Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**
Title	**Fix problems in Feedback Polling IE**
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Re:	Response to Sponsor Ballot on IEEE802.16e/D7 document
Abstract	Fix problems in Feedback Polling IE
Purpose	To incorporate the text changes proposed in this contribution into the 802.16e/D8 draft.
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Fix Problems in Feedback Polling IE

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1. Problem Statement

The Feedback Polling IE in IEEE802.16e/D7 allocates dedicated UL resource to transmit Feedback header in designated future frames. This mechanism contains the following problems:

- "Duration" is used in Feedback Polling IE to allocate dedicated UL resource, however, the start position of duration can not be determined at the a future frame.
- A different MS entered the network after Feedback Polling IE is transmitted would not know to skip the UL allocation done by Feedback Polling IE
- Since UCD message might change the mapping of UIUC, the UIUC included in Feedback Polling IE might be changed when the Feedback header is transmitted.

2. Proposed Solutions

The proposed changes are following:

- Remove all allocation done in Feedback polling IE. Feedback polling IE is only used to inform the MS to transmit Feedback header. UL_MAP should include a normal UL allocation for this MS at the frame the Feedback header is scheduled to be transmitted.

3. Specific Text Changes

[Modify the following section:]

8.4.5.3.20 Feedback polling IE

This IE is used by BS to ~~allocate dedicated UL resource to~~ schedule Feedback header transmission by the MS. At the designated transmitting frame defined by this IE, the MS shall compose the Feedback header and the BS shall include a dedicated UL allocation for the transmission.

Table 285i—Feedback polling IE format

Syntax	Size	Notes
Feedback polling IE () {	—	—
Extended UIUC	4	0x??
Length	4	Length in bytes of following fields
for (i=0; i < Num Allocations; i++) {	—	—
Basic CID	16	—
~~UIUC~~	~~4~~	~~—~~
Feedback type	4	See Table 7i
~~Duration~~	~~10~~	~~In OFDMA slots (see 8.4.3.1)~~
Frame Offset	3	The offset (in units of frames) from the current frame in which the first UL feedback header shall be transmitted on the allocated UL resource. A value of ~~zero~~0/1 indicates the subsequent frame

Period (p)	2	The UL resource region is dedicated to the MS in every 2p frame
Allocation Duration (d)	3	The allocation is valid for 10×2d frame starting from the frame defined by Frame_offset If d == 0b000, the dedicated allocation is de-allocated If d == 0b111, the dedicated resource shall be valid until the BS commands to de-allocate the dedicated allocation
}	—	—
Padding bits	variable	To align octet boundary
}	—	—

Feedback type

See Table 7i.

Allocation offset

The UL feedback shall be transmitted in the frame which is 0-8 frame delay relative to the current frame.

~~**Duration**~~

~~In OFDMA slots (see 8.4.3.1)~~

Period (p)

The UL resource region is dedicated

4. References

[1] IEEE 802.16- 2004 IEEE Standards for local and metropolitan area networks part 16: Air interface for fixed broadband wireless access systems

[2] IEEE P802.16e-D7-2005