IEEE P802.11  
Wireless LANs

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| **TGbe D0.3 Comment Resolutions**  **for 36.3.2.5 RU/MRU restrictions for 20 MHz operation** |
| **Date:** 2021-02-22 |
| **Author(s):** |

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Abstract

This submission proposes resolutions for comments of TGbe D0.3 with the following 10 CIDs:

1252, 1302, 1304, 1305, 1553, 2698, 2992, 3276, 3277, 3278

Revisions:

* Rev 0: Initial version of the document.

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 TGbe D0.3 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe D0.3 Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

#### *CIDs 1252, 1302, 1304, 1305, 1553, 2698, 2992, 3276, 3277, 3278*

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| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 1252 | 36.3.2.5 | 195.46 | "An AP shall not assign all 242-tone RUs to a 20 MHz operating non-AP EHT STA for 40 MHz, 80 MHz, 160 MHz, and 320 MHz EHT TB PPDU.". Change "all" to "any" 242-tone RU | as in comment | Accepted |
| 1302 | 36.3.2.5 | 194.50 | Awkward English at P194L50-54, since this is just informative | Try "For a 20 MHz operating non-AP EHT STA receiving a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT MU PPDU, or transitting a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT TB PPDU, it is noteworthy that the 20MHz RU/MRU tone mapping is not aligned with the 40 MHz, 80 MHz, 160 MHz, or 320 MHz RU  tone mapping (see 36.3.2.1 (Subcarriers and resource allocation for wideband))." | Revised  Agree in principle with the commenter. Revise the sentence.  TGbe editor to make the changes shown in 11-21/0273r1. |
| 1304 | 36.3.2.5 | 195.42 | I don't understand this "An AP shall not assign all 26+106-tone MRUs" since the non-AP STA should only be assigned one of these MRUs anyway!? | Figure out wehat is meant and say it more clearly. Ditto P195L46 | Revised  Agree in principle with the commenter. This sentence intends that any 26+106 MRUs cannot be allocated. Change “all” to “any” for clarification.  TGbe editor to make the changes shown in 11-21/0273r1. |
| 1305 | 36.3.2.5 | 195.50 | I don't understand this "A 20 MHz operating non-AP EHT STA may support tone mapping of 242-tone RU" | Should it be interpreted as "A 20 MHz operating non-AP EHT STA may support reception of a 242-tone RU in a 40 MHz ..." If so, please write it as such | Revised  Agree in principle with the commenter. Revise the paragraph.  TGbe editor to make the changes shown in 11-21/0273r1. |
| 1553 | 36.3.2.5 | 194.60 | delete the TBD in clause 36.3.2.5 and update the table which is used for referring | as in comment. | Revised  Agree in principle with the commenter. The tables have been defiend in 11-21/104r3 which will be reflected in the next draft.  TGbe editor to make the changes shown in 11-21/0273r1. |
| 2698 | 36.3.2.5 | 194.48 | It would be easier to provide a list of RUs/MRUs that an AP can assign to a 20MHz operating non-AP EHT STA, rather a list of those which can't not. | see comment | Rejected  Basically, most of RUs/MRUs within 20MHz are allowed for 20MHz operating STAs and only some of them are restricted. It would be better to provide a list of those which are disallowed for a compact description. |
| 2992 | 36.3.2.5 | 194.63 | How to compose MRU is described in section 36.3.2.3. No need to state in here. | Delete details of how to compose small MRUs. For example, P194L63, modify "26+52-tone MRU 2 and 5 (26-tone RU 5 + 52-tone RU 2 and 26-tone RU 14 + 52-tone RU 6) of a 40 MHz EHT MU PPDU and EHT TB PPDU" as follow, "52+26-tone MRU 2 and 5 of a 40 MHz EHT MU PPDU and EHT TB PPDU" | Revised  Agree in principle with the commenter. Delete the details described in brackets  TGbe editor to make the changes shown in 11-21/0273r1. |
| 3276 | 36.3.2.5 | 194.48 | remove "/" and make it clear from "or" or "and" or add the meaning of the symbol / | as in comment | Revised  Agree in principle with the commenter. Change “/” to “or”.  TGbe editor to make the changes shown in 11-21/0273r1. |
| 3277 | 36.3.2.5 | 194.48 | 26+52-tone MRU and 26+106-tone MRU should be 52+26-tone MRU and 106+26-tone MRU to be consistent throught the spec | as in comment | Revised  Agree in principle with the commenter. Make the MRU names consistent.  TGbe editor to make the changes shown in 11-21/0273r1. |
| 3278 | 36.3.2.5 | 195.52 | 802.11be defines 20 MHz-only client in 2.4/5 GHz band only in Motion 124. There seems to be conflict between the description and Motion 124. For example, 6 GHz band is not agreed for 20MHz-only client. | as in comment | Rejected  This restriction rule applies to 20MHz operating STAs as well as 20MHz-only STAs. Operating bandwidth of some STAs which have wider bandwidth capability can be set to 20MHz for a certain purpose and these 20MHz operating STAs can operate in 6GHz. |

*TGbe Editor: Please make the following changes in Section 36.3.2.5 of D0.3:*

**36.3.2.5 RU and MRU restrictions for 20 MHz operation(#3276)**

For a 20 MHz operating non-AP EHT STA receiving a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT MU PPDU, or transmitting a 40 MHz, 80 MHz, 160 MHz, or 320 MHz EHT TB PPDU, it is noteworthy that the 20MHz RU or MRU tone mapping is not aligned with the 40 MHz, 80 MHz, 160 MHz, or 320 MHz RU or MRU tone mapping (see 36.3.2.1 (Subcarriers and resource allocation for wideband)).(#1302)(#3276)

An AP shall not assign the following RUs or MRUs to a 20 MHz operating non-AP EHT STA where the RU index is defined in Table 27-8 (Data and pilot subcarrier indices for RUs in a 40 MHz HE PPDU and in a non-OFDMA 40 MHz HE PPDU) and the MRU index is defined in Table 36-x (Indices for small-size MRUs in an OFDMA 40 MHz EHT PPDU):(#1553)(#3276)

* 26-tone RU 5 and 14 of a 40 MHz EHT MU PPDU and EHT TB PPDU
* 52+26-tone MRU 2 and 5 of a 40 MHz EHT MU PPDU and EHT TB PPDU(#2992)(#3277)

An AP shall not assign the following RUs or MRUs to a 20 MHz operating non-AP EHT STA where the RU index is defined in Table 36-5 (Data and pilot subcarrier indices for RUs in an 80 MHz EHT PPDU) and the MRU index is defined in Table 36-x (Indices for small-size MRUs in an OFDMA 80 MHz EHT PPDU):(#1553)(#3276)

* 26-tone RU 5, 14, 24, and 33 of an 80 MHz EHT MU PPDU and EHT TB PPDU
* 52+26-tone MRU 2, 5, 8, and 11 of an 80 MHz EHT MU PPDU and EHT TB PPDU(#2992)(#3277)

An AP shall not assign the following RUs or MRUs to a 20 MHz operating non-AP EHT STA where the RU index is defined in Table 36-6 (Data and pilot subcarrier indices for RUs in a 160 MHz EHT PPDU) and the MRU index is defined in Table 36-x (Indices for small-size MRUs in an OFDMA 160 MHz EHT PPDU):(#1553)(#3276)

* 26-tone RU 5, 14, 24, 33, 42, 51, 61, and 70 of a 160 MHz EHT MU PPDU and EHT TB PPDU
* 52+26-tone MRU 2, 5, 8, 11, 14, 17, 20, and 23 of a 160 MHz EHT MU PPDU and EHT TB PPDU(#2992)(#3277)

An AP shall not assign the following RUs or MRUs to a 20 MHz operating non-AP EHT STA where the RU index is defined in Table 36-7 (Data and pilot subcarrier indices for RUs in a 320 MHz EHT PPDU) and the MRU index is defined in Table 36-x (Indices for small-size MRUs in an OFDMA 320 MHz EHT PPDU):(#1553)(#3276)

* 26-tone RU 5, 14, 24, 33, 42, 51, 61, 70, 79, 88, 98, 107, 116, 125, 135, and 144 of a 320 MHz EHT MU PPDU and EHT TB PPDU
* 52+26-tone MRU 2, 5, 8, 11, 14, 17, 20, 23, 26, 29, 32, 35, 38, 41, 44, and 47 of a 320 MHz EHT MU PPDU and EHT TB PPDU(#2992)(#3277)

An AP shall not assign any 106+26-tone MRUs to a 20 MHz operating non-AP EHT STA for 40 MHz, 80 MHz, 160 MHz, and 320 MHz EHT MU PPDU and EHT TB PPDU.(#1304)(#3277)

An AP shall not assign any 242-tone RUs to a 20 MHz operating non-AP EHT STA for 40 MHz, 80 MHz, 160 MHz, and 320 MHz EHT TB PPDU.(#1252)(#1304)

A 20 MHz operating non-AP EHT STA may support reception of a 242-tone RU for 40 MHz EHT MU PPDU (see Table 27-8 (Data and pilot subcarrier indices for RUs in a 40 MHz HE PPDU and in a non-OFDMA 40 MHz HE PPDU)) in the 2.4 GHz, 5 GHz, and 6 GHz bands, 80 MHz and 160 MHz EHT MU PPDU (see Table 36-5 (Data and pilot subcarrier indices for RUs in an 80 MHz EHT PPDU) and Table 36-6 (Data and pilot subcarrier indices for RUs in a 160 MHz EHT PPDU)) in the 5 GHz and 6 GHz bands, and 320 MHz EHT MU PPDU (see Table 36-7 (Data and pilot subcarrier indices for RUs in a 320 MHz EHT PPDU)) in the 6 GHz band.(#1305) This support is indicated in the Supported Channel Width Set subfield in the EHT PHY Capabilities Information field in the EHT Capabilities element (see 9.4.2.295c.1 (EHT PHY Capabilities Information field)).