IEEE P802.11  
Wireless LANs

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| --- | --- | --- | --- | --- |
| Miscellaneous CIDs | | | | |
| Date: 2018-12-10 | | | | |
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Abstract

This document proposed resolution to several CIDs:

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| 198 |  |  | The LTFVECTOR needs to be added to Table 8-3 | As it says in the comment |

TBD

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| --- | --- | --- | --- | --- |
| 206 | 20.00 | 9.3.1.20 | What is TBD? Who selects it? Or whether it is used? | Clarify |
| 207 | 20.00 | 9.3.1.20 | "The Sounding Dialog Token Number field in the Sounding Dialog Token field contains a value in 10 the range of 0 to 31; the MSB (B7) of the Sounding Dialog Token Number field is reserved" -- b7 is not the MSb of the SDTN field, since that field only has 5 bits | Delete "; the MSB (B7) of the Sounding Dialog Token Number field is reserved" or change "B7" to "B5" |

Proposed Resolution: **Revised**

***TGaz Editor modify P19L13-15 (9.3.1.19) as follows:***

The Sounding Dialog Token Number field in the Sounding Dialog Token (SDT) field contains a value in the range of 0 to 31; the MSB (B7 of the SDT field) of the Sounding Dialog Token Number field is reserved. This field is selected by an ISTA in VHTz mode and RSTA in HEz mode to identify the NGP NDP Announcement frame.

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| 210 | 20.00 | 9.3.1.20 | "The RID11/AID11 subfield contains the 11 least significant bits of the RID or AID of a STA " -- well, which is it? It can't contain both | Clarify |

Proposed Resolution: **Revised**

***TGaz Editor Modify P15L1-3 (9.3.1.19) as follows:***

The RID11/AID11 subfield contains the 11 least significant bits of the RID or AID of an unassociated STA or an associated STA respectively, expected to process the following NDP frame.

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| 213 | 21.00 | 9.3.1.20 | "The HEz-LTF field offset subfield, Number of space-time streams subfield and repetition of HEz-LTF field subfield are used to indicate the HEz-LTF field allocation for the ISTAs in the DL sounding NDP of secured HEz ranging. " -- and what are they set to for VHTz? | State that these fields are reserved for VHTz |

Proposed Resolution: **Revised**

**Discussion:**

This text has been removed in D0.5

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 484 | 12.00 | 6.3.70.2 | There is no difference between MLME-FINETIMINGMSMTRQ.request section(6.3.58.3) and MLME-FINETIMINGMSMT.request section(6.3.70.2) | please make the difference clear |
| 485 | 13.00 | 6.3.70.3 | there is no difference between MLME-FINETIMINGMSMTRQ.indication section(6.3.70.3) and MLME-FINETIMINGMSMT.indication in section 6.3.58.4 | please make the difference clear |

Proposed Resolution: **Reject**

**Discussion:**

The difference between these primitives is in the frame that they start and indicate. In 58 it is Fine Timing Measurement Requests and in 70 it is Fine Timing Measurement. The parameters are the same because of the way these frames are used in the FTM protocol (i.e. the response to the request is measurement frame.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 518 | 19.00 |  | "The VHT/HE/ Ranging NDP Announcement frame has two three variants, the VHT NDP Announcement frame, and the HE NDP Announcement frame and the Ranging Announcement frame. " "Ranging Announcement frame" is undefined. | Define Ranging Announcement frame before use. |

Proposed Resolution: **Revised**

**Discussion:**

The text has been modified in D0.5 so the comment has been resolved, however, the new text uses the term “NGP” which we don’t want to use and was replaced in 11.22.6.4.4 with “Ranging”, so we need to replace it with “ranging” throughout the subclause.

***TGaz Editor: Modify the text in P17L8 (9.3.1.19) as follows.***

The VHT/HE/ Ranging Announcement frame has three variants, the VHT NDP

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| --- | --- | --- | --- | --- | --- |
| 536 | 30.00 | 12 | 9.4.2.166 | Table 9-272 (Format And Bandwidth field) needs VHTz and HEz PPDU format. | As in comment. |

Proposed Resolution: **Revised**

**Discussion:**

This comment have been resolved in D2.2. However, the table misses entries for EDMG OFDM.

***TGaz Editor: Last line of table 9-272 with the following lines:***

|  |  |  |
| --- | --- | --- |
| 37 | EDMG (OFDM) | 2160 |
| 38 | EDMG (OFDM) | 4320 |
| 39 | EDMG (OFDM) | 8640 |
| 40 | EDMG (OFDM) | 2160+2160 |
| 41 | EDMG (OFDM) | 4320+4320 |
| ~~32~~42–63 | Reserved | Reserved |

***TGaz Editor: Modify 9.4.2.250.2 (P27L4-10) as follows***

9.4.2.250.2 Beamforming Capability subelement



*Revised the Beamforming Capability subelement is defined in Figure 44:*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B15 | B16 B19 | B20 | B21 | B22 B23 |
|  | First Path Training Supported | Dual Polarization TRN Capability | Hybrid Beamforming and MU-MIMO Supported | Hybrid Beamforming and SU-MIMO Supported | Largest Ng Supported |
| Bits: | 1 | 4 | 1 | 1 | 2 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | B22 B23 | B24 | B25 | B26 | 27 | B28 B31 |
|  | Largest Ng Supported | Dynamic Grouping Supported | Secure ToF Supported | EDMG SC Ranging Supported | EDMG OFDM Ranging Supported | Reserved |
| Bits: | 2 | 1 | 1 | 1 | 1 | 6 |

***TGaz Editor: Insert the following paragraphs at the end of 9.4.2.250.2 (P35L14)***

The EDMG SC Ranging Supported subfield is set to 1 to indicate that the EDMG STA is capable of performing range measurement based on FTM using EDMG SC PPDUs. This subfield is set to 0 otherwise.

The EDMG OFDM Ranging Supported subfield is set to 1 to indicate that the EDMG STA is capable of performing range measurement based on FTM using EDMG OFDM PPDUs. This subfield is set to 0 otherwise.

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| --- | --- | --- | --- | --- |
| 501 | 48.00 |  | "eDMGz Ranging, it shall set the EDMG Range Measurement field of the Extended Capabilities element to 1. Otherwise it shall set the Multi User Range Measurement field of the Extended Capabilities element to 0. " There is no 'EDMG Range Measurements' field defined for the Extended Capabilities element. | Modify the text so it's correct and consistent. |

Proposed Resolution: **Revised**

**Discussion:**

The EDMG SC ranging supported goes into the beamforming capabilities subelement. The DMG should use the Fine timing measurement capability, other feature (such as directional measurement) either use other capability bits or are not available to DMG devices

***TGaz: Modify P64L19-> as follows (11.22.6.1)***

1. eDMGz Ranging, it shall set the EDMG Range Measurement field of the Extended Capabilities element to 1. It may also set the EDMG OFDM Range Measurement field of the Beamforming Capabilities subelement to 1 if it additionally supports OFDM ranging Otherwise it shall set the Multi User Range Measurement field of the Extended Capabilities element to 0. A STA that additionally supports Direction Measurement shall include a DMG Direction Measurement Capabilities field in the DMG Capabilities element and set one of the first 4 subfields (AOA TX Capability, AOA RX Capability, AOD TX Capability, AOD RX Capability) of this field to 1.

Sequences (b), (c), (d) and (e) above are referred to as 802.11az ranging protocols in this specification.

*Insert the following paragraphs of Clause 11.22.6.1 as shown below:*

For EDMG STAs that have set to 1 the First Path Training Supported field in the Beamforming Capability subelement, an FTM session shall be preceded by a First Path Beamforming Training as described in 10.39.9.6 First Path Beamforming Training.

**References:**