IEEE P802.11
Wireless LANs

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| Smaller Operating Bandwidth STA Participating Large Bandwidth |
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Abstract

This submission proposes update on unused subcarrier EVM test.

**Discussion:**

In case of 20/80/160 MHz operating non-AP EHT STA participating larger bandwidth EHT TB PPDU, e.g. 20 MHz operating non-AP STA participating 40/80/160/320 MHz EHT TB PPDU, 80 MHz operating non-AP STA participating 160/320 MHz EHT TB PPDU or 160 MHz operating non-AP STA participating 320 MHz EHT TB PPDU, the non-AP STA needs to meet -38dB of unused tone EVM outside of its operating bandwidth. This is more than spectral mask requirement.

For example, 242-tone RU allocated to the first 20MHz of the 80MHz operating STA in 160MHz TB PPDU.

According to the spectral mask, non-AP STA needs to meet maximum -28dBr until from 80 to 120MHz.



However, according to the unused tone EVM requirement, the non-AP STA needs to meet -38dB because it is outside of 3r (60MHz).

In this case, no matter which modulation level the non-AP STA used. (r is 9 for 242 tone RU)



**Proposed Changes:**

***TGbe Editor: Modify first sentence in 36.3.19.1 (Transmit spectral mask) as follows:***

* + - 1. Transmit spectral mask
				1. General

The bandwidth of the spectral mask applied to an EHT MU PPDU and EHT TB PPDU shall be determined by the bandwidth indicated in the Bandwidth subfield of the U-SIG field except when a smaller bandwidth operating non-AP EHT STA is participating in larger bandwidth EHT TB PPDU, the bandwidth of the spectral mask applied to an EHT TB PPDU shall be determined by the operating bandwidth of the non-AP EHT STA.

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***TGbe Editor: Add underline text in 36.3.18.4.4 (Transmitter modulation accuracy (EVM) test) as follows:***

* Transmitter modulation accuracy (EVM) test

…

The valid range for *m* for Equation (36-106) is as follows:

*  for a 20 MHz, 40 MHz, 80 MHz, 160 MHz, or 320 MHz PPDU

The valid range for *m* for Equation (36-107) is as follows:

*  for a 20 MHz, 40 MHz, 80 MHz, 160 MHz, or 320 MHz PPDU

When a smaller bandwidth operating non-AP EHT STA is participating in larger bandwidth EHT TB PPDU, the transmit modulation accuracy test for the unoccupied subcarriers of the PPDU shall be performed within the non-AP EHT STA’s operating bandwidth.

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