Project	**IEEE 802.16 Broadband Wireless Access Working Group** <http://ieee802.org/16>
Title	**Cleanup texts for Physical Processing of SFH (16.3.6.3.1)**
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Re:	IEEE 802.16-10/0011, "IEEE 802.16 Working Group Letter Ballot#31" Target topic: "IEEE P802.16m/D4, section 16.3.6.3.1".
Abstract	The contribution provides the clean up text for SFH
Purpose	To be discussed and adopted by TGm for the 802.16m/D5
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Cleanup texts for Physical Processing of SFH (16.3.6.3.1)

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1. Introduction

This contribution provides the cleanup text to physical processing for P-SFH and S-SFH.

~~Removed text~~

Added text

2. References

[1] IEEE P802.16m/D4, *"P802.16m DRAFT Amendment to IEEE Standard for Local and metropolitan area networks Part 16: Air Interface for Broadband Wireless Access Systems"*, 2010-02-03

3. Proposed Text Changes

[Remedy: Adopt the following modification in page 439, line 1, section 16.3.6.3.1]

---------- Start proposed text ----------

16.3.6.3.1 Superframe Header

16.3.6.3.1.1 Primary Superframe Header

Figure 518 shows the physical processing block diagram for the P-SFH.

<Figure 518 is omitted>

The P-SFH IE shall be appended with 5 bits CRC as in CRC-5 ITU with initialization to 0b00000 and no bitwise flipping of the polynomial output. The generating polynomial is $G(x) = x^5 + x^4 + x^2 + 1$.

The resulting sequence of bits shall be encoded by the TBCC described in 16.3.11.2 with parameter $M = N_{Rep,P-SFH} K_{bufsize}$ and $K_{bufsize} = 4L$, where L is the number of information bits and $N_{Rep,P-SFH}$ is the number of repetition for effective code rate of [1/16] or 1/24.

The encoded bit sequences shall be modulated using QPSK.

The modulated symbols shall be mapped to two transmission streams using SFBC described in section 16.3.7.1.1.~~for two antennas~~. The two streams using SFBC ~~may~~ shall be precoded and mapped to the transmit antennas ~~more than two antennas~~ described in section 16.3.7.1.2~~1.~~

Antenna specific symbols at the output of the MIMO ~~encoder/~~precoder shall be mapped to the resource elements as described in section 16.3.6.2.1.1. The mapping of data subcarriers across the resource elements is specified in 16.3.7.2.3

16.3.6.3.1.2 Secondary Superframe Header

Figure 519 shows the physical processing block diagram for the S-SFH.

<Figure 519 is omitted>

The S-SFH IE shall be appended with a 16-bit CRC, CRC16-CCITT as defined in ITU-T recommendation X.25 is used.

The resulting sequence of bits shall be encoded by the TBCC described in 16.2.17.2 with parameter $M = N_{Rep,S-SFH} K_{bufsize}$ and $K_{bufsize} = 4L$, where L is the number of information bits.

The value of $N_{Rep,S-SFH}$ is indicated in P-SFH.

The encoded bit sequences shall be modulated using QPSK.

The modulated symbols shall be mapped to two transmission streams using SFBC described in section 16.3.7.1.1.~~for two antennas~~. The two streams using SFBC ~~may~~ shall be precoded and mapped to the transmit antennas ~~more than two antennas~~ described in section 16.3.7.1.2~~1.~~

Antenna specific symbols at the output of the MIMO ~~encoder/~~precoder shall be mapped to the resource elements as described in section 16.3.6.2.1.2. The mapping of data subcarriers across the resource elements is specified in 16.3.7.2.3.

---------- End proposed texts ----------