IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Proposed Draft Text: Effect of CH\_BANDWIDTH parameter on PPDU format | | | | |
| Date: 2021-01-25 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Yujin Noh | Senscomm |  |  | yujin.noh@senscomm.com |
| Ross Jian Yu | Huawei Technologies |  |  |  |
| Youhan Kim | Qualcomm |  |  |  |

Abstract

This submission shows

* Draft of 36.2.5 (Effect of CH\_BANDWIDTH parameter on PPDU format)

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: TBD filled based on the feedback on the teleconference call.
  + In INACTIVE\_SUBCHANNELS parameter in Non-HT duplicate transmission, puncturing patterns include both non-OFDMA and OFDMA cases altogether.

**36.2.5 Effect of CH\_BANDWIDTH parameter on PPDU format**

Table 36-x1 (Interpretation of FORMAT, NON\_HT\_MODULATION and CH\_BANDWIDTH parameters) shows the valid combinations of the FORMAT, NON\_HT\_MODULATION(#24306) and CH\_BANDWIDTH parameters and the corresponding PPDU format and value of CH\_OFFSET (if applicable). Other combinations are reserved.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Table 36-x1 Interpretation of FORMAT, NON\_HT\_MODULATION(#24306) and CH\_BANDWIDTH parameters | | | | |
| FORMAT | NON\_HT\_  MODULATION | CH\_BANDWIDTH | CH\_OFFSET | PPDU format |
| EHT\_MU, EHT\_TB | N/A | CBW20 | N/A | The STA transmits an EHT PPDU of 20 MHz bandwidth. If the BSS bandwidth is wider than 20 MHz, then the transmission shall use the primary 20 MHz channel. |
| EHT\_MU, EHT\_TB | N/A | CBW40 | N/A | The STA transmits an EHT PPDU of 40 MHz bandwidth. If the BSS bandwidth is wider than 40 MHz, then the transmission shall use the primary 40 MHz channel. |
| EHT\_MU, EHT\_TB | N/A | CBW80 | N/A | The STA transmits an EHT PPDU of 80 MHz bandwidth. If the BSS bandwidth is wider than 80 MHz, then the transmission shall use the primary 80 MHz channel. |
| EHT\_MU, EHT\_TB | N/A | CBW160 | N/A | The STA transmits an EHT PPDU of 160 MHz bandwidth. If the BSS bandwidth is wider than 160 MHz, then the transmission shall use the primary 160 MHz channel. |
| EHT\_MU, EHT\_TB | N/A | CBW320 | N/A | The STA transmits an EHT PPDU of 320 MHz bandwidth. |
| HT\_MF, HT\_GF, VHT, HE\_SU, HE\_MU, HE\_ER\_SU, HE\_TB | See Table 27-3 (Interpretation of FORMAT, NON\_HT\_MODULATION and CH\_BANDWIDTH parameters), Table 21-2 (Interpretation of FORMAT, NON\_HT\_MODULATION, CH\_BANDWIDTH, and CH\_OFFSET parameters), and Table 19-2 (Interpretation of FORMAT, CH\_BANDWIDTH and CH\_OFFSET parameters), | | | |
| NON\_HT | If INACTIVE\_SUBCHANNELS is not present, see Table 27-3 (Interpretation of FORMAT, NON\_HT\_MODULATION and CH\_BANDWIDTH parameters), Table 21-2 (Interpretation of FORMAT, NON\_HT\_MODULATION, CH\_BANDWIDTH, and CH\_OFFSET parameters) and Table 19-2 (Interpretation of FORMAT, CH\_BANDWIDTH and CH\_OFFSET parameters) | | | |
| NON\_HT | If INACTIVE\_SUBCHANNELS is present, see Table 36-x2 (Interpretation of CH\_BANDWIDTH and INACTIVE\_SUBCHANNELS parameters when FORMAT is equal to NON\_HT and NON\_HT\_MODULATION is equal to NON\_HT\_DUP\_OFDM) | | | |

Valid combinations of the CH\_BANDWIDTH and INACTIVE\_SUBCHANNELS parameters when FORMAT is NON\_HT and the corresponding PPDU and CH\_OFFSET (if applicable) are shown in Table 36-x2 (Interpretation of CH\_BANDWIDTH and INACTIVE\_SUBCHANNELS parameters when FORMAT is equal to NON\_HT and NON\_HT\_MODULATION is equal to NON\_HT\_DUP\_OFDM). Other combinations are reserved.

|  |  |  |  |
| --- | --- | --- | --- |
| Table 36-x2 Interpretation of CH\_BANDWIDTH and INACTIVE\_SUBCHANNELS parameters when FORMAT is equal to NON\_HT and NON\_HT\_MODULATION is equal to NON\_HT\_DUP\_OFDM | | | |
| CH\_BANDWIDTH | INACTIVE\_SUBCHANNELS | CH\_OFFSET | PPDU format |
| ~~CBW80~~ | ~~All bits set to 1 except for the~~  ~~four bits corresponding to the~~  ~~primary 80 MHz channel, which are set to 0~~ | ~~N/A~~ | ~~The STA transmits a nonpunctured non-HT PPDU(#24307) of 80 MHz bandwidth. If the BSS bandwidth is wider than 80 MHz, then the transmission shall use the primary 80 MHz channel.~~ |
| CBW80 | For the non-OFDMA case (see Table 36-29 (5-bit punctured channel indication for the non-OFDMA case in an EHT MU PPDU), the bit corresponding to the nonpunctured subchannel set to 0, all other bits set to 1. The puncturing granularity is 20 MHz.  For the OFDMA case (see Punctured Channel Information field in Table 36-27 (U-SIG field of an EHT MU PPDU)), the bit corresponding to the nonpunctured subchannel set to 0, all other bits set to 1.  The allowed punctured patterns are defined with B3–B6 of U-SIG2 field for an 80 MHz subblock. | N/A | The STA transmits a ~~punctured~~ non-HT PPDU(#24307) of 80 MHz bandwidth. If the BSS bandwidth is wider than 80 MHz, then the transmission shall use the primary 80 MHz channel. |
| ~~CBW160~~ | ~~All bits set to 1 except for the~~  ~~eight bits corresponding to the~~  ~~primary 160 MHz channel, which are set to 0~~ | ~~N/A~~ | ~~The STA transmits a nonpunctured non-HT PPDU(#24307) of 160 MHz bandwidth. If the BSS bandwidth is wider than 160 MHz, then the transmission shall use the primary 160 MHz channel.~~ |
| CBW160 | For the non-OFDMA case (see Table 36-29 (5-bit punctured channel indication for the non-OFDMA case in an EHT MU PPDU), the bit corresponding to the nonpunctured subchannel set to 0, all other bits set to 1. The puncturing granularity is 20 MHz.  For the OFDMA case (see Punctured Channel Information field in Table 36-27 (U-SIG field of an EHT MU PPDU)), the bit corresponding to the nonpunctured subchannel set to 0, all other bits set to 1.  The allowed punctured patterns are defined with B3–B6 of U-SIG2 field for an 80 MHz subblock where value in this field may be varied from one 80 MHz to the other. | N/A | The STA transmits a ~~punctured~~ non-HT PPDU(#24307) of 160 MHz bandwidth. If the BSS bandwidth is wider than 160 MHz, then the transmission shall use the primary 160 MHz channel. |
| ~~CBW320~~ | ~~All bits set to 0~~ | ~~N/A~~ | ~~The STA transmits a nonpunctured non-HT PPDU(#24307) of 320 MHz bandwidth.~~ |
| CBW320 | For the non-OFDMA case (see Table 36-29 (5-bit punctured channel indication for the non-OFDMA case in an EHT MU PPDU), the bit corresponding to the nonpunctured subchannel set to 0, all other bits set to 1. The puncturing granularity is 40 MHz.  For the OFDMA case (see Punctured Channel Information field in Table 36-27 (U-SIG field of an EHT MU PPDU)), the bit corresponding to the nonpunctured subchannel set to 0, all other bits set to 1.  The allowed punctured patterns are defined with B3–B6 of U-SIG2 field for an 80 MHz subblock where value in this field may be varied from one 80 MHz to the other. | N/A | The STA transmits a ~~punctured~~ non-HT PPDU(#24307) of 320 MHz bandwidth. |