IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Proposed Draft Text (PDT-PHY): Modulation Accuracy - Update | | | | |
| Date: 2021-06-17 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Wook Bong Lee | Samsung |  |  | wookbong.lee@samsung.com |
|  |  |  |  |  |

Abstract

This submission proposed modifications on modulation accuracy of TGbe D1.0.

Proposed Changes #1:

***TGbe Editor: Modify text in 36.3.19.4.4 (Transmitter modulation accuracy (EVM) test):***

* + - * 1. Transmitter modulation accuracy (EVM) test

…

The transmitter modulation accuracy test procedure for the occupied subcarriers of the PPDU is similar as in steps of the transmit modulation accuracy test procedure defined in 27.3.19.4.4 (Transmitter modulation accuracy (EVM) test) as follows.

1. Start of PPDU shall be detected.
2. Transition from L-STF to L-LTF shall be detected and fine timing shall be established.
3. Coarse and fine frequency offsets shall be estimated.
4. Symbols in a PPDU shall be derotated according to a single estimated frequency offset. Sampling offset drift shall be also compensated.
5. For each EHT-LTF symbol, transform the symbol into subcarrier received values, estimate a single phase from the pilot subcarriers, and derotate the subcarrier values according to the estimated phase.
6. Estimate the complex channel response coefficient for each of the subcarriers and each of the transmit streams.
7. For each of the data OFDM symbols, transform the symbol into subcarrier received values, estimate a phase from the pilot subcarriers, and compensate the subcarrier values according to the estimated phase, group the results from all of the receiver chains in each subcarrier to a vector, and multiply the vector by a zero-forcing equalization matrix generated from the estimated channel.
8. For each data-carrying subcarrier in each spatial stream of RU under test, find the closest constellation point and compute the Euclidean distance from it.
9. Compute the average across PPDUs of the RMS of all errors per PPDU as given by [Equation (36-](#bookmark305) [102)](#bookmark305).

**…**

**End of proposed changes.**