Project	**IEEE 802.16 Broadband Wireless Access Working Group <http://ieee802.org/16>**	
Title	**Additional comments to P802.16d/D2**	
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Re:	P80216d_D2 ballot	
Abstract	This contribution contains some additional changes and comments to P802.16d/D2.	
Purpose		
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Additional Comments to P802.16d/D2

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1. General

This contribution contains some additional changes and comments to P80216d_D2.

2. Specific changes

2.1 Changes to 802.16

Section: 6.2.2.3.22 **Page**: 73

Change:

HMAC Tuple (see 11.4.1~~2~~0)

Reason:

Wrong reference.

Section: 11.4.9.3.6.17-19 **Page**: 314

Change:

Change the numbering of 11.4.9.3.6.17-19 to 11.4.9.3.6.16.1 - 11.4.9.3.6.16.3

Reason:

Those sections contains specific parameters for PHS error parameter set, and therefore should be nested under section 11.4.9.3.6.16.

2.2 Changes to 802.16a

Section: 8.5.4.2 **Page**:183

Change the fourth paragraph:

~~The framing structure used for the DL includes the transmission of a FCH, which is transmitted in the most robust burst profile of the system followed by transmission using burst profiles as defined in the FCH. The MAC layer also defines the DL transmission frame length and the length of the different transmission parts.~~

The first FEC block transmitted in the DL is called FCH. The FCH is transmitted at the first sub-channel and first OFDM symbol of the DL. The FCH is transmitted using QPSK rate 1/2 with the mandatory coding scheme and power boosted with +6dB. The FCH contains the DL_Frame_Prefix to specify the burst profile and structure of the first burst of the DL. The Rate_ID encoding is defined in Table 116ao. A DL-MAP message shall immediately follow the DL_Frame_Prefix, as shown in figure 128aw. Note that the DL-MAP message may 'spill' over into the first DL burst. Although the first DL burst contains broadcast MAC control messages, it is not necessary to use the most robust well-know modulation/coding. A more efficient modulation/coding may be used if it is supported and applicable to all the SSs of a BS. With exception of the map messages, no MAC PDUs shall be split over multiple consequtive bursts with different burst profiles.

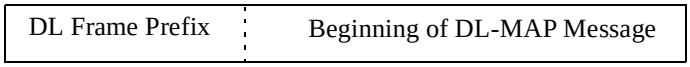


Figure 128aw—Structure of the first FEC block in OFDMA (FCH)

Reason:

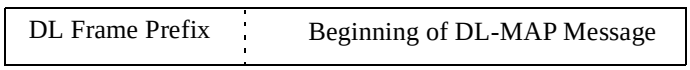
The definition of FCH in the OFDMA was unclear, the updated definition try to resolve this with more accurate/clear definition.

Section: 8.5.4.3 **Page**:184

Change:

8.5.4.3 DL Frame Prefix

~~The FCH is transmitted at the beginning of each frame. It is a data structure that contains the DL-MAP message and may additionally include the UL-MAP, DCD or UCD messages. The first FEC block of the DL frame shall contain information about the FCH and beginning of the DL-MAP, as shown in Figure 128aw. The DL Frame prefix is always transmitted using the burst profile QPSK-1/2 with the mandatory coding scheme and power boosted with +6dB.~~



~~**Figure 128aw—Structure of the first FEC block in OFDMA**~~

The DL Frame Prefix is defined in Table 116bm and is used to provide information about where to demodulate the ~~FCH~~first burst of the DL (structure of the transmitted matrix) and how to demodulate it (PHY parameters).

Table 0a—OFDMA DL Frame Prefix

Syntax	Size	Notes
DL_Frame_Prefix_Format() {		
Rate_ID	4 bits	
Boosting	2 bits	00: normal (not boosted); 01: +6dB; 10: -6dB; 11: not used.
Reserved	~~4~~2 bits	
DL_Information_Message_Rectangle() {		
No_OFDM_Symbols	10 bits	
No_subchannels	6 bits	
}		
Prefix_CS	8 bits	
}		

Rate_ID:
Enumerated field that describes the ~~modulation/coding of the DL-MAP message~~burst profile of the first DL burst. Encoding values of the Rate_ID field are defined in Table 116ao.

Boosting
Indication whether the carriers for ~~this allocation~~DL first burst are power boosted.

No_OFDM_Symbols
Indicates the number of OFDM symbols for the ~~DL_MAP message~~DL first burst starting from the first symbol of the frame.

No_subchannels
Indicates the number of subchannels for the ~~DL_MAP message~~DL first burst starting from subchannel 0.

Prefix_CS
An 8-bit checksum for the DL-Frame prefix fields, with the generator polynomial:
$g(D) = D^8+D^2+D+1$.

~~The remaining bytes of the first FEC block may contain the beginning of the frame control information (DL-MAP).~~

Reason:

The old text implied that the DL_Frame_Prefix specifies the profile for the DL_MAP message only, while the correct text refer it to the first DL burst.

Section: 11.1.6 **Page**: 241

Change:

In the report parameters table, at the Basic Report entry, change Human to HUMAN

Reason:

Typo