### **IEEE P802.11 Wireless LANs**

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| PDT Update on Ng Values | | |
| Date: 2023-01-03 | | |
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**Introduction**

This document provides proposed draft text for IEEE 802.11bf D0.6.

The following Straw Poll applies to this PDT:

**Straw Poll:** Do you agree to make the following change to the 11bf table of conditionally mandatory and optionally supported Ng values in the first table below and do you support adding the second table specifying the indices of Ng = 8 for 320 MHz NDP to 11bf?

Table

Description automatically generated

Table

Description automatically generated with medium confidence

**Result:** Unanimously supported.

**Discussion**

While inserting the table for the subcarrier indices for the case of 320 MHz and , it was discovered that there were some errors in the text referring to Table 9-127j, so that error was also fixed.

While we were at it we added a row for 320 MHz on the number of indices and also update the largest CSI size of the CSI report.

***TGbf editor: Please make the following change in subclause 11.55.1.2:***

A STA with five or more transmit antennas, and a bandwidth greater than or equal to 160 MHz, which supports the Sensing Measurement report shall support an value of 8 and may optionally support an value of 16 (Motion 125).

***TGbf editor: Please make the following change in subclause 9.4.1.75.4:***

The number of subcarriers depends on the channel width and the value of .

The subcarrier indices for a channel width up to 160 MHz with and are provided in Table 9-91e—Subcarrier indices for compressed beamforming feedback matrix.

The subcarrier indices for a channel width of 160 MHz and are provided in Table 9-127j – Subcarrier indices for Sensing CSI field, for Channel Width of 160 MHz and .

The subcarrier indices for a channel width of 320 MHz and are provided in Table 9-127c—Subcarrier indices when all bits in Partial BW Info subfield corresponding to the 80 MHz subblock are set to 1 for Ng = 4.

The subcarrier indices for a channel width of 320 MHz and are provided in Table 9-A – Subcarrier indices for Sensing CSI field, for Channel Width of 320 MHz and .

The subcarrier indices for a channel width of 320 MHz and are provided in Table 9-127d—Subcarrier indices when all bits in Partial BW Info subfield corresponding to the 80 MHz subblock are set to 1 for Ng = 16

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| --- | --- | --- |
| * Subcarrier indices for Sensing CSI field for channel width of 160 MHz and Ng = 8 | | |
| Channel width | Ng | Meaning |
| 160 MHz | 8 | -1012, -1004, … -20, -12, 12, 20, … 1004, 1012 |

Table 9-A – Subcarrier indices for Sensing CSI field for unpunctured channels with a channel width of 320 MHz and

|  |  |
| --- | --- |
| **996-tone RU Index** | **Subcarrier Indices for Ng = 8 for 320 MHz** |
| 1 | [-2036 : 8 : -1540, -1532 : 8 : -1036] |
| 2 | [-1012 : 8 : -516, -508: 8: -12] |
| 3 | [12 : 8: 508, 516 : 8: 1012] |
| 4 | [1036: 8 : 1532, 1540: 8 : 2036] |

|  |  |  |
| --- | --- | --- |
| * Number of subcarriers as a function of channel width, puncturing, and Ng | | |
| Channel width | Ng | Number of subcarriers |
| 20 MHz | 4 | 64 |
| 16 | 20 |
| 40 MHz | 4 | 122 |
| 16 | 32 |
| 80 MHz | 4 | 250 |
| 16 | 64 |
| 160 MHz | 4 | 500 |
| 8 | 252 |
| 16 | 128 |
| 320 MHz  (Unpunctured) | 4 | 1000 |
| 8 | 504 |
| 16 | 265 |
| 320 MHz  (40 MHz Punctured) | 4 | 875 |
| 8 | 441 |
| 16 | 231 |
| 320 MHz  (80 MHz Punctured) | 4 | 750 |
| 8 | 378 |
| 16 | 198 |
| 320 MHz  (40 + 80 MHz Punctured) | 4 | 625 |
| 8 | 315 |
| 16 | 165 |

NOTE—The size of the Sensing Measurement Report information increases with the number of transmit antennas, the number of receive antennas, the channel width, the smaller subcarrier grouping size, and the larger number of quantization bits for each real and imaginary component of CSI. The smallest Sensing Measurement Report field is 42 octets, and the largest Sensing Measurement Report field is 80736 octets.