IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB232 Comment Resolutions | | | | |
| Date: 2018-07-09 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Chris Hansen | Peraso |  |  | chris@covariantcorp.com |
|  |  |  |  |  |

Abstract

Resolutions for CIDs 1048, 1179, 1180, and 1316.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause Number(C)** | **Comment** | **Proposed Change** |
| 1048 | Thomas Handte | 20.4.4.1.2 | In DMG PHY section, we have different definitions for EVM:  For DMG Control mode (p. 2862), it is based on the metric "measured symbol - ideal symbol", whereas for DMG SC mode (p. 2874) it's "measured symbol - ideal symbol - offset". The offset is chosen such that EVM is minimized. | Propose to adopt DMG SC mode EVM metric also for DMG control mode |

Resolution: Accept

Discussion: Modification will align EVM measurements between modes by removing residual DC offset in the control mode PHY EVM measurement.

*Instruct the Editor to Replace the equation for EVM with 20.4.4.1.2 Transmit EVM with the equation for EVM in 20.5.4.1.1. Also, add the following text to 20.4.4.1.2 above line 50:*

(I0,Q0) is the complex DC term chosen to minimize EVM.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1179 | Hiroyuki Motozuka | 20.3.1 | The channel number and OPERATING\_CHANNEL sound confusing. | Propose to change the name OPERATING\_CHANNEL to like DMG\_OPERATING\_FREQ\_INDEX. |

Resolution: Reject

Discussion: OPERATING\_CHANNEL was introduced in 17/1810r1 which was motioned in January 2018. The name and use of OPERATING\_CHANNEL is aligned with the other physical layers in 802.11.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1180 | Hiroyuki Motozuka | 20.3.4 | aSCGILength is defined in Table 20-28 while N\_GI, which shall be equal to aSCGILength, is defined in Table 20-4 as N\_GI=64. Table 20-4 should refer aSCGILength instead of the value "64". Also, "512" is referred in the definition for T\_HEADER and T\_Data. aSCBlockSize should be referred instead. | Replace the "Value" for N\_GI with "aSCGILength (64) as defined in Table 20-28 (DMG PHY characteristics)." (64) is for reader's convinience.     Replace the "Value" for T\_HEADER with "0.582 us=2 x aSCBlockSize x Tc (for SC and low-power SC)     Replace the "Value" for T\_Data with "(N\_BLKS x aSCBlockSize + aSCGILength) x Tc (for SC)  NOTE - N\_BLKS is defined in 20.5.3.2.3.3 (LDPC encoding process) and aSCBlockSize and aSCGILength are defined in Table 20-28 (DMG PHY characteristics)" |

Resolution: Accept

*Instruct the Editor to replace the numeric constants from Table 20-4 with PHY parameter names as described above.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 1316 | Li-Hsiang Sun | 20.9.2.2.7 | The description of 20.9.2.2.7 channel measurement may need to be improved:    It describes the largest amplitude based on the CE of BRP-RX, but later in the paragraph it uses TRN-T (mixing field and subfield). It is not clear what beam refinement feedback subfield refers to    In table 9-256, each tap I/Q measurement is relative to the 'strongest tap measured', however in this cluase, each tap is relative to the same tap measured in the first TRN-T | revise the procedure in 20.9.2.2.7 to be consistent with the description of table 9-256 |

Resolution: Revise

Discussion: The description in 20.9.2.2.7 Channel measurement seems consistent with Table 9-256. However, TRN-T should be changed to TRN to be consisten with 20.9.2.2.6.

*Instruct the Editor to modify Section 20.9.2.2.7 as shown:*

* Channel measurement

The good autocorrelation properties of the Golay sequence enable reconstructing part of the impulse response of the channel between the transmitter and the receiver. The receiver should find the tap with largest amplitude in the channel during the Channel Estimation field in the preamblethe BRP-RX packet. It selects thereafter the set of taps that is measured around the tap with the largest amplitude, according to dot11ChanMeasFBCKNtaps. It can select a contiguous set of taps or select a noncontiguous set of taps,and include the tap delays subfield as part of the subfield measurement. It then measures the phase and amplitude of the corresponding channel taps in each of the TRNx subfield repetition (except for the CE subfield of each TRN-Unit). The beam refinement feedback in subfield k-1 is the amplitude and phase of this tap in the k’th repetition relative to the largest amplitude version of this tap in all TRN subfields(#64).