receiver (UMR)”

Item	Characteristics	Reference	Status	Inter-Layer Dependency
1	Sink Audio Locations characteristic	[2]	M	[4] BAP 9/2
2	Multiple Sink Audio Locations	[2] 3.5.1.5	O	[4] BAP 9/7

Table 98: Unicast Media Receiver Sink Audio Locations Values

Prerequisite: TMAP 1/4 “Unicast Media Receiver (UMR)”

Item	Sink Audio Location Bit Values	Reference	Status
1	Front Left Sink Audio Location	[2] 3.5.1.2.1	C.1
2	Front Right Sink Audio Location	[2] 3.5.1.2.1	C.1
3	Front Right and Front Left Sink Audio Locations	[2] 3.5.1.2.1	C.1

C.1: Mandatory to support at least one.

Table 99: Number of Audio Outputs*Prerequisite: TMAP 1/4 “Unicast Media Receiver (UMR)”*

Item	Number	Reference	Status
1	1 audio output	[2] 3.7	M
2	2 or more audio outputs	[2] 3.7	O

Table 100: Unicast Media Receiver Multi-Stream Configurations*Prerequisite: TMAP 1/4 “Unicast Media Receiver (UMR)”*

Item	Configuration	Reference	Status
1	Case 1: Multiple UMR audio sink devices each with a single ASE	[2] 3.7	C.1
2	Case 2: A single UMR audio sink device with multiple ASEs	[2] 3.7	C.1, C.2

C.1: Mandatory to support at least one.

C.2: Mandatory IF TMAP 99/2 “2 or more audio outputs”, otherwise Excluded.

3.2.3 Broadcast Media Receiver (BMR)

3.2.3.1 BMR versions

Table 110: X.Y Versions*Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”*

Item	Version	Reference	Status
1	TMAP v1.0	[2]	M

Table 111: X.Y.Z Versions*Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”*

Item	Version	Reference	Status
1	TMAP v1.0.1	[2][10]	C.1

C.1: Optional IF TMAP 110/1 “TMAP v1.0”, otherwise Excluded.

3.2.3.2 BMR profile and service dependencies

Table 112: BMR Profile and Service Dependencies*Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”*

Item	Service	Reference	Status	Inter-Layer Dependency
1	Common Audio Profile	[2] 3.1	M	[3] CAP
2	Basic Audio Profile	[2] 3.1	M	[4] BAP

3.2.3.3 Role discovery requirements

Table 113: Role Discovery Requirements

Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	Service	Reference	Status
1	Advertise Broadcast Media Receiver Support	[2] 3.4	O

3.2.3.4 BMR requirements

Table 114: BMR Inter-Layer Dependency Role Requirements

Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	External Roles	Reference	Status	Inter-Layer Dependency
CAP Roles				
1	CAP Acceptor	[2] 3.1	M	[3] CAP 1/1
2	CAP Commander	[2] 3.1	O	[3] CAP 1/3
Capture and Rendering Control				
3	VCP Volume Renderer	[2] 3.1	M	[3] CAP 6/5
CAP Audio Stream Transition				
4	BAP Broadcast Sink	[2] 3.1	M	[4] BAP 1/4
Context Type Support Requirements				
5	Media (BAP Broadcast Sink)	[10] 3.5.2.1	C.1	[4] BAP 73/3

C.1: Mandatory IF TMAP 111/1 “TMAP v1.0.1”, otherwise Optional.

Table 115: Broadcast Media Receiver Codec Settings Requirements

Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	Settings	Reference	Status	Inter-Layer Dependency
1	48_1 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 75 Octets	[2] 3.5.2.1	M	[4] BAP 68/11
2	48_2 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 100 Octets	[2] 3.5.2.1	M	[4] BAP 68/12
3	48_3 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 90 Octets	[2] 3.5.2.1	M	[4] BAP 68/13
4	48_4 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 120 Octets	[2] 3.5.2.1	M	[4] BAP 68/14
5	48_5 LC3: 48 kHz Sampling Frequency, 7.5 ms Frame Duration, 117 Octets	[2] 3.5.2.1	M	[4] BAP 68/15
6	48_6 LC3: 48 kHz Sampling Frequency, 10 ms Frame Duration, 155 Octets	[2] 3.5.2.1	M	[4] BAP 68/16
7	441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets	[2] 3.5.2.3	O	[4] BAP 68/9
8	441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets	[2] 3.5.2.3	O	[4] BAP 68/10



Table 116: Broadcast Media Receiver QoS Settings Requirements*Prerequisite: TMAP 1/6 "Broadcast Media Receiver (BMR)"*

Item	Settings	Reference	Status	Inter-Layer Dependency
Low Latency Media				
1	48_1_1 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 4 RTN, 15 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 69/11
2	48_2_1 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 4 RTN, 20 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 69/12
3	48_3_1 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 4 RTN, 15 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 69/13
4	48_4_1 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 4 RTN, 20 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 69/14
5	48_5_1 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 4 RTN, 15 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 69/15
6	48_6_1 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 4 RTN, 20 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 69/16
7	441_1_1 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 4 RTN, 24 Max_Transport_Latency	[2] 3.5.2.3	C.1	[4] BAP 69/9
8	441_2_1 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 4 RTN, 31 Max_Transport_Latency	[2] 3.5.2.3	C.2	[4] BAP 69/10
High Reliability Media				
9	48_1_2 LC3: 7500 SDU Interval, unframed, 75 Max SDU Size, 4 RTN, 50 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 70/11
10	48_2_2 LC3: 10000 SDU Interval, unframed, 100 Max SDU Size, 4 RTN, 65 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 70/12
11	48_3_2 LC3: 7500 SDU Interval, unframed, 90 Max SDU Size, 4 RTN, 50 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 70/13
12	48_4_2 LC3: 10000 SDU Interval, unframed, 120 Max SDU Size, 4 RTN, 65 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 70/14
13	48_5_2 LC3: 7500 SDU Interval, unframed, 117 Max SDU Size, 4 RTN, 50 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 70/15
14	48_6_2 LC3: 10000 SDU Interval, unframed, 155 Max SDU Size, 4 RTN, 65 Max_Transport_Latency	[2] 3.5.2.3	M	[4] BAP 70/16

Item	Settings	Reference	Status	Inter-Layer Dependency
15	441_1_2 LC3: 8163 SDU Interval, framed, 97 Max SDU Size, 4 RTN, 54 Max_Transport_Latency	[2] 3.5.2.3	C.1	[4] BAP 70/9
16	441_2_2 LC3: 10884 SDU Interval, framed, 130 Max SDU Size, 4 RTN, 60 Max_Transport_Latency	[2] 3.5.2.3	C.2	[4] BAP 70/10

C.1: Mandatory IF TMAP 115/7 “441_1 LC3: 44.1 kHz Sampling Frequency, 8.163 ms Frame Duration, 97 Octets”, otherwise not defined.

C.2: Mandatory IF TMAP 115/8 “441_2 LC3: 44.1 kHz Sampling Frequency, 10.884 ms Frame Duration, 130 Octets”, otherwise not defined.

Table 117: BMR Codec Specific Audio Capability Support

Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	Settings	Reference	Status	Inter-Layer Dependency
1	Multiple Audio Locations	[2] 3.5.2.	O	[4] BAP 66/1
2	Two Audio Channels	[2] 3.5.2	O	[4] BAP 66/2

Table 118: BMR Audio Location Values

Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	Audio Location Values	Reference	Status
1	Front Left Audio Location	[2] 3.5.2.2	C.1
2	Front Right Audio Location	[2] 3.5.2.2	C.1
3	Front Right and Front Left Audio Locations	[2] 3.5.2.2	C.1

C.1: Mandatory to support at least one.

Table 119: Number of Audio Outputs

Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	Number	Reference	Status
1	1 audio output	[2] 3.7	M
2	2 or more audio outputs	[2] 3.7	O

Table 120: LC3 Audio Configuration*Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”*

Item	Characteristics	Reference	Status	Inter-Layer Dependency
1	AC14: 1 BIS, Multiple Audio Channels/BIS, 1 Audio Stream	[2]	C.1	[4] BAP 72/3

C.1: Mandatory IF TMAP 117/1 “Multiple Audio Locations” AND TMAP 117/2 “Two Audio Channels”, otherwise not defined.

Table 121: Multi-Stream Configurations*Prerequisite: TMAP 1/6 “Broadcast Media Receiver (BMR)”*

Item	Configuration	Reference	Status
1	Case 5: Multiple BMR devices, each synchronized to a single BIS	[2] 3.7	C.1
2	Case 6: A single BMR device synchronized to multiple BISes	[2] 3.7	C.1, C.2

C.1: Mandatory to support at least one.

C.2: Mandatory IF TMAP 119/2 “2 or more audio outputs”, otherwise Excluded.

4 Audio, Link Layer and HCI features

4.1 Audio, Link Layer and HCI features

Table 130: CAP Procedure Requirements

Prerequisite: TMAP 1/3 “Unicast Media Sender (UMS)” AND TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	Unicast to Broadcast Handover Support (Initiator)	[2] 3.5.2.5	M	[3] CAP 17/3
2	Broadcast to Unicast Handover Support (Initiator)	[2] 3.5.2.5	M	[3] CAP 17/4
3	Unicast to Broadcast Handover Support (Commander)	[2] 3.5.2.5	M	[3] CAP 27/2
4	Broadcast to Unicast Handover Support (Commander)	[2] 3.5.2.5	M	[3] CAP 27/3

Table 131: Link Layer and HCI Features

Prerequisite: TMAP 1/1 “Call Gateway (CG)” OR TMAP 1/2 “Call Terminal (CT)” OR TMAP 1/3 “Unicast Media Sender (UMS)” OR TMAP 1/4 “Unicast Media Receiver (UMR)” OR TMAP 1/5 “Broadcast Media Sender (BMS)” OR TMAP 1/6 “Broadcast Media Receiver (BMR)”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE 2M PHY	[2] 3.2	M	[8] LL 9/7
2	No longer used.	N/A	N/A	N/A

5 Content control

5.1 MCP Server function

Table 140: MCS Media Control Point Opcodes

Prerequisite: TMAP 1/1 “Call Gateway (CG)” OR TMAP 1/3 “Unicast Media Sender (UMS)” OR TMAP 1/5 “Broadcast Media Sender (BMS)”

Item	Sub-procedure	Reference	Status	Inter-Layer Dependency
1	Play	[2] 3.6.1	C.1	[9] MCS 3/1
2	Pause	[2] 3.6.1	C.1	[9] MCS 3/2
3	Media Control Service	[2] 3.6.1	O	[9] MCS 0b/1

C.1: Mandatory IF TMAP 140/3 “Media Control Service”, otherwise not defined.

6 Telephony and Media Audio Client and Server

6.1 Telephony and Media Audio Client requirements

6.1.1 Client service requirements

Table 150: TMA Service Characteristic Support Requirements

Prerequisite: TMAP 1/7 “TMA Client”

Item	Capability	Reference	Status
1	TMAP Role Characteristic	[2] 4.7.1	M

6.1.2 Client GATT requirements

Table 151: GATT Requirements

Prerequisite: TMAP 1/7 “TMA Client”

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Client over LE	[2] 3.8	M	[5] GATT 1a/1
1a	GATT Client over BR/EDR	[2] 3.8	C.3	[5] GATT 1a/2
2	Discover All Primary Services	[2] 3.8.1.3	C.1	[5] GATT 3/2
3	Discover Primary Services by Service UUID	[2] 3.8.1.3	C.1	[5] GATT 3/3
4	Discover All Characteristics of a Service	[2] 3.8.1.3	C.2	[5] GATT 3/5
5	Discover Characteristics by UUID	[2] 3.8.1.3	C.2	[5] GATT 3/6
6	Read Characteristic Value	[2] 3.8.1.3	M	[5] GATT 3/8

C.1: Mandatory to support at least one.

C.2: Mandatory to support at least one.

C.3: Mandatory IF TMAP 2/1a “Service TMA supported over BR/EDR”, otherwise not defined.

6.2 Telephony and Media Audio Server requirements

6.2.1 Service requirements

Table 152: Service Characteristic

Prerequisite: TMAP 1/8 “TMA Server”

Item	Capability	Reference	Status
1	TMAP Role Characteristic	[2] 4.7.1	M

Table 153: TMAP Role Support*Prerequisite: TMAP 152/1 “TMAP Role Characteristic”*

Item	Profile Role Support	Reference	Status
1	Call Gateway Support	[2] 4.7.1.2	C.1
2	Call Terminal Support	[2] 4.7.1.2	C.2
3	Unicast Media Sender Support	[2] 4.7.1.2	C.3
4	Unicast Media Receiver Support	[2] 4.7.1.2	C.4
5	Broadcast Media Sender Support	[2] 4.7.1.2	C.5
6	Broadcast Media Receiver Support	[2] 4.7.1.2	C.6

C.1: Mandatory IF TMAP 1/1 “Call Gateway (CG)”, otherwise Excluded.

C.2: Mandatory IF TMAP 1/2 “Call Terminal (CT)”, otherwise Excluded.

C.3: Mandatory IF TMAP 1/3 “Unicast Media Sender (UMS)”, otherwise Excluded.

C.4: Mandatory IF TMAP 1/4 “Unicast Media Receiver (UMR)”, otherwise Excluded.

C.5: Mandatory IF TMAP 1/5 “Broadcast Media Sender (BMS)”, otherwise Excluded.

C.6: Mandatory IF TMAP 1/6 “Broadcast Media Receiver (BMR)”, otherwise Excluded.

6.2.2 Server GATT requirements

Table 154: GATT Requirements*Prerequisite: TMAP 1/8 “TMA Server”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	GATT Server over LE	[2] 4.8	M	[5] GATT 1a/3
2	GATT Server over BR/EDR	[2] 4.8	C.1	[5] GATT 1a/4

C.1: Mandatory IF TMAP 2/1a “Service TMA supported over BR/EDR”, otherwise not defined.

6.2.3 SDP requirements

Table 155: SDP Requirements*Prerequisite: TMAP 1/8 “TMA Server” AND TMAP 2/1a “Service TMA supported over BR/EDR”*

Item	Feature	Reference	Status
1	SDP record present for TMAP	[2] 4.9	M
2–4	No longer used	N/A	N/A

6.3 GAP requirements

Table 156: GAP Requirements*Prerequisite: TMAP 1/7 “TMA Client” OR TMAP 1/8 “TMA Server”*

Item	Capability	Reference	Status	Inter-Layer Dependency
1	LE security mode 1	[2] 4.8	M	[1] GAP 25/1 OR GAP 35/1

7 References

- [1] ICS Proforma for Generic Access Profile (GAP)
- [2] Telephony and Media Audio Profile (TMAP) Specification, Version 1.0 or later
- [3] ICS Proforma for Common Audio Profile (CAP)
- [4] ICS Proforma for Basic Audio Profile (BAP)
- [5] ICS Proforma for Generic Attribute Profile (GATT)
- [6] ICS Proforma for Media Control Profile (MCP)
- [7] ICS Proforma for Call Control Profile (CCP)
- [8] ICS Proforma for Link Layer (LL)
- [9] ICS Proforma for Media Control Service (MCS)
- [10] Telephony and Media Audio Profile (TMAP) Specification, Version 1.0.1

8 Revision history and acknowledgments

Revision History

Publication Number	Revision Number	Date	Comments
0	p0	2022-06-14	Adopted by the BoD on 2022-06-11. Prepared for initial publication.
	p1r00–r07	2023-08-09 – 2024-04-08	TSE 23095 (rating 2): Added BAP Unicast Client/Server role dependencies, items 14/7, 34/6, 74/6, and 94/5. TSE 23681 (rating 1): To support resolving SDP ILDs, removed references to LL and HCI parts of Core v5.2 or later from the References section, updated Table 155 by removing the ILD column, revising the Feature description for 155/1, and deleting 155/2, 155/3, and 155/4. Editorials throughout to align the document with the latest ICS conventions. TSE 24101 (rating 1): Removed the GMCS ICS from the References section. Updated 40/1 and 40/2 ILDs from GMCS to MCS. TSE 24549 (rating 1): Updated 131/2 to “No longer used” and removed associated conditional C.1. TSE 24613 (rating 2): Updated settings in Table 36. TSE 25098 (rating 2): Added 140/3 and updated the prerequisite for Table 140 and the C.1 conditional to clarify the MCS ILDs.
1	p1	2024-07-01	Approved by BTI on 2024-04-21. Prepared for TCRL 2024-1 publication.
	p2r00–r05	2024-11-11 – 2024-12-16	TSE 26433 (rating 1): In Table 2, added Items 2/1a and 2/2a, updated the reference and status values for Items 2/1 and 2/2, deleted the existing conditional C.1, and added conditionals C.1–C.5. In Table 151, added Item 1a and conditional C.3. Updated conditional C.1 in Table 154. Updated the prerequisite for Table 155. TSE 26508 (rating 4): Per E25928, to support the “Conversational” and “Media” context types and TMAP v1.0.1, added Tables 11, 31, 51, 71, 91, and 111; added a “Context Type Support Requirement” section to Tables 14, 34, 54, 74, 94, and 114; and added Telephony and Media Audio Profile (TMAP) Specification, Version 1.0.1, to the References section.
2	p2	2025-02-18	Approved by BTI on 2025-02-09. TMAP v1.0.1 adopted by the BoD on 2024-02-11. Prepared for TCRL 2025-1 publication.
	p2ed2 r00–r01	2025-02-12 – 2025-02-24	TSE 26971 (rating 1): Updated “External Roles” value for 14/8, 34/7, 54/5, 74/7, 74/8, 94/6, and 114/5. Updated “Inter-layer Dependency” value for 94/6.
	p2 edition 2	2025-03-14	Approved by BTI on 2025-03-11. Prepared for edition 2 publication.

Publication Number	Revision Number	Date	Comments
	p3r00	2025-07-24	TSE 27526 (rating 1): Updated entries for TMAP 3/1 and TMAP 3/2. Removed conditional C.1 for Table 3 and added note.
3	p3	2025-11-04	Approved by BTI on 2025-09-29. Prepared for TCRL pkg101 publication.

Acknowledgments

Name	Company
Dejan Berec	Bluetooth SIG, Inc.
Tharon Hall	Bluetooth SIG, Inc.
Rasmus Abildgren	Bose Corporation
Łukasz Rymanowski	Codecoup
Andrew Estrada	Sony Group Corporation
Masahiko Seki	Sony Group Corporation
Akio Tanaka	Sony Group Corporation