IEEE P802.11
Wireless LANs

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| Proposed Draft Text: OFDM modulation |
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Abstract

This submission proposed the draft text on OFDM modulation for TGbe D0.2.

This document is based on 27.3.12.14 OFDM modulation of P802.11ax D7.0, and making updates based on the passed motions:

* Only contiguous PPDU is defined in EHT, so no segment index is needed.
* STBC is not defined for EHT PPDU: changing STS to SS.
* 11ax definition of needs to be updated to cover MRU.

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: font change
* Rev 2: update definition of P\_n for RU/MRU, and
* Rev 3: fix typos in equations according to offline comments.

**34.3.12.9 OFDM modulation**

The time domain waveform of the Data field of an EHT PPDU that is not an EHT TB PPDU for transmit chain , , shall be as defined in Equation (36-x1).

(36-x1)

where

 is defined in Table 36-9 (Timing-related constants)

 is defined in 17.3.5.10 (OFDM modulation)

 is defined based on the RU/MRU size. For any RU/MRU, except MRU 26+52 and MRU 26+106, the value is defined for each component RU using Equation (27-101) to Equation (27-107) in 27.3.12.13 (Pilot subcarriers). For MRU 26+52 and MRU 26+106, the value is defined from Equation (36-xx) to Equation (36-aa). For RU , the value is defined in Equation (36-72) in 36.3.12.8 (Pilot subcarriers).

 represents the cyclic shift for spatial stream as defined in 36.3.11.2.2 (Cyclic shift for EHT modulated fields).

 is the guard interval duration as defined in Table 36-9 (Timing-related constants)

 is the transmitted constellation for user in the -th RU/MRU at subcarrier k, spatial stream m, and Data field OFDM symbol and is defined by Equation (36-x2).

 (36-x2)

where

 is the set of pilot subcarrier indices for the Data field OFDM symbols as defined in 36.3.12.13 (Pilot subcarriers)

 is defined in Equation (36-x3)

 (36-x3)

where

 is the minimum value of the set

 is the cardinality of a set

NOTE— translates a subcarrier index into the index of data symbols in a transmission over RU/MRU . The subcarrier index for the data subcarrier is first offset by the minimum value of subcarrier index /MRU and number of the unoccupied tonesThe time domain waveform of the Data field of an EHT TB PPDU for user in the -th RU/MRU from transmit chain , , shall be as defined in Equation (36-x4).

(36-x4)

where

 is defined in 36.3.10 (Mathematical description of signals).

NOTE—Other variables in Equation (36-x1) and (36-x4) are defined in subclause 36.3.10.4 (Transmitted signal).