IEEE P802.11
Wireless LANs

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| Clause 22.2.2 TXVECTOR and RXVECTOR Parameters D2.0 Comments Resolution |
| Date: 02 May 2012 |
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Abstract

This document provides resolutions for CIDs: 4072 and 5115.

**Comments:**

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 4072 | 165.57 | 22.2.2 | NO\_SIG\_EXTNThere is no signal extension in 5GHz, and therefore no need to control it. | Remove this row. | Rejected. VHT STA needs to support NO\_SIG\_EXTN when it transmits HT PPDU for which NO\_SIG\_EXTN is required. |

**Discussion:**

The comment addresses the issue that in current TX/RXVECTOR list, NO\_SIG\_EXTN is not presented in either TXVECTOR nor RXVECTOR. That means it’s not used in VHT case at all. Therefore it could be removed.

While as explained by Brian, this parameter is used by a VHT device to handle HT PPDU or NON\_HT PPDU, as described in 22.2.4. In this case, VHT TX/RXVECTOR will be mapped to HT TX/RXVECTOR thus the corresponding items must be kept in VHT TX/RXVECTOR to avoid blank mapping.

***Brian’s further comment:*** as shown in fig 22-1, a VHT STA may transmit a HT PPDU, and NO\_SIG\_EXTN is a required parameter of the HT TXVECTOR so NO\_SIG\_EXTN must also be passed into the VHT TXVECTOR. Although it is certainly true that a VHT PHY could set NO\_SIG\_EXTN to true, this goes against the layering arch, where it is the MAC’s job to know whether there is a signal extension or not. Consider, for instance, the HT case, where the HT PHY could set NO\_SIG\_EXTN to true/false based on its knowledge of which band it is operating in; but HT chose that the MAC would pass this information into the PHY.

**Comment Status: Rejected**

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 5115 | 168.24 | 22.2.2 | Ambiguity in use of field "BEAMFORMED" | It is not clear what qualifies as a "beamforming steering matrix". Where is the boundary between a spatial mapping matrix and a beamforming steering matrix?Is there an underlying requirement here that can be captured better? What was the initial intent of this BEAMFORMED field? | Revised. See edits under CID 5115 in document 11-12/0532r1. |

**Discussion:**

Actually the commented context is located at L24/P169.

The background of this BEAMFORMED parameter is to imply if smoothing could be applied or not. Thus it’s clearly to identify beamforming steering matrix rather than others.

A beamforming steering matrix is clearly defined in 20.3.11.11.2, and thus a reference to that clause has been added. Because the intention of the BEAMFORMED parameter is to imply if smoothing should be applied or not, a note has been added in this regard. Note that this definition is identical to the one proposed for the BEAMFORMED bit in VHT-SIGA (CID 5163).

**Comment Status: Revised.**

**TGac editor: please modify the content of Value column in Table 22-1, section 22.2.2 pg169/ln24 as following.**

“Set to 1 if a beamforming steering matrix is applied to the waveform in an SU transmission as described in 20.3.11.11.2 (Spatial mapping). Set to 0 otherwise.

 Note – when BEAMFORMED is set to 1, smoothing is not recommended.”