IEEE P802.11
Wireless LANs

|  |
| --- |
| LB271 CR for UL MU Operation |
| Date: March 10, 2023 |
| 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 6 CIDs received for TGbe LB271:

15620 15661 15660 17029 17030 17031

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: update the resolution for some CIDs based on offline feedback.
* Rev 2: modify the text on the fly

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.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 15620 | Sanghyun Kim | 593.04 | 35.5.2.2.4 | AP MLD should take into account the mapped TID of a non-AP MLD for the UL direction, when it set the Preferred AC subfield for that non-AP MLD. | As in comment | Revised-Agree in principle with the comment.TGbe Editor – please implement the changes in this document tagged as #15620 |
| 15661 | Geonjung Ko | 593.07 | 35.5.2.2.4 | Setting the Preferred AC subfield to the ACI that corresponds to a TID mapped to downlink only does not seem meaningful. | Please add text specifying uplink mapping to the condition. | Revised-Agree in principle with the comment.TGbe Editor – please implement the changes in this document tagged as #15620 |
| 15660 | Geonjung Ko | 593.07 | 35.5.2.2.4 | When the User Info field allocates an RA-RU, it is difficult to interpret the if condition. | Please add the below condition"and if the AID12 subfield in the User Info field is set to a value between 1 and 2006."or change "~ a Basic Trigger frame for a non-AP STA" to "~ a Basic Trigger frame for a single non-AP STA". | Revised-Agree in principle with the comment.TGbe Editor – please implement the changes in this document tagged as #15660 |
| 17029 | Mark RISON | 596.01 | 35.5.2.2.4 | "shall not respond with a TB PPDU to the Trigger frame" -- but it can respond with something else? I suspect not | Delete "with a TB PPDU" | Accepted |
| 17030 | Mark RISON | 596.01 | 35.5.2.2.4 | "If B39 is equal to 1, then the non-AP EHT STAshall not respond with an EHT TB PPDU unless the bandwidth for the solicited EHT TB PPDU is specifiedas 320 MHz in the Trigger frame." -- it is not clear if this supersedes the "shall not respond" in the previous sentence | Change to "Otherwise, if B39 is equal to 1, then the non-AP EHT STAshall not respond with an EHT TB PPDU unless the bandwidth for the solicited EHT TB PPDU is specifiedas 320 MHz in the Trigger frame." | Rejected-Even without the “Otherwise”, the following sentence is correct. |
| 17031 | Mark RISON | 596.14 | 35.5.2.2.4 | "Specifically, if the CS Required subfield in a Trigger frame is 1, then the non-AP STA shall consider thestatus of the CCA (using energy detect defined in 36.3.21.6.4 (Per 20 MHz CCA sensitivity) and the virtualcarrier sense (NAV))" but then the rest of the para does not cover the NAV | Change to "Specifically, if the CS Required subfield in a Trigger frame is 1, then the non-AP STA shall consider thestatus of the CCA (using energy detect defined in 36.3.21.6.4 (Per 20 MHz CCA sensitivity) only)" | Revised-Agree in principle with the comment, but the proposed change is not correct.TGbe Editor – please implement the changes in this document tagged as #17031 |

**35.5.2.2.4 Allowed settings of the Trigger frame fields and TRS Control subfield**

*TG be Editor: please modify the following paragraph as follows.*

The AP affiliated with an AP MLD and operating on a link shall not set an ACI value in the Preferred AC subfield in the Trigger Dependent User Info field of the User Info fieldof a Basic Trigger frame (#15660) that is individually addressed toa non-AP STA that is affiliated with a non-AP MLD if no TID that corresponds to this ACI is mapped in UL (#15620) to the link for the non-AP MLD by the TID-to-link mapping (see 35.3.7 (Link management)).

**35.5.2.4 UL MU CS mechanism for EHT STAs**

An EHT STA shall follow the rules defined in 26.5.2.5 (UL MU CS mechanism), except that the EHT STA shall use the rules defined in 36.3.21.6.4 (Per 20 MHz CCA sensitivity)instead of those defined in 27.3.20.6.5 (Per 20 MHz CCA sensitivity) when CCA is performed on any nonpunctured 20 MHz subchannel in an EHT BSS.

Specifically, if the CS Required subfield in a Trigger frame is 1, then the non-AP STA shall consider the status of the CCA (using energy detect defined in 36.3.21.6.4 (Per 20 MHz CCA sensitivity)and the virtual carrier sense (NAV)) during the SIFS between the PPDU that contains the Trigger frame and the PPDU sent in response to the Trigger frame. In this case, (#17031)when performing CCA, the non-AP STA shall sense the medium using energy detect after receiving the PPDU that contains the Trigger frame (i.e., during the SIFS), and it shall perform the energy detect at least in the subchannel that contains the non-AP STA’s UL allocation, where the sensed subchannel consists of one or more occupied 20 MHz channels. The non-AP STA may transmit the solicited PPDU if all the occupied 20 MHz channels containing the RUs allocated in the Trigger frame are considered idle. If the non-AP STA detects that any of the occupied 20 MHz channels containing the allocated RUs is not idle, then the non-AP STA shall not transmit.