IEEE P802.11
Wireless LANs

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| LB266 CR for EHT MU Operation |
| Date: August 4, 2022 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jason Yuchen Guo | Huawei |  |  | guoyuchen@huawei.com |
| Ming Gan | Huawei |  |  |  |
| Yunbo Li | Huawei |  |  |  |
| Guogang Huang | Huawei |  |  |  |
| Mengyao Ma | Huawei |  |  |  |
| Hongjia Su | Huawei |  |  |  |
| Yousi Lin | Huawei |  |  |  |

 Abstract

This submission proposes resolutions for following 9 CIDs received for TGbe LB266:

10996 11272 11273 12006 13434

13435 13862 13437 13438

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 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe 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.***

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| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 10996 | Yanjun Sun | 483.36 | 35.5.1.2 | Looks like a typo. As normative text is a better fit here instead of informative text, please change "does not allocate" to "shall not allocate" | As in comment | Revised-Agree with the comment. TGbe editor:Please implement changes as shown in this document tagged as 10996. |
| 11272 | Sigurd Schelstraete | 483.13 | 35.5.1.2 | change "equals to 1" to either "equals 1" or "is equal to 1" | See comment | Revised-Agree in principle with the comment. Same for the next paragraph.TGbe editor:Please implement changes as shown in this document tagged as 11272. |
| 11273 | Sigurd Schelstraete | 483.25 | 35.5.1.2 | change "equals to 1" to either "equals 1" or "is equal to 1" | See comment | Revised-Agree in principle with the comment. TGbe editor:Please implement changes as shown in this document tagged as 11273. |
| 12006 | Eunsung Park | 483.36 | 35.5.1.2 | Make the last two paragraphs consistent regarding the description of the secondary 160 MHz allocation. | Delete "with dot11EHTBaseLineFeaturesImplementedOnly equal to true" in the last paragraph or add it to the second last paragraph. | Revised-Agree in principle with the comment. TGbe editor:Please implement changes as shown in this document tagged as 12006. |
| 13434 | Liwen Chu | 483.36 | 35.5.1.2 | This is restriction is not necessary under SST operation. 11be should enable SST within 320MHz channel. | As in comment | Revised-Agree in principle with the comment. TGbe editor:Please implement changes as shown in this document tagged as 13434. |
| 13435 | Liwen Chu | 483.44 | 35.5.1.2 | This is restriction is not necessary under SST operation. 11be should enable SST within 320MHz channel. | As in comment | Revised-Agree in principle with the comment. TGbe editor:Please implement changes as shown in this document tagged as 13435. |
| 13862 | Sanghyun Kim | 483.21 | 35.5.1.2 | Need to consider if the AP can allocate the small size RU/MRU to the 20 MHz operating STA that has set the Support For 242-tone RU in BW Wider Than 20 MHz subfield to 0? | As in comment. | Rejected-For wide band PPDU, the 20 MHz operating STA is mandatory to support some of the small size RUs/MRUs, subject to the restrictions defined in 36.3.2.6 (RU and MRU restrictions for 20 MHz operation), it is only optional to support the 242-tone RU, as indicated by the capability bit “Support For 242-tone RU in BW Wider Than 20 MHz”. |
| 13437 | Liwen Chu | 485.21 | 35.5.2.2.3 | Change the sentence to "When an EHT AP of an AP MLD transmits an initial Control frame to initiate a frame exchange with a non-AP MLD operating in the EMLSR mode, the AP shall ensure that the number of bits in the PSDU following the last bit of User Info field addressed to the non-AP MLD is at least LPAD,MAC defined in Equation (35-1) besides the padding requirement defined in 26.5.2.2.3(Padding for a triggering frame)."LPAD,MAC defined in Equation (35-1) besides the padding requirement defined in 26.5.2.2.3(Padding for a triggering frame)." | As in comment. | Revised-Agree in principle with the comment. TGbe editor:Please implement changes as shown in this document tagged as 13437. |
| 13438 | Liwen Chu | 485.42 | 35.5.2.2.3 | Change the sentence to "When an EHT AP of AP MLD transmits a triggering frame using non-HT or non-HT duplicate PPDU as an initial frame to initiate a frame exchange with a non-AP MLD operating in EMLMR mode, the AP shall ensure that the number of bits in the PSDU following the last bit of User Info field addressed to the non-AP MLD is at least" | As in comment. | Revised-Agree in principle with the comment. TGbe editor:Please implement changes as shown in this document tagged as 13438. |

***TGbe editor: Please note baselines are Draft P802.11be\_D2.1 and REVme D1.3***

**35.5.1.2 RU allocation in an EHT MU PPDU**

An EHT STA shall not transmit a 320 MHz EHT MU PPDU in the 6 GHz band with a 2×996+484-tone, 3×996-tone, 3×996+484-tone or 4×996-tone RU or MRU allocated to the other EHT STA, unless the EHT STA has received an EHT Capabilities element with the Support For 320 MHz In 6 GHz subfield in the EHT PHY Capabilities Information field equal (#11272) to 1 from the other EHT STA and the other EHT STA is in 320 MHz operating bandwidth.

A non-AP EHT STA with dot11EHTSupportFor242ToneRUInBWWiderThan20Implemented equal(#11272) to false shall set the Support For 242-tone RU In BW Wider Than 20 MHz subfield in the EHT PHY Capabilities Information field in the EHT Capabilities element to 0.

An AP shall not transmit a 40 MHz, 80 MHz, 160 MHz or 320 MHz EHT MU PPDU with a 242-tone RU allocated to a 20 MHz operating non-AP EHT STA, unless the AP has received from the 20 MHz operating non-AP EHT STA an EHT Capabilities element with the Support For 242-tone RU in BW Wider Than 20 MHz subfield in the EHT Capabilities Information field equal (#11273) to 1.

In a 40 MHz, 80 MHz, 160 MHz or 320 MHz EHT MU PPDU, an AP shall not allocate to a 20 MHz operating non-AP STA an RU or MRU that is not supported by the STA as indicated in 36.3.2.6 (RU and MRU restrictions for 20 MHz operation). An AP shall follow the rules in 36.3.2.5 (20 MHz operating non-AP EHT STAs), 36.3.2.7 (80 MHz operating non-AP EHT STAs), and 36.3.2.8 (160 MHz operating non-AP EHT STAs) if allocating RU(s) or MRU(s) to an non-AP EHT STA whose operating bandwidth is smaller than the BSS operating channel width.

An EHT AP shall (#10996) not allocate an RU or MRU in the secondary 160 MHz channel of a 320 MHz EHT MU PPDU or EHT TB PPDU to an 80 MHz operating non-AP EHT STA, if the 80 MHz operating non-AP EHT STA has not set up SST operation on the secondary 160 MHz channel with the EHT AP, or there is an inactive 20 MHz subchannel within the secondary 160 MHz channel (#13434). An EHT AP shall not allocate an RU or MRU in the secondary 80 MHz channel of a 160 MHz or 320 MHz EHT MU or EHT TB PPDU to an 80 MHz operating non-AP EHT STA, if the 80 MHz operating non-AP EHT STA has not set up SST operation on the secondary 80 MHz channel with the EHT AP or there is an inactive 20 MHz subchannel within the secondary 80 MHz channel.

An EHT AP (#12006)shall not allocate an RU or MRU on the secondary 160 MHz in a 320 MHz EHT MU PPDU or EHT TB PPDU to a 160 MHz operating non-AP EHT STA, if the 160 MHz operating non-AP EHT STA has not set up SST operation on the secondary 160 MHz channel with the EHT AP or there is an inactive 20 MHz subchannel within the secondary 160 MHz channel (#13435).

**35.5.2.2.3 Padding for a triggering frame**

An EHT AP shall ensure that there is sufficient padding in a triggering frame as specified in 26.5.2.2.3 (Padding for a triggering frame) if the triggering frame is neither an initial Control frame of a frame exchange sequence with a non-AP MLD operating in the EMLSR mode, nor an initial frame of a frame exchange sequence with a non-AP MLD operating in the EMLMR mode.

When an EHT AP of an AP MLD transmits an initial Control frame to initiate a frame exchange with a non-AP MLD operating in the EMLSR mode, the AP shall ensure that the number of bits in the PSDU following the last bit of the User Info field addressed to the non-AP MLD is at least *LPAD,MAC* defined in Equation (35-1) together with the padding requirement defined in 26.5.2.2.3(Padding for a triggering frame) (#13437).

  (35-1)

where



*EMLSR\_DELAY* is value of the EMLSR Delay subfield in the EML Capabilities subfield in the Multi-Link element

*NDBPS* is defined in Table 17-4 (Modulation-dependent parameters).

NOTE – The initial Control frame of a frame exchange sequence to initiate a frame exchange with a non-AP MLD
operating in the EMLSR mode is sent using the non-HT or non-HT duplicate PPDU.

When an EHT AP of an AP MLD transmits a triggering frame using a non-HT or non-HT duplicate PPDU as an initial frame to initiate a frame exchange with a non-AP MLD operating in EMLMR mode, the AP shall ensure that the number of bits in the PSDU following the last bit of the User Info field addressed to the non-AP MLD is at least defined in Equation (35-1) together with the padding requirement defined in 26.5.2.2.3(Padding for a triggering frame) (#13438)

where



*EMLMR\_DELAY* is value of the EMLMR Delay subfield in the EML Capabilities subfield in the Multi-Link element

*NDBPS* is defined in Table 17-4 (Modulation-dependent parameters).

NOTE – The initial frame of a frame exchange sequence to initiate a frame exchange with a non-AP MLD operating in EMLMR mode can be sent using the non-HT PPDU, non-HT duplicate PPDU, HT PPDU, VHT PPDU, HE PPDU, or EHT PPDU. However, for HT PPDU, VHT PPDU, HE PPDU, or EHT PPDU, there are other methods to do the padding for the initial frame, so the above padding method only applies to the case where the initial frame is sent using non-HT or non-HT duplicate PPDU.