IEEE P802.11
Wireless LANs

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| Resolutions for CID 22177  |
| Date: February 26, 2024 |
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 Abstract

This submission proposes resolutions for the CID 22177 for SA ballot on draft 5.0.

**Revisions:**

* Rev 0: Initial version of the document.
* Rev 1: The comment raised during the presentation is solved after offline discussion by accepting the original solution in R0. The reasoning wording has been simplified. Changed to set “MCS15 Disable” to 0 to disable the reception of EHT-MCS 15 and set to 1 to enable it.
* Rev 2: Clarified that the reception of an EHT PPDU with EHT-MCS 15 is in both the data field and EHT-SIG field. Changed to set “MCS15 Disable” to 1 to disable the reception of EHT-MCS 15 and set to 0 to enable it by default.

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Pg/Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 22177 | 4.3.16a | 64.41 | "— Mandatory support for single spatial stream EHT-MCS 15 in an RU". Support of MCS15 should be optional. Another SDO is doing interoperability testing and MCS15 may be tested but as an optional feature. To avoid interoperability issue with already deployed 11be devices, I think it would be safer to make this feature optional and use one reserved bit of "EHT PHY Capabilities Information" field to indicate MCS15 support. For example B69 (currently reserved) could be renamed to "Support of MCS15 in an RU" and set to 1 is supported, 0 if not. It would not break existing device implementations IMHO. | As in comment (make MCS15 optional and use one reserved bit of "EHT PHY Capabilities Information" field to signal it) | **Revise.**To solve interoperability issue, a “MCS15 Disable” indication is introduced in the EHT Operation element and in the EHT OM Control. In the IEEE 802.11be, similar approach had been introduced for ER SU PPDU support. 11be Editor: please see the instructions in IEEE 802.11-24/0368r2. |

**Introduction to 11be Editor on CID 22177:**

**Text modification in Page xxx/Line xx in D5.0:**

* + - * 1. **EHT OM Control**

***TGbe editor: Change the figure below as follows (CID 22177):***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 |  B3  | B4 B5 |
|  | Rx NSSExtension | Channel Width Extension | Tx NSTSExtension | MCS15 Disable | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 2 |

**Figure 9-33a — Control Information subfield format in an EHT OM Control subfield**

***TGbe editor: Insert the paragraph below at the end of this subclause (CID 22177):***

A non-AP EHT STA sets the MCS15 Disable subfield to 1 to indicate that the reception of an EHT PPDU with EHT-MCS 15 in both the data field and EHT-SIG field is disabled and to 0 to indicate that the reception of an EHT PPDU with EHT-MCS 15 in both the data field and EHT-SIG field is enabled. If the EHT OM Control field is transmitted by an EHT AP, then the EHT-MCS 15 Disable subfield is reserved.

* + - 1. **EHT Operation element**

***TGbe editor: Change the figure below as follows (CID 22177):***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 | B4 B5 | B6  | B7 |
|  | EHT Operation Information Present | Disabled Subchannel Bitmap Present | EHTDefault PE Duration | Group Addressed BU Indication Limit | Group Addressed BU Indication Exponent | MCS15 Disable | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 2 | 1 | 1 |

**Figure 9-1001b—EHT Operation Parameters field forma****t**

***TGbe editor: Insert the paragraph below at the end of this subclause (CID 22177):***

The MCS15 Disable subfield indicates whether the reception of an EHT PPDU with EHT-MCS 15 in both the data field and EHT-SIG field by the AP is disabled or enabled. The MCS15 Disable subfield is set to 1 to indicate that it is disabled and set to 0 to indicate that it is enabled.

* + 1. **PPDU format selection**

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An EHT STA 6G shall not transmit an EHT PPDU in EHT duplicate mode to a peer EHT STA if the EHT Capabilities element received from that peer EHT STA has the Support Of EHT DUP (EHT-MCS 14) In 6 GHz subfield equal to 0.

***TGbe editor: Insert the paragraph below after the 3rd paragraph of this subclause (CID 22177):***

An EHT STA shall not transmit an EHT PPDU with EHT-MCS-15 in both the data field and EHT-SIG field to a peer non-AP STA if the most recently indicated MCS15 Disable subfield value of the EHT OM Control field from that peer non-AP STA, if any, is equal to 1.

An EHT STA shall not transmit an EHT PPDU with EHT-MCS 15 in both the data field and EHT-SIG field to an AP if the most recently indicated MCS15 Disable subfield value of the EHT Operation element from that AP is equal to 1.

An EHT STA shall not transmit an EHT PPDU with EHT-MCS 15 and MRUs listed in Table 9-404n (Subfield of the EHT PHY Capabilities Information field) to a peer EHT STA if the EHT Capabilities element received from that peer EHT STA has the Support Of EHT-MCS 15 In MRU subfield equal to 0.

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