OBMF over MCTP Binding Specification

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CONTENTS

17 # 1 Foreword

18 The *OBMF over MCTP Binding Specification* (DSP0295) was prepared by the Platform Management Communications Infrastructure (PMCI Working Group) of DMTF.

19 DMTF is a not-for-profit association of industry members dedicated to promoting enterprise and systems management and interoperability. For information about DMTF, see https://www.dmtf.org.

20 Open Compute Project (OCP) is a collaborative community focused on redesigning hardware technology to efficiently support the growing demands on compute infrastructure. For more information about OCP, see https://opencompute.org.

21 ## 1.1 Acknowledgments

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2 Introduction

The OBMF over MCTP Binding Specification defines an MCTP message type used to transport OBMF payloads to or from platform components over MCTP. OBMF (Open Boot and Management Framework) messages allow consolidation of multiple other boot and management interfaces over MCTP.

2.1 Document conventions

2.1.1 Typographical conventions

This document uses the following typographical conventions:

- Document titles are marked in *italics*.
- Important terms that are used for the first time are marked in italics.
- Terms include a link to the term definition in the "Terms and definitions" clause, enabling easy navigation to the term definition.
- ABNF rules are in monospaced font.

2.1.2 ABNF usage conventions

Format definitions in this document are specified using ABNF (see RFC5234), with the following deviations:

- Literal strings are to be interpreted as case-sensitive Unicode characters, as opposed to the definition in RFC5234 that interprets literal strings as case-insensitive US-ASCII characters.

3 Scope

The OBMF over MCTP Binding Specification defines a binding in order to transport OBMF messages to or from platform components over MCTP.

Portions of this specification rely on information and definitions from other specifications, which are identified in the Normative references clause. The following references are particularly relevant:

- DMTF DSP0236, *Management Component Transport Protocol (MCTP) Base Specification 1.3*, defines the MCTP transport protocol over which the OBMF messages are to be transported.

47

4 Normative references

48 The following referenced documents are indispensable for the application of this document. For dated or versioned references, only the edition cited (including any corrigenda or DMTF update versions) applies. For references without a date or version, the latest published edition of the referenced document (including any corrigenda or DMTF update versions) applies. Earlier versions may not provide sufficient support for this specification.

49 DMTF DSP0233, *Management Component Transport Protocol (MCTP) I3C Transport Binding Specification 1.0,*\ https://www.dmtf.org/sites/default/files/standards/documents/DSP0233_1.0.pdf

50 DMTF DSP0236, *Management Component Transport Protocol (MCTP) Base Specification 1.3,*\ https://www.dmtf.org/sites/default/files/standards/documents/DSP0236_1.3.pdf

51 DMTF DSP0237, *Management Component Transport Protocol (MCTP) SMBus/I2C Transport Binding Specification 1.2,*\ https://www.dmtf.org/sites/default/files/standards/documents/DSP0237_1.2.pdf

52 DMTF DSP0238, *Management Component Transport Protocol (MCTP) PCIe VDM Transport Binding Specification 1.2,*\ https://www.dmtf.org/sites/default/files/standards/documents/DSP0238_1.2.pdf

53 DMTF DSP0239, *Management Component Transport Protocol (MCTP) IDs and Codes 1.9,*\ https://www.dmtf.org/sites/default/files/standards/documents/DSP0239_1.9.pdf

54 DMTF DSP0283, *MCTP over USB Binding Specification 1.0,*\ https://www.dmtf.org/sites/default/files/standards/documents/DSP0283_1.0.pdf

55 IETF RFC4122, *A Universally Unique IDentifier (UUID) URN Namespace, July 2005,*\ https://www.ietf.org/rfc/rfc4122.txt

56 IETF RFC5234, *ABNF: Augmented BNF for Syntax Specifications, January 2008,*\ https://tools.ietf.org/html/rfc5234

57 ISO/IEC Directives, Part 2, *Principles and rules for the structure and drafting of ISO and IEC documents*\ https://www.iso.org/sites/directives/current/part2/index.xhtml

58 OBMF Specification, *OBMF® Specification Draft revision 0.7.1,*\ https://github.com/opencomputeproject/ocp-obmf/blob/main/OBMF-ICP%20Specification/OBMF-ICP%20Specification%20revision%200.7.1.pdf

5 Terms and definitions

In this document, some terms have a specific meaning beyond the normal English meaning. Those terms are defined in this clause.

The terms "shall" ("required"), "shall not", "should" ("recommended"), "should not" ("not recommended"), "may", "need not" ("not required"), "can" and "cannot" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 7. The terms in parentheses are alternatives for the preceding term, for use in exceptional cases when the preceding term cannot be used for linguistic reasons. Note that ISO/IEC Directives, Part 2, Clause 7 specifies additional alternatives. Occurrences of such additional alternatives shall be interpreted in their normal English meaning.

The terms "clause", "subclause", "paragraph", and "annex" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 6.

The terms "normative" and "informative" in this document are to be interpreted as described in ISO/IEC Directives, Part 2, Clause 3. In this document, clauses, subclauses, or annexes labeled "(informative)" do not contain normative content. Notes and examples are always informative elements.

Refer to the MCTP Base Specification DSP0236 for terms and definitions that are used across the MCTP specifications. For the purposes of this document, the following additional terms and definitions apply.

Endpoint

An MCTP endpoint unless otherwise specified.

PCI Express (PCIe)

An industry-standard low-latency high-bandwidth serial expansion bus for connecting peripheral components to a computer system.

OBMF

Open Boot and Management Framework defined by OCP to consolidate boot and management interfaces to platform components.

6 Symbols and abbreviated terms

Refer to the MCTP Base Specification DSP0236 for symbols and abbreviated terms that are used across the MCTP specifications. For the purposes of this document, the following additional symbols and abbreviated terms apply.

MCTP

Management Component Transport Protocol

PCIe

PCI Express

77 # 7 Conventions

78 ## 7.1 Reserved and unassigned values

79 Unless otherwise specified, any reserved, unspecified, or unassigned values in enumerations or other numeric ranges are reserved for future definition by DMTF.

80 Unless otherwise specified, numeric or bit fields that are designated as reserved shall be written as 0 (zero) and ignored when read.

81 ## 7.2 Byte ordering

82 Unless otherwise specified, the byte ordering of multibyte numeric fields or multibyte bit fields in this specification shall be "Big Endian" (i.e., the lowest byte offset holds the most significant byte and higher offsets hold lesser significant bytes).

8 Overview

8.1 General

TBD

86 # 9 Message type-specific considerations

87 ## 9.1 Message type number

88 The message type number for OBMF messages is defined in the MCTP IDs and Codes Specification DSP0239 and the number assigned is TBD.

89 ## 9.2 OBMF over MCTP specification version information

90 Implementations that follow this specification shall return the following version information in the response to the GET MCTP Version Support command when the Message Type parameter in the request is set to TBD (return OBMF over MCTP Specification version information).

91 The Version Number Entry 1 field shall be used to indicate compatibility with Version 1.0 of the OBMF over MCTP message type as:

92 1.0 [Major version 1, minor version 0, any update version, no alpha]

93 This is reported using the encoding as: 0xF1F0FF00

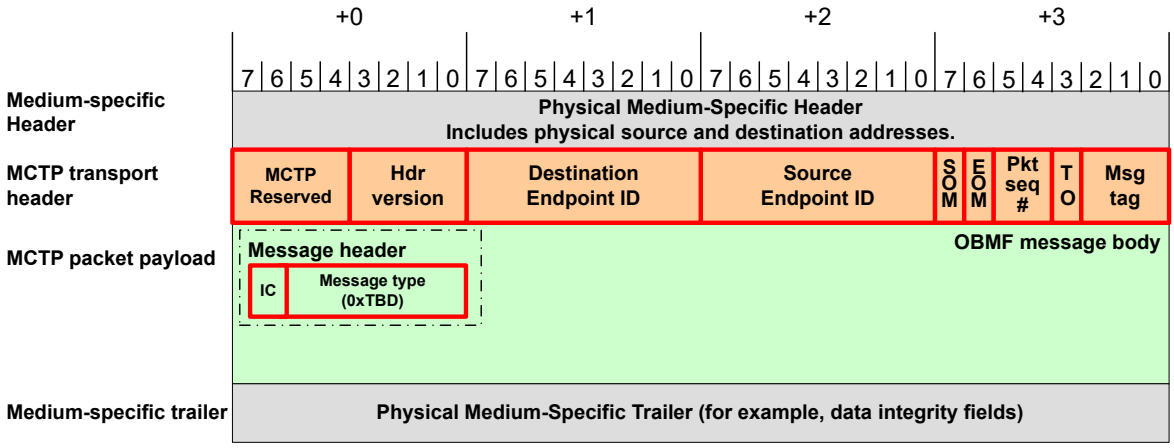
94 ## 9.3 Timing specifications

95 OBMF over MCTP messages are made up of one or more MCTP packets. Each MCTP packet shall comply with the timing, arbitration, and fairness requirements of the transport binding specifications for the media through which it passes. For examples, refer to the specific MCTP physical layer binding specification (for example the MCTP SMBus/I2C Transport Binding Specification DSP0237, the MCTP I3C Transport Binding Specification DSP0233, the MCTP PCIe VDM Transport Binding Specification DSP0238, and the MCTP over USB Binding Specification DSP0283, among others) for specific packet and message timing requirements.

96 ## 9.4 OBMF over MCTP message format

97 Referring to Figure 1, the OBMF over MCTP messages are carried via the MCTP packet payload of one or more MCTP packets.

98



99 **Figure 1 — OBMF over MCTP Message Fields in an MCTP Packet**

100 9.4.1 OBMF over MCTP message field descriptions

101 OBMF message fields shall comply with the requirements in the MCTP Base Specification DSP0236 and with the additional requirements indicated in Table 1.

102 **Table 1 — OBMF over MCTP Message Field Descriptions**

Field Name	Field Size	Description
Tag Owner (TO)	1 bit	1b - OBMF Request messages. 0b - OBMF Response messages. A OBMF Response message shall use the destination EID and physical address that were used as the source EID and source physical address of the corresponding OBMF Request message.
Message Tag (Msg tag)	3 bits	When OBMF message exchange is used and the Tag Owner (TO) bit is set to 1b in the OBMF Request message, a OBMF Response shall return the same Message Tag with the Tag Owner bit cleared to 0b in the corresponding OBMF Response message.
Integrity Check (IC)	1 bit	Message Integrity Check bit = 0b OBMF over MCTP messages do not include an overall Message Integrity check field.
Message type	7 bits	The OBMF over MCTP message type number shall be set to TBD. This field identifies the MCTP message as carrying a OBMF over MCTP message.
OBMF message body	Variable	Other than the message type field and the IC bit, the OBMF message body is defined by the OBMF Specification.

103 For the definition of OBMF Request Message, OBMF Response Message, and the OBMF message body other than the message type field and the IC bit, refer to the OBMF Specification.

9.4.2 Message fragmentation and assembly

OBMF over MCTP messages may be split into multiple MCTP packets thus requiring segmentation and assembly. All multi-packet OBMF over MCTP messages shall comply with the message packetization and assembly rules of the MCTP Base Specification DSP0236. Specifically, sections in the MCTP Base Specification DSP0236 related to Message assembly, Dropped packets, Starting message assembly, Terminating message assembly/dropped messages, and Dropped messages shall be complied with. OBMF messages when transported over MCTP shall not require any changes to the MCTP Base Specification DSP0236.

106

10 ANNEX A (informative) Change Log

Version	Date	Description
1.0.0WIP80	2026-03-27	WIP release