### IEEE P802.11 Wireless LANs

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| **DMG Positioning Bit** | | | | |
| Date: 2023-12-01 | | | | |
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Abstract

This document contains a proposed resolution to the bit assignment conflict in Figure 9-416 (BSSID Information field) between REVme and TGbe D5.0.

Revisions:

* Rev 0: Initial version of the document
* Rev 1: Revised version that takes into account received feedback during the presentation.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the REVme Draft. This introduction is not part of the adopted material.

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

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

This document proposes a resolution to the alignment issue between D5.0 of TGbe and D5.0 of REVme that arose when TGbe draft was updated to be aligned with the latter.

Issue: Figure 9-416 (BSSID Information field format) in P802.11be D5.01

* TGbe used bit 21 to indicate "Extremely High Throughput". After reviewing the same figure of REVme D5.0, bit 21 has been allocated to 802.11az-2022 for "DMG Positioning".



At this time there are three ways forward to fix this issue:

|  |  |  |
| --- | --- | --- |
| **Plan** | **Action** | **Description** |
| A | Update the bit position used by “DMG Positioning” from 21 to 22 in REVme. | REVme is still in the SA ballot phase and its draft should be published by the year end.  Need some due diligence that the old value is not in any implementations that could not be updated. |
| B | Along the lines that suggested in a submission [24/0430](https://mentor.ieee.org/802.11/dcn/24/11-24-0430-00-00be-proposed-resolution-to-alignment-issue-in-figure-9-416.ppt) | A technical solution that label bit 21 as “DMG Positioning/Extremely High Throughput”. |
| C | Update the bit position used by “Extremely High Throughput” from 21 to 22 in P802.11be | IEEE 802.11be is in the SA ballot phase.  May require some work of the vendors and the certification body to ensure implementations use the new bit. |

Based on feedback and discussions with members Plan A seems to be the most appropriate as it solves the issue in a timely manner, and it does not seem that there are implementations in the field that are using B21 as a DMG positioning bit. Plan B has some technical ramifications due to the use of the same bit for two different purposes and possibly interpretations when sent in different bands. Plan C is less than optimal since it appears that the bit 21 has already detected to be used in practice as an EHT indication.

**REVme Editor: Please change the figure below as follows:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 B1 | B2 | B3 | B4 B9 | B10 | B11 | B12 | B13 |
|  | AP Reachability | Security | Key Scope | Capabilities | Mobility  Domain | High Throughput | Very High Throughput | FTM |
| Bits: | 2 | 1 | 1 | 6 | 1 | 1 | 1 | 1 |
|  |  |  |  |  |  |  |  |  |
|  | B14 | B15 | B16 | B17 | B18 | B19 | B20 | B21 |
|  | High Efficiency | ER BSS | Colocated AP | Unsolicited Probe Responses Active | Member Of ESS With 2.4/5 GHz Colocated AP | OCT Supported With Reporting AP | Colocated With 6 GHz AP | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|  |  |  |  |  |  |  |  |  |
|  | B22 | B23 B31 |  |  |  |  |  |  |
|  | DMG Positioning | Reserved |  |  |  |  |  |  |
| Bits: | 1 | 9 |  |  |  |  |  |  |
| * BSSID Information field format(11ax) | | | | | | | | |