IEEE P802.11  
Wireless LANs

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| Channel width indication support in Tx and Rx vector | | | | |
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Abstract

Provide support of CH\_BANDWIDTH\_IN\_NON\_EDMG parameter in Tx/Rx Vector and sublauses 10.3 DCF, and 10.7 Multirate support.

*Editor, change Table 6 —TXVECTOR and RXVECTOR parameters as presented below*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CH\_BANDWIDTH | FORMAT is EDMG | In the TXVECTOR, indicates the channel width of the transmitted PPDU. In the RXVECTOR, indicates the channel width of the received PPDU.  Enumerated type:  CBW216 for 2.16 GHz  CBW432 for 4.32 GHz  CBW648 for 6.48 GHz  CBW864 for 8.64 GHz  CBW216+216 for 2.16+2.16 GHz  CBW432+432 for 4.32+4.32 GHz | Y | Y |
| FORMAT is NON\_EDMG | In TXVECTOR, indicates the channel width of the transmitted PPDU.  In RXVECTOR, indicates the estimated channel width of the received PPDU.  Enumerated type:  CBW432, CBW648, CBW864, CBW216+216, or CBW432+432 | Y | Y |
| CH\_BANDWIDTH\_IN\_NON\_EDMG | FORMAT is NON\_EDMG | In TXVECTOR, if present, indicates the channel width of the PPDU transmitted with DMG control modulation class in duplicated mode, which is signaled via the scrambling sequence or in the control trailer. In RXVECTOR, if valid, indicates the channel width of the received PPDU, which is signaled via the scrambling sequence or in the control trailer. Enumerated type: CBW216, CBW432, CBW648, CBW864, CBW216+216, or CBW432+432 if NON\_EDMG\_MODULATION equals NON\_EDMG\_DUP\_C\_MODE | O | Y |
| Otherwise | Not present | N | N |

**Table 6 —TXVECTOR and RXVECTOR parameters**

10.3.2.4 CTS and DMG CTS procedure

*Editor, please implememnt following changes in the subcaluse*

* Otherwise, the STA shall not respond with a DMG CTS frame. The STA may respond with a DMG DTS frame in a non-EDMG or non-EDMG duplicate PPDU after a SIFS. The DMG DTS frame’s TXVECTOR parameter CH\_BANDWIDTH shall be set to be equal or less than value in the RTS frame’s RXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG. A DMG DTS frame transmitted by an EDMG STA over channel width of a 4.32 GHz, 6.48 GHz or 8.64 GHz shall be transmitted in non-EDMG duplicate format.

In case an EDMG STA responds to an RTS frame with a DMG DTS frame, the following apply:

* The STA shall set the Duration, NAV-RA and NAV-TA fields of the DMG DTS frame to 0 if the STA’s NAV is 0 or a virtual CCA is not maintained by the STA on the channel.
* The STA shall set the Duration field of the DMG DTS frame to the NAV remainder if the STA’s NAV is nonzero on the channel.
* In case the Duration, NAV-RA and NAV-TA fields become different in different 2.16 channels indicated in CH\_BANDWIDTH parameter in RXVECTOR of the RTS frame a DTS frame is response to, and a STA is not able to transmit DTS frames that contain different NAV-RA, NAV-TA, and Duration values it shall transmit the DTS frame in primary channel only. The NAV-RA, NAV-TA, and Duration fields of the DTS frame are set as defined in the rules above in realtion to primary channel.

If the DMG CTS frame and DTS frame is transmitted in a non-EDMG duplicate PPDU (channel width 4.32 GHz or wider) the transmitting DMG STA shall set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG equal to CH\_BANDWIDTH parameter.

If the DMG CTS frame and DTS frame is transmitted in a non-EDMG PPDU (channel width 2.16 GHz) the transmitting EDMG STA may set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG equal to CH\_BANDWIDTH parameter.

10.3.2.14 EDMG RTS procedure

*Editor, append at end of the subclause*

If the RTS frame is transmitted in a non-EDMG duplicate PPDU (channel width 4.32 GHz or wider) the transmitting DMG STA shall set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG. equal to CH\_BANDWIDTH parameter.

If the RTS frame is transmitted in a non-EDMG PPDU (channel width 2.16 GHz) the transmitting DMG STA may set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG and if set it shall be equal to CH\_BANDWIDTH parameter.

10.7.7.6 Channel Width selection for Control frames transmitted by EDMG STAs

*Editor, append at end of the subclause*

If the Control frame is transmitted in a non-EDMG duplicate PPDU (channel width 4.32 GHz or wider) and in DMG Control modulation class the transmitting DMG STA shall set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG equal to CH\_BANDWIDTH parameter.

If the Control frame is transmitted in a non-EDMG PPDU (channel width 2.16 GHz) and in DMG Control modulation class the transmitting DMG STA may set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG equal to CH\_BANDWIDTH parameter.

If the Control frame is transmitted in a non-EDMG duplicate PPDU (channel width 4.32 GHz or wider) and in SC modulation class the transmitting DMG STA shall not set the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_EDMG.

**References:**

1. IEEE P802.11ay/D0.3, March 2017