IEEE P802.11
Wireless LANs

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| Resolution for CMMG MAC related CIDs 4217,4218, and 4250 |
| Date: 2020-03-02 |
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##### This submission present proposed resolution for CIDs 4217,4218, and 4250. The proposed changes are based on REVmd/D3.0.

##### Revision history:

##### R0 – initial version

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comments | Proposed Change |
| 4217 |  9.4.2.229.2 | 1442 | 49 | No behaviour is associated with the Antenna Pattern Reciprocity field in the CMMG Capabilities Info field | In Figure 9-754--CMMG Capabilities Info field format change "Antenna Pattern Reciprocity" to "Reserved" and delete the "Antenna Pattern Reciprocity" row in Table 9-313--Subfields of the CMMG Capabilities Info field format |
| 4218 | 9.4.2.229.2 | 1442 | 49 | No behaviour is associated with the Antenna Pattern Reciprocity field in the CMMG Capabilities Info field | Add behaviour modelled on that given for DMG in 10.42.6.4.4 Antenna configuration setting during a beam refinement transaction |

**Discussion:**

This comment is related to Figures 9-753 and 9-754:





It is also related to the last paragraph of subclause 10.42.6.4.4 that the commenter points out:



We agree with the direction the commenter proposes in CID 4218 to add the behavior associated with the Antenna Pattern Reciprocity field.

In addition to this, the number of bits of the DMG Antenna Reciprocity subfield and the Antenna

Pattern Reciprocity subfield should be updated from 7 and 3 to 1 and 1, respectively.

**Proposed Resolution for CIDs 4217 and 4218:**

Revised

At page 1442, lines 10-18, Figure 9-753—CMMG Capabilities element format is changed to

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ElementID | Length | ElementIDExtension | CMMGCapabilitesInfo | A-MPDUParameters | TransmitBeamformingCapabilites | SupportedCMMGMCS andNSS Set | CMMG APor PCPCapabilityInformation |
| Octets: | 1 | 1 | 1 | 6 | 1 | 4 | 8 | 2 |

At page 1442, lines 29-64, Figure 9-754—CMMG Capabilities Info field format is changed to

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| B0 B1 | B2 | B3 | B4 B5 | B6 | B7 | B8 | B9 |
| MaximumMPDULength | SupportedChannelWidth Set | TxSTBC | RxSTBC | Short GI for540 MHz | Short GI for1080 MHz | SupportedMIMO | Heart beat |
| Bits: 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| B10 B11 | B12 | B13 | B14 | B15 | B16 | B17 | B18 B23 |
| TPC | Number ofSoundingDimensions CMMG | TXOP PS | ProtectedBlock Ack | CMMG LinkAdaptationCapable | Rx AntennaPatternConsistency | TxAntennaPatternConsistency | Fast LinkAdaptation |
| Bits: 2 | 1 | 1 | 1 | 1 | 1 | 1 | 6 |
| B24  | B25 B26 | B27 | B28 B29 | B30 | B31 | B31 | B33 |
| RXSSLengthS | Color | PSH andInterferenceMitigation | Number ofRx DMGAntennas | SupportsOther\_AID | RXSS TxRateSupported | DMG AntennaReciprocity | AntennaPatternReciprocity |
| Bits: 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 |
| B34 B40 | B41 B43 | B44 B45 | B46 | B47 B48 |  |  |  |
| TotalNumber ofSectors | HeartbeatElapsedIndication | MCSFeedback | RDResponder | Reserved |  |  |  |
| Bits: 7 | 3 | 2 | 1 | 2 |  |  |  |

At page 2059, after line 47, i.e. after the end of the last paragraph in subclause 10.42.6.4.4 Antenna configuration setting during a beam refinement transaction, insert the following paragraph:

A STA that has the CMMG Antenna Pattern Reciprocity subfield within the CMMG STA Capability Information field of the CMMG Capabilities element equal to 1 and that receives a BRP-RX PPDU from a peer STA that also has the CMMG Antenna Pattern Reciprocity subfield within the CMMG STA Capability Information field of the peer STA’s CMMG Capabilities element equal to 1 shall use the same AWV that was configured with the BRP-RX PPDU in subsequent transmissions and receptions with the peer STA during the DTI. This allows STAs that use reciprocity to shorten the beamforming training time.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Clause | Page | Line | Comments | Proposed Change |
| 4250 |  10.39.6.6 | 1983 | 9 | "The actual duration of the time the STA stays in the listening mode is limited by the aCMMGPPMinListeningTime parameter." -- no such parameter | Delete the cited sentence |

**Discussion:**

The following is the paragraph of interest as pointed out by the commenter:



aCMMGPPMinListeningTime parameter is missing from the table summarizing the CMMG PHY characteristics. Its value is the same as that of the aDMGPPMinListeningTime parameter.

**Proposed Resolution:**

Revised

At page 3562, the aCMMGPPMinListeningTime parameter is defined by adding a new line in Table 25-37 (CMMG PHY characteristics) in subclause 25.14.4 (PHY characteristic) as follows:

Table 25-37—CMMG PHY characteristics

|  |  |
| --- | --- |
| PHY parameter | Value |
| …… | ……. |
| aCCATime | 3us |
| aCMMGPPMinListeningTime | 150 us |
| aTxRFDelay | Implementation dependent |
| …… | ……. |