Project	IEEE 802.16 Broadband Wireless Access Working Group <**http://ieee802.org/16**>
Title	MAC Header and Subheader Type Fields Encodings
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Re:	This is a contribution to IEEE 802.16e.
Abstract	In the current document of 802.16e, i.e., 16e/D6, the type field code allocation is problematic, e.g., duplicated allocations. This contribution proposes to add tables to list the type fields encodings and also to clean up the type code allocation problems in 16e/D6.
Purpose	To correct the errors of the type code allocations and also to improve the type code allocations.
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MAC Header and Subheader Type Fields Encodings
Session#36 MAC Header Drafting Group

Introduction

In the current document of 802.16e, i.e., 16e/D6, the type field code allocation is problematic, e.g., duplicated allocations. This contribution proposes to add tables to list the type fields encodings and also to clean up the type code allocation problems in 16e/D6.

References

IEEE Std 802.16-2004

IEEE P802.16e/D6, February 2005

Suggested Changes

1. Insert Table 7g in line 32, page 13

Table 7g   MAC Header HT and EC fields encoding

HT	EC	MAC PDU Type	Reference Figure	Reference Table
0	0	MAC PDU with data payload, no encryption, with a 6-bit type field, see Table 6 for its type field encodings.	19	5
0	1	MAC PDU with data payload, with encryption with a 6-bit type field, see Table 6 for its type field encodings.	19	5
1	0	MAC PDU without data payload, (also called Bandwidth Request Header), with a 3-bit type field, see Table 7h for type encoding definitions	20	7
1	1	MAC PDU without data payload, with a 1-bit type field, see Table 7i for its type encoding definitions.	??	??

2. Insert Table 7h in line 23 page 14

Table 7h   MAC Header Type Field Encodings with HT/EC=0b10

type field (3 bits)	MAC Header Type (with HT/EC=0b10)	Reference Figure	Reference Table

000	BR incremental	20	7
001	BR aggregate	20	7
010	PHY channel report header	20c	7c
011	BR with UL Tx power	20a	7a
100	BR with DL burst profile	20b	7b
101	BR with UL sleep control header	n/a	??
110	SN report	21c	7f
111	CQICH channel allocation request	??	??

3. move two subsections 6.3.2.1.5 and 6.3.2.1.6 to line 42 page 18; and then renumber those two sections to 6.3.2.1.5 and 6.3.2.1.6, respectively;

4. renumber section number on page 18 line 45 to 6.3.2.1.6

5. insert Table 7i to line 47 page 18

Table 7i   MAC Header type fields encoding with HT/EC=0x0b11

FHD/EHD	MAC header Type with HT/EC=0b11	Reference Figure	Reference Table
0	Feedback header, with another 5-bit type field, see Table 7d for its type encodings.	20d-a	??
1	reservedExtended MAC Header	??	??

6. page 14 line 45, make the following changes:

e) The allowed types for bandwidth requests are "000" for incremental and "001" for aggregate BR, "011" for BR and UL Tx power report header, "100" for "BR and DBPC request header" and "111" for CQICH channel allocation request.

7. page14 line 26, make the following changes:

The Bandwidth Request PDU shall consist of bandwidth request header alone and shall not contain a payload. The bandwidth request header is types are illustrated in Table 7h. Figure 20, Figure 20a and Figure 20ba. An SS receiving a bandwidth request header on the downlink shall discard the PDU.

8. page 14 line 48 make the following changes:

The fields of the bandwidth request header are defined in Table 7 for types "000", "001 and "111" ,Table 7a for type "011" and Table 7b for "100". Every header is encoded, starting with the HT and EC fields. The coding of these fields is such that the first byte of a MAC header shall never have the value of 0xFX. This prevents false detection of the stuff byte.

9. page 14 line 61

change Figure ddd to Figure 20a

10. page 15 line 34, make the following changes:

d) The allowed types for bandwidth requests with UL Tx transmit power report are is "000" for incremental, "001" for aggregate, and "011" for an aggregate request with UL Tx transmit power report. The requested bandwidth is incremental.

11. page 16 line 4:

change Table 7a—Description of fields of the PHY channel report header to Table 7a -- Description of fileds of BR and UL Tx power report header

12. page 24 line 41,

 change "encoded as 000b" to "encoded as 0b101"

13. page 25 line 46

Change

The coding of these fields is such that the first byte of a MAC header shall never have the value of 0xFX.

to

The coding of these fields is such that the first byte of a MAC header shall never have the value of 0xFF.