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Re:	This is a response to a Call for Comments on IEEE P802.16e-D6
Abstract	we suggest using UL MIMO mode feedback subheader which merges the two subheaders together
Purpose	Adoption of proposed changes into P802.16e /D6. Pink color indicates revised texts
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Clarification of Subheader related to MIMO mode feedback

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1. Introduction

In the current spec, there are two subheaders related to the MIMO mode. One is the Mode Selection Feedback Subheader and the other is the Fast UL Feedback Subheader. A MSS uses the Mode Selection Feedback Suhbeader to provide its feedback in terms of the mode selection described by Table 298. MSS also uses the Fast UL Feedback subheader to provide MIMO Mode Feedback as described by Table 298b. Each subheader has some problems.

Problems are as follow.

- First, for the Mode Selection Feedback subheader, the contents of Table 298 which describes this subheader is included in Table 298b, thus resulting in possible duplication.

- Second, for the Fast UL Feedback subheader, there is no indication of methods to tell the existence of the Fast UL Feedback Subheader unlike the Mode selection feedback subheader.

In attempt to solve these two problems, we suggest using UL MIMO mode feedback subheader which merges the two subheaders together and uses ESF to indicate the existence and includes the feedback contents as described by Table 298b. This subheader is used for the case when the selected MIMO mode feedback has changed from the one previously reported and when the MSS has UL resource assigned to transmit UL traffic.

2. Proposed Text Change

[Change name in Table 13c in page 28]

Table 13c- Description of extended subheadeers(UL)

ESF bit	Name	Length(bytes)	Descritipon
Bit #0 (LSB)	~~Mode selection feedback~~ ~~UL~~ MIMO mode feedback	1	See 6.3.2.2.7.1
Bits #1-10	Reserved		

[Remove section 6.3.2.2.7]

~~6.3.2.2.7.1 Mode Selection Feedback Extended Subheader~~

[Insert new section 6.3.2.2.7]

6.3.2.2.7.1 ~~UL~~ MIMO mode Feedback Extended subheader

The format of the ~~UL~~ MIMO mode feedback Extended subheader is specified in Table 13d. The support of the ~~UL~~ MIMO mode feedback Extended subheader is PHY specific. An MS uses the ~~UL~~ MIMO Feedback Extended Subheader to provide its feedback in terms of MIMO mode feedback. When there is an UL MAC PDU payload to be transmitted at

the same time, this subheader shall only be used if the MS has successfully negotiated support of ~~UL~~ MIMO mode feedback Extended subheader with BS through the capabilities exchange dialog (SBC-REQ/RSP).

Table 13d – ~~UL~~ MIMO mode Feedback extended subheader format

Name	Length (bits)	Descritipon
Feedback type	2	00: ~~MIMO mode and Permutation, or The number of Stream~~ feedback type '000' as defined in Table 302a 01: ~~Antenna grouping~~ feedback type '001' as defined in Table 302a 10: ~~Antenna selection~~ feedback type '010' as defined in Table 302a 11: ~~Precoding matrix code book~~ feedback type '011' as defined in Table 302a
Feedback contents	6	Feedback contents and the corresponding feedback payload (6 bits) are the same as that defined in Table 302a and sections 8.4.5.4.10.4, 8.4.5.4.10.5, 8.4.5.4.10.6, 8.4.5.4.10.7, 8.4.5.4.10.8, 8.4.5.4.10.9, 8.4.5.4.10.10 ~~Feedback content is as described in Table 298b, and if Feedback type is '01', see Table 298c. if '10', see Table 298d. if '11', see Table 298e.~~

[Remove section 6.3.2.2.7.2]

~~6.3.2.2.7.2 Fast UL Feedback subheader~~

[Change the table as indicated]

11.8.2 Capabilities for construction and transmission of MAC PDUs

Type	Length	Value	Scope
4	1	Bit #0: Ability to receive requests piggybackedwith data Bit #1: Specifies the size of FSN values used when forming MAC PDUs on non-ARQ connections 0: Only 3-bit FSN values are supported 1: Only 11-bit FSN values are supported Bit #2: ~~Specifies support for MSF extended subheader~~ Specifies support for ~~UL~~ MIMO mode feedback subheader(see 6.3.2.2.7.1) Bit #3: Specifies support for Generic Sleep Extended subheader. (see 6.3.2.2.7.2) Bit #4: Specifies support for Feedback Request Extended subheader (see 6.3.2.2.7.3) Bit #5-#7 :Reserved, Shall be set to zero	~~REG-REQ~~ ~~REG-RSP~~ SBC-REQ SBC-RSP