

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Proposed Changes in 16m/D2 Related to MAC Control Message MAC Header (15.2.2.1)	
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Re:	IEEE 802.16 Working Group Letter Ballot #30a on P802.16m/D2	
Abstract	The contribution proposes the changes in 16m/D2 regarding MAC Control Message MAC Header.	
Purpose	To be discussed and adopted by TGM for the 802.16m DRAFT amendment.	
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Proposed Changes in 802.16m/D2 Related to MAC Control Message MAC Header (15.2.2.1)

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1 Introduction

There are multiple problems with the paragraph in line 41 on page 22 in the 802.16m/D2 regarding the Fragmentation Extended Header (FEH) for MAC control messages:

- a) Since the encryption is indicated in this extended header and this extended header is about MAC control messages, then there won't be any cases where will make a MAC PDU contain payload from more than one management connection. Therefore, the FEH is actually mandated for all MAC control messages. Then let's see what fields in the current FEH are needed for all MAC control messages.
- b) I think the EC bit seems is needed for all the MAC control message PDUs. Then, why don't we just include it in the MAC header for MAC control messages? Note that MAC control messages are of predefined FIDs. Similar to signaling header, we can certainly have its own MAC header. A simplest way is to just name the current AGMH+FEH as MAC control message header. Really just a name change. In this way, we don't mandate this FEH extended header for MAC management connections, actually, we don't need the FEH at all.

This contribution proposes the changes in 802.16m/D2 to specify the newly proposed MAC control message MAC Header format.

2 Suggested changes in the 802.16m/D2

Based on the above discussion, we propose the following changes in the 802.16m/D2. Note that the new text is marked with blue and underline; the deleted text are marked with red and strikethrough.

Suggested change #1: page 17, line 42

Change the paragraph in line 42 on page 17 as follows:

There are ~~three~~ two defined MAC header formats. The first is the Advanced Generic MAC Header that begins each DL and UL MAC PDUs containing either MAC control messages or CS data. The second is the compact MAC header that begins MAC PDUs of the connections using persistent allocation or group allocation. ~~The~~ These two MAC header formats shall not be used simultaneously on the same connection. The third is the MAC control message header that begins MAC PDUs containing MAC control messages.

Suggested change #2: page 18, line 58

Insert the following before line 58 on page 18:

15.2.2.1.3 MAC Control Message MAC Header (CMMH) Format

The Control Message MAC Header (CMMH) is defined in Table 654a.

Table 654a—CMMH Format

<u>Syntax</u>	<u>Size (bit)</u>	<u>Notes</u>
<u>Control Message MAC Header {</u>		
<u>FID</u>	<u>4</u>	<u>Flow identifier for the MAC management connections, i.e., 0b0000 or 0b0001.</u>
<u>EH</u>	<u>1</u>	<u>Extended header presence indicator; When set to '1', this field indicates that an Extended Header is present following this CMMH.</u>
<u>Length</u>	<u>11</u>	<u>This field indicates the length in bytes of MAC PDU including the CMMH and extended header if present.</u>
<u>EC</u>	<u>1</u>	<u>Encryption Control indicator 0 = Payload is not encrypted 1 = Payload is encrypted</u>
<u>Polling</u>	<u>1</u>	<u>0 = no acknowledgement required 1 = acknowledge required upon receiving the MAC message</u>
<u>FC</u>	<u>2</u>	<u>Fragmentation control (see Table 659)</u>
<u>SN</u>	<u>4</u>	<u>Payload sequence number of MAC control message MAC PDU</u>
<u>}</u>		

Suggested change #3: page 19, line 38

Delete the row of “Fragmentation extended header” in Table 656.

Suggested change #4: page 22, line 38

Delete subsection 15.2.2.2.2 on page 17 and page 18.

Suggested change #5: page 97, line 64

Change the paragraph in line 64 on page 97 as follows:

For management connections [the Control Message MAC Header \(CMMH\) FEH \(as defined in 15.2.2.2.2\)](#) in the MAC PDU provides the information about the control message fragment. SN in [CMMH FEH](#) is used for sequencing the control message fragments and Fragmentation Control (FC) bits in [CMMH FEH](#), are used to tag the control message fragments with respect to their position in the parent control message.

Suggested change #6: page 24, line 35

Change “8” to “4”.

Suggested change #7: throughout 802.16m/D2

Change “FEH” to “CMMH” throughout the 802.16m/D2

3 References

[1] IEEE Std 802.16-2009

[2] IEEE P802.16m/D2, “DRAFT Amendment to IEEE Standard for Local and metropolitan area networks”