IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CID 2147 Resolution: SIGB Encoding | | | | |
| Date: 2016-11-08 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
| Hongyuan Zhang | Marvell |  |  | [hongyuan@marvell.com](mailto:hongyuan@marvell.com) |
| Xiaogang Chen | Intel |  |  |  |
|  |  |  |  |  |

Abstract: This document contains comment resolution on CID 2147 for 11ax D0.5.

**Doc 11-16-1408r0 proposed the following resolution of CID 2147:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 26.3.3 | 77.50 | Post-FEC padding block is missing in Fig 26-8 | Add block | Rejected. Post-FEC is not applied to HE-SIGB |

**Discussions:**

The current D0.5 section **26.3.10.8.3 Time domain encoding** is confusing on how the padding bits are inserted,

P233L4~12: “**After encoding, padding bits are added to each content channel to round up the number of symbols the content channel occupies to the nearest integer value. Further padding is added to each content channel until the number of OFDM symbols in the content channel equals the Number of HE-SIG-B symbols signaled by a 4-bit field in the HE-SIG-A field for an HE MU PPDU. Thus, padding ensures that the content channels in different 20 MHz bands end at the same OFDM symbol.(#306) (#2027)For both the Common Block and User Specific fields, when the code rate is not equal to ½, the convolutional encoder output bits for each field (including padding bits) are concatenated, then the concatenated bit streams are punctured as described in 17.3.5.6 (Convolutional encoder)(#307)(#2028).**”

This reads like padding bits are added after BCC ½ encoding, but before puncturing. This should not be the real intention of the original drafter.

Propose the follow the padding process as in 11a, i.e. clause **17.3.5.4 Pad bits (PAD)** of revmc D8.0.

**Revised Comment Resolution from 11-16-1408r0:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 26.3.3 | 77.50 | Post-FEC padding block is missing in Fig 26-8 | Add block | Revised.  TGax Editor to make the changes shown in IEEE 802.11-16/1522r3 |

***TGax Editor: Please make the following text change in P232L62~P233L12 of D0.5***:

In the User Specific field, in any 20 MHz band, the bits corresponding to two STAs (i.e. two User fields) are encoded together. Specifically, the STAs scheduled in the HE MU PPDU(#Ed) are split into groups of two. Each group of two User fields shall have CRC and tail bits added ~~and then BCC encoded at rate R = ½ using the encoder described in 17.3.5.6 (Convolutional encoder)(#307)~~. If the number of users in the content channel is odd, CRC and tail bits are added after the User Block field corresponding to the last user, who is not grouped~~, is encoded after adding tail and CRC bits~~. ~~After encoding, p~~ Padding bits are ~~added~~ appended right after the tail bits corresponding to the last User Block field ~~to~~ in each content channel, to round up toward the next multiple of number of data bits per HE-SIG-B symbol, as described in 17.3.5.4 Pad bits (PAD). ~~the number of symbols the content channel occupies to the nearest integer value~~. Further padding bits ~~is~~ are ~~added~~ appended to each content channel ~~until~~ so that the number of OFDM symbols after encoding and modulation in the content channel equals the Number of HE-SIG-B symbols signaled by a 4-bit field in the HE-SIG-A field for an HE MU PPDU. Thus, padding ensures that the content channels in different 20 MHz bands end at the same OFDM symbol.(#306) (#2027)For both the Common Block and User Specific fields, the information bits, tail bits and padding bits (if present) are BCC encoded at rate R = ½ using the encoder described in 17.3.5.6 (Convolutional encoder)(#307). ~~w~~When the code rate of the HE-SIG-B MCS being used is not equal to ½, the convolutional encoder output bits for each field ~~(including padding bits)~~ are concatenated, then the concatenated bit streams are punctured as described in 17.3.5.6 (Convolutional encoder)(#307)(#2028).