IEEE P802.11
Wireless LANs

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| REVmd SB1 PHY CR—CID 4471 |
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Abstract

Resolution for REVmd SB1 comment on PHY topic: 4471.

References to page and line numbers are to D3.0.

Change history:

r0 (2020-04-30): Initial draft.

## Comment 4471

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| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** |
| 4471 | Mark Rison | 1174.38 | 9.4.2.55.2 | "Indicates short GI supportfor the reception of PPDUs(#1362) transmittedwith the TXVECTORparameter(#2639)CH\_BANDWIDTH equalto HT\_CBW20"-- also VHT20, per "Support for short GI for the reception of PPDUs(#1362) with TXVECTOR parameter CH\_BANDWIDTHequal to CBW20 or CBW40 is indicated in the HT Capabilities Info field of the HT Capabilities element." in 9.4.2.157.2 VHT Capabilities Information field | Change the cited text at the referenced location to "Indicates short GI supportfor the reception ofPPDUs(#1362) transmittedwith the TXVECTORparameter(#2639)CH\_BANDWIDTH equalto HT\_CBW20 or (for a VHT STA) CBW20". Change cell below to "Indicates short GI supportfor the reception ofPPDUs(#1362) transmittedwith the TXVECTORparameter(#2639)CH\_BANDWIDTH equalto HT\_CBW40 or (for a VHT STA) CBW40" |

## Discussion for 4471

The definition of “20 MHz mask physical layer (PHY) protocol data unit (PPDU)” (174.6) includes the following cases:

“c) A high-throughput (HT) PPDU with the TXVECTOR parameter CH\_BANDWIDTH equal to HT\_CBW20 and the CH\_OFFSET parameter equal to CH\_OFF\_20 transmitted using the 20 MHz transmit spectral mask defined in Clause19 (High-throughput (HT) PHY specification).

d) A very high throughput (VHT) PPDU with (#2639)the TXVECTOR parameter CH\_BANDWIDTH equal to CBW20 transmitted using the 20 MHz transmit spectral mask defined in Clause21 (Very high throughput (VHT) PHY specification).

f) An HT PPDU with the TXVECTOR parameter CH\_BANDWIDTH equal to HT\_CBW20 and the CH\_OFFSET parameter equal to CH\_OFF\_20 transmitted by a VHT STA using the 20 MHz transmit spectral mask defined in Clause21 (Very high throughput (VHT) PHY specification).”

From this, the TXVECTOR parameter corresponds to the PPDU, not the STA.

The commenter is correct that HT\_CBW20 and HT\_CBW40 in the HT Capabilities element signal CBW20 and CBW40 for VHT (i.e., for a VHT PPDU) according to the text cited by the comment (1339.54), and the text should be altered to reflect this.

There are other necessary changes. For example, Section 10.17 (Short GI operation) (1813.33) doesn’t mention HT\_CBW20 or HT\_CBW40, and instead uses CBW20 and CBW40.

Also, Table 19-6 in Section 19.3.6 refers to “HT\_CBW\_20” (3004.43 and 3005.7), whatever that is, and this also appears at 3006.51.

## Proposed resolution for 4471

REVISED.

At 1174.38, change second column as follows (turn on change tracking to see changes):

“Indicates short GI support for the reception of HT PPDUs(#1362) transmitted with the TXVECTOR parameter(#2639) CH\_BANDWIDTH equal to HT\_CBW20 and, for a VHT STA, for the reception of VHT PPDUs transmitted with the TXVECTOR parameter CH\_BANDWIDTH equal to CBW20”

At 1174.46, change second column as follows (turn on change tracking to see changes):

“Indicates short GI support for the reception of HT PPDUs(#1362) transmitted with the TXVECTOR parameter(#2639) CH\_BANDWIDTH equal to HT\_CBW40 and, for a VHT STA, for the reception of VHT PPDUs transmitted with the TXVECTOR parameter CH\_BANDWIDTH equal to CBW40”

At 1813.34, change the paragraph as follows (turn on change tracking to see changes):

“A STA may transmit a frame in a PSDU with TXVECTOR parameters CH\_BANDWIDTH set to HT\_CBW20 and GI\_TYPE set to SHORT\_GI only if all of the following conditions are met (if there is more than one intended receiver, then this requirement applies for each intended receiver):

— The STA is an HT STA.

— The TXVECTOR parameter FORMAT is equal to HT\_MF or HT\_GF.

— The RA of the frame corresponds to a STA for which the Short GI for 20 MHz subfield of the HT Capabilities element contained a value of 1.

— dot11ShortGIOptionInTwentyActivated is present and is true.”

Add new paragraph after the one at 1813.34:

“A STA may transmit a frame in a PSDU with TXVECTOR parameters CH\_BANDWIDTH set to CBW20 and GI\_TYPE set to SHORT\_GI only if all of the following conditions are met (if there is more than one intended receiver, then this requirement applies for each intended receiver):

— The STA is a VHT STA.

— The TXVECTOR parameter FORMAT is equal to VHT.

— The RA of the frame corresponds to a STA for which the Short GI for 20 MHz subfield of the HT Capabilities element contained a value of 1.

— dot11ShortGIOptionInTwentyActivated is present and is true.”

At 1813.45, change the paragraph as follows (turn on change tracking to see changes):

“A STA may transmit a frame in a PSDU with TXVECTOR parameters CH\_BANDWIDTH set to HT\_CBW40 and GI\_TYPE set to SHORT\_GI only if all of the following conditions are met (if there is more than one intended receiver, then this requirement applies for each intended receiver):

— The STA is an HT STA.

— The TXVECTOR parameter FORMAT is equal to HT\_MFor HT\_GF.

— The RA of the frame corresponds to a STA for which the Short GI for 40 MHz subfield of the HT Capabilities element contained a value of 1.

— dot11ShortGIOptionInFortyActivated is present and is true.”

Add new paragraph after the one at 1813.45:

“A STA may transmit a frame in a PSDU with TXVECTOR parameters CH\_BANDWIDTH set to CBW40 and GI\_TYPE set to SHORT\_GI only if all of the following conditions are met (if there is more than one intended receiver, then this requirement applies for each intended receiver):

— The STA is a VHT STA.

— The TXVECTOR parameter FORMAT is equal to VHT.

 — The RA of the frame corresponds to a STA for which the Short GI for 40 MHz subfield of the HT Capabilities element contained a value of 1.

— dot11ShortGIOptionInFortyActivated is present and is true.”

At 3004.43, 3005.7, and 3006.51, change “HT\_CBW\_20” to “HT\_CBW20”.

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