IEEE P802.11  
Wireless LANs

|  |
| --- |
| **CC36 Comment Resolutions for CID 4653** |
| **Date:** 2021-10-27 |
| **Author(s):** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Affiliation** | **Address** | **Phone** | **Email** |
| Eunsung Park | LG Electronics | 19, Yangjae-daero 11gil, Seocho-gu, Seoul 137-130, Korea |  | esung.park@lge.com |
| Dongguk Lim |  | dongguk.lim@lge.com |
| Jinyoung Chun |  | jiny.chun@lge.com |
| Jinsoo Choi |  | js.choi@lge.com |
| Brian Hart | Cisco |  |  | brianh@cisco.com |
| Bin Tian | Qualcomm |  |  | btian@qti.qualcomm.com |

Abstract

This submission proposes a resolution for CID 4653.

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Further changes in 35.4.2.2.1

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 D1.2 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe D1.2 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.***

#### *CID 4653*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 4653 | 36.3.2.5 | 369.05 | While true, P369L5-7, P369L18-62 is controlled by the MAC not the PHY | 1) Identify the equivalent text in a MAC section & if not already present then copy this text to there, then 2) convert the text here to a note and add a cross-ref to the MAC section in the note. | Revised  TGbe editor to make the changes shown in 11-21/1738r2. |

*TGbe Editor: Please make the following changes in 36.3.2.6 of D1.2:*

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

(#1302)(#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, (#5467)it is noteworthy that the 20 MHz RU or MRU tone mapping (see 36.3.2 (Subcarrier and resource allocation)) 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)).

(#1553)(#3276)(#3080)A 20 MHz operating non-AP EHT STA does not support the following RUs or MRUs where the RU indices are 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 indices are defined in Table 36-9 (Indices for small size MRUs in an OFDMA 40 MHz EHT PPDU):

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

(#1553)(#3276)(#3080)A 20 MHz operating non-AP EHT STA does not support the following RUs or MRUs where the RU indices are defined in Table 36-5 (Data and pilot subcarrier indices for RUs in an80 MHz EHT PPDU) and the MRU indices are defined in Table 36-10 (Indices for small size MRUs in an OFDMA 80 MHz EHT PPDU):

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

(#1553)(#3276)(#3080)A 20 MHz operating non-AP EHT STA does not support the following RUs or MRUs where the RU indices are defined in Table 36-6 (Data and pilot subcarrier indices for RUs in a160 MHz EHT PPDU) and the MRU indices are defined in Table 36-11 (Indices for small size MRUs in an OFDMA 160 MHz EHT PPDU):

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

(#1553)(#3276)(#3080)A 20 MHz operating non-AP EHT STA does not support the following RUs or MRUs where the RU indices are defined in Table 36-7 (Data and pilot subcarrier indices for RUs in a 320 MHz EHT PPDU) and the MRU indices are defined in Table 36-12 (Indices for small size MRUs in an OFDMA 320 MHz EHT PPDU):

* 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 (receive) and EHT TB PPDU (transmit)
* (#2992)(#3277)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 (receive) and EHT TB PPDU (transmit)

(#1304)(#3277)A 20 MHz operating non-AP EHT STA does not support any 106+26-tone MRUs for 40 MHz, 80 MHz, 160 MHz, and 320 MHz EHT MU PPDU (receive) and EHT TB PPDU (transmit).

(#1252)(#1304)A 20 MHz operating non-AP EHT STA does not support any 242-tone RUs for 40 MHz, 80 MHz, 160 MHz, and 320 MHz EHT TB PPDU (transmit).

NOTE—As defined in 35.4.1.2 (RU allocation in an EHT MU PPDU), an EHT AP does not assign an RU or MRU to a STA that does not support the RU or MRU.

(#1305)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. (#1306)This PHY capability is indicated to the MAC sublayer by dot11EHTSupportFor242ToneRUInBWWiderThan20Implemented.

(#1306)NOTE—The STA advertises the value of dot11EHTSupportFor242ToneRUInBWWiderThan20Implemented in 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 (see 9.4.2.295c.3 (EHT PHY Capabilities Information field)).

*TGbe Editor: Please make the following changes in 35.4.1.2 of D1.2:*

**35.4.1.2 RU allocation in an EHT MU PPDU(#1306)**

(#1087)An EHT STA shall not transmit a 320 MHz EHT MU PPDU in the 6 GHz band with a 2x996+484-tone, 3x996-tone, 3x996+484-tone or 4x996-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 equals to 1 from the other EHT STA and the other EHT STA is in 320 MHz operating bandwidth.

(#1087)A non-AP EHT STA with dot11EHTSupportFor242ToneRUInBWWiderThan20Implemented equals 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.

(#1087)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 equals to 1.

(#1087)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(#1244)(#1254)), 36.3.2.7 (80 MHz operating non-AP EHT STAs(#1244)(#1254)), and 36.3.2.8 (160 MHz operating non-AP EHT STAs(#1244)(#1254)) if allocating RUs or MRUs to an non-AP EHT STA whose operating bandwidth is smaller than the BSS operating channel width.

*TGbe Editor: Please make the following changes in 35.4.2.2.1 of D1.2:*

**35.4.2.2.1 General(#1088)**

An EHT STA shall follow the rules defined in 26.5.2.2.1 (General), where

* Rules related to HE STAs also apply to EHT STAs.
* Rules related to triggering frames also apply to triggering frames soliciting EHT TB PPDUs.
* Rules related to HE MU and HE TB PPDUs also apply to EHT MU and EHT TB PPDUs, respectively.

An EHT AP shall not transmit a Trigger frame soliciting an OFDMA EHT TB PPDU that uses UL MU-MIMO within an RU/MRU to a non-AP EHT STA from which the AP has not received an EHT Capabilities element with the Partial Bandwidth UL MU-MIMO subfield of the EHT PHY Capabilities Information field equal to 1.

In a 40 MHz, 80 MHz, 160 MHz or 320 MHz EHT TB 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 defined in 36.3.2.5 (20 MHz operating non-AP EHT STAs(#1244)(#1254)), 36.3.2.7 (80 MHz operating non-AP EHT STAs(#1244)(#1254)), and 36.3.2.8 (160 MHz operating non-AP EHT STAs(#1244)(#1254)) when assigning an RU/MRU to a non-AP EHT STA whose operating bandwidth is smaller than the BSS operating channel width.