IEEE P802.11
Wireless LANs

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| Proposed Draft Text for TXOP: Bandwidth Signaling |
| Date: 2020-09-10 |
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Abstract

This submission proposes draft text for TXOP: Bandwidth signaling based on the following portions of the SFD:

1. 802.11be supports defining a MAC mechanism to protect TXOP for PPDUs with > 160 MHz and/or PPDUs with preamble puncturing.

[Motion 111, #SP0611-26, [13] and [85]]

1. 802.11be supports indicating BW larger than 160 MHz through scrambler sequence in non-HT or non-HT duplicated frames.

[Motion 115, #SP102, [10] and [86]]

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Added corresponding descriptions for all related control frames
* Rev 2: Added tables and wording changes

***Editing instructions formatted like this are intended to be copied into the TGbe Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe editor to modify existing material in the TGbe draft. As a result of adopting the changes, the TGbe editor will execute the instructions rather than copy them to the TGbe Draft.***

***Insert new Clause 33 following Clause 32 as follows:***

33. Extremely High Throughput (EHT) MAC specification

33.x TXOP

33.x.y1 Bandwidth Signaling

An EHT STA transmitting a control frame in non-HT duplicate format addressed to an EHT STA shall set the TA field to a bandwidth signalling TA and shall set the TXVECTOR parameters CH\_BANDWIDTH\_IN\_NON\_HT and EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT according to Table 33-x (Setting TXVECTOR parameters EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and CH\_BANDWIDTH\_IN\_NON\_HT).

Table 33-x Setting TXVECTOR parameters EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and CH\_BANDWIDTH\_IN\_NON\_HT

|  |  |  |
| --- | --- | --- |
| Bandwidth of PPDU | EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT value | CH\_BANDWIDTH\_IN\_NON\_HT value |
| <=160 MHz | Parameter not present | See Table 21-1 (TXVECTOR and RXVECTOR parameters) |
| 320 MHz | CBW320 | TBD |
| 160+160 MHz | CBW160+160 | TBD |

**9.3 Format of individual frame types**

**9.3.1 Control frames**

**9.3.1.2 RTS frame format**

***Change the 3rd paragraph as follows:***

The TA field is the address of the STA transmitting the RTS frame or the bandwidth signaling TA of the STA transmitting the RTS frame. In an RTS frame transmitted by a VHT STA or an HE STA or an EHT STA in a non-HT or non-HT duplicate format to another VHT STA or HE STA or EHT STA, the scrambling sequence carries the TXVECTOR parameters CH\_BANDWIDTH\_IN\_NON\_HT and DYN\_BANDWIDTH\_IN\_NON\_HT (see 10.3.2.8 (VHT and S1G RTS procedure)) and the TA field is a bandwidth signaling TA. In an RTS frame transmitted by an EHT STA in a non-HT duplicate format with bandwidth greater than 160/80+80 MHz to another EHT STA, the TBD field carries the TXVECTOR parameter EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and the TA field is a bandwidth signaling TA.

**9.3.1.5 PS-Poll frame format**

***Change the 2nd paragraph as follows:***

The BSSID (RA) is set to the address of the STA contained in the AP. The TA field value is the address of the STA transmitting the frame or a bandwidth signaling TA. In a PS-Poll frame transmitted by a VHT STA or an HE STA or an EHT STA in a non-HT or non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field value is a bandwidth signaling TA. In a PS-Poll frame transmitted by an EHT STA in a non-HT duplicate format with bandwidth greater than 160/80+80 MHz to another EHT STA, the TBD field carries the TXVECTOR parameter EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and the TA field value is a bandwidth signalling TA.

**9.3.1.6 CF-End frame format**

***Change the last paragraph as follows:***

If transmitted by a non-DMG STA, the BSSID (TA) field is the address of the STA contained in the AP except that the Individual/Group bit of the BSSID (TA) field is set to 1 in a CF-End frame transmitted by a VHT STA to a VHT AP or an HE STA to an HE AP or an EHT STA to an EHT AP in a non-HT or non-HT duplicate format to indicate that the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT. If transmitted by a DMG STA, the TA field is the MAC address of the STA transmitting the frame. In a CF-End frame transmitted by an EHT STA in a non-HT duplicate format with bandwidth greater than 160/80+80 MHz, the TBD field carries the TXVECTOR parameter EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and the TA field value is a bandwidth signalling TA.

**9.3.1.7 BlockAckReq frame format**

**9.3.1.7.1 Overview**

***Change the 4th paragraph as follows:***

The TA field value is the address of the STA transmitting the BlockAckReq frame or a bandwidth signaling TA. In a BlockAckReq frame transmitted by a VHT STA or an HE STA or an EHT STA in a non-HT or non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field value is a bandwidth signaling TA. In a BlockAckReq frame transmitted by an EHT STA in a non-HT duplicate format with bandwidth greater than 160/80+80 MHz, the TBD field carries the TXVECTOR parameter EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and the TA field value is a bandwidth signalling TA.

**9.3.1.8 BlockAck frame format**

**9.3.1.8.1 Overview**

***Change the 4th paragraphs as follows:***

The TA field value is the address of the STA transmitting the BlockAck frame or a bandwidth signaling TA in the context of HT-delayed block ack. In a BlockAck frame transmitted in the context of HT-delayed block ack by a VHT STA or an HE STA or an EHT STA in a non-HT or non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field value is a bandwidth signaling TA. In a BlockAck frame transmitted by an EHT STA in a non-HT duplicate format with bandwidth greater than 160/80+80 MHz, the TBD field carries the TXVECTOR parameter EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and the TA field value is a bandwidth signalling TA.

**9.3.1.19 VHT/HE/EHT NDP Announcement frame format**

***Change the 4th paragraphs as follows:***

The TA field is set to the address of the STA transmitting the VHT/HE NDP Announcement frame or the bandwidth signaling TA of the STA transmitting the VHT/HE/EHT NDP Announcement frame. In a VHT/HE/EHT NDP Announcement frame transmitted by a VHT or HE STA or an EHT STA in a non-HT or non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field is set to a bandwidth signaling TA. In an EHT NDP Announcement frame transmitted by an EHT STA in a non-HT duplicate format with bandwidth greater than 160/80+80 MHz, the TBD field carries the TXVECTOR parameter EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT and the TA field value is a bandwidth signalling TA.

34. Extremely High Throughput (EHT) PHY specification

34.2 EHT PHY service interface

34.2.2 TXVECTOR and RXVECTOR parameters

***Within Table 34-1 – TXVECTOR and RXVECTOR parameters, insert a new row as shown, header information shown for convenience:***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Condition | Value | TXVECTOR | RXVECTOR |
| EXTENDED\_CH\_BANDWIDTH\_IN\_NON\_HT | FORMAT is EHT or NON\_HT\_DUP | Indicates a PPDU with 320 MHz bandwidth. Enumerated type: CBW320 indicates PPDU with 320 MHz bandwidthCBW160+160 indicates a PPDU with 160+160 MHz bandwidth | Y | Y |

**Straw Poll: Do you support to incorporate the proposed draft text in this document 11-20/1281r0 to the TGbe Draft 0.1?**

**Result: Yes/No/Abstain**