###  **IEEE P802.11Wireless LANs**

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| LB266 CR for 35.2.2 |
| Date: 2022-07-21 |
| Author(s): |
| Name | Affiliation | Address | Phone | Email |
| Yanjun Sun | Qualcomm |  |  |  |
| Steve Shellhammer |  |  |  |  |
| Alfred Asterjadhi |  |  |  |  |
| George Cherian |  |  |  |  |
| Abhishek Patil |  |  |  |  |
| Youhan Kim |  |  |  |  |
| Bin Tian |  |  |  |  |
| Duncan Ho |  |  |  |  |
| Gaurang Naik |  |  |  |  |
| Abdel Karim Ajami |  |  |  |  |
| Hanqing Lou | Interdigital |  |  |  |
| Greg Geonjung Ko | WILUS |  |  |  |

**Abstract**

This submission proposes resolutions for the following CIDs for TGbe LB266:

* 11130,11095,13885,13886,11096,12508,12509,13887,13847,13976,
* 13888,10995,13319,13977,10922

**Revisions:**

* Rev 0: Initial version of the document.

***TGbe editor: Please note Baseline is IEEE 802.11-2020, 11ax D8.0, and 11be D2.0***

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| --- | --- | --- | --- | --- | --- | --- |
| CID | Commenter | Clause | Page | Comment | Proposed Change | Resolution |
| 11130 | Brian Hart | 35.2.2.1 | 403.52 | The "any" and "the" don't connect elegantly. English provides the indefinite and definite articles for this problem. | Try: "If a non-AP EHT STA is addressed in an MU-RTS Trigger frame from an EHT AP and any of the following conditions is met, the User Info field addressed to the EHT STA in the MU-RTS Trigger frame shall be an EHT variant User Info field:" | RevisedAgree with the commenter in principle and “any” has been replaced with “a”.Tgbe editor please implement changes as shown in doc 11-22/1177r0 tagged as #11130 |
| 11095 | Robert Stacey | 35.2.2.1 | 403.51 | "any" used inappropriately. The indefinite "a" sufficies for the first occurance and "one or more" is necessary in place of the second occurance. Case is incorrect. THe fact that it is from an EHT AP is not pertinent. Neither is the need for the addressee to be "non-AP" (EHT is sufficient). The conditions that apply in the "otherwise" sentence are not clear. | Change to "If an MU-RTS Trigger frame is sent in a 320 MHZ PPDU or a punctured PPDU then a User Info field in the frame that is addressed to an EHT STA shall be an EHT variant User Info field. If the PPDU carrying the MU-RTS Trigger from is not 320 MHz and not punctured, then a User Info field in the frame that is addressed to an EHT STA may be either an HE variant User Info field or an EHT variant User Info field." | RevisedAgree with the commenter in principle and “any” has been replaced with “a”.Tgbe editor please implement changes as shown in doc 11-22/1177r0 tagged as #11130, same as above |
| 13885 | Ming Gan | 35.2.2.1 | 403.55 | Detecting whether the received user info field is HE variant or EHT variant should follow subclause 9.3.22, and then have unified description | please change it to have unified description | RejectedAgree with the commenter in principle on how to determine the variant of User Info field at the receiver side. In 35.2.2.2, we have the following text that is aligned with the suggested behavior and therefore no further change is needed. Reference: “An non-AP EHT STA shall follow the rules defined in 35.5.2.2.4 (Allowed settings of the Trigger frame fields and TRS Control subfield) to determine whether the EHT STA is addressed by the HE variant User Info field or an EHT variant User Info field in an MU-RTS Trigger frame.” |
| 13886 | Ming Gan | 35.2.2.1 | 403.57 | The format of PPDU should be specified, otherwise, it is allowed in some HE PPDU. Again it should have unified detection for HE variant and EHT variant User Info field | please change it to have unified description | RevisedAgree with the commenter in principle and replaced PPDU with EHT MU PPDU/non-HT duplicate PPDU. Tgbe editor please implement changes as shown in doc 11-22/1177r0 tagged as #13886 |
| 11096 | Robert Stacey | 35.2.2.1 | 403.63 | B55, B54, B39: give fields meaninful names; bit positions might change (creating possible errors) and this gives the requirement some meaning. | Assing names to B55, B54 and B39. | RejectedAgree with the commenter in principle that it would be better to have a name for each of these bits. However, the current text offers succinct spec text without ambiguity and baseline spec also uses bit names in many places. We also analyzed what it would take if we were to assign names to these bits. B54 and B55 are part of the UL HE-SIG-A2 Reserved subfield in the HE variant User Info field without any no meaning, while they are named the HE/EHT subfield and the Special User Info Field Flag subfield in the EHT variant User Info field. If we were to assign the subfield names defined for the EHT variant User Info field to the HE variant User Info field, then we could need to add text on how an HE and EHT STA handle them differently under various conditions and also rewrite the 11ax spec text related to the UL HE-SIG-A2 Reserved subfield.Please submit more specific changes that would satisfy the commenter. |
| 12508 | Jeongki Kim | 35.2.2.1 | 403.63 | According to the table 9-45a, when B55 is equal to 0, B54 can be set to 1. The indicated text should be correct.Change "If the B55 in the Common Info field is equal to 0 in an MU-RTS Trigger frame, an EHT AP shall not set the B54 in the Common Info field to 1." to "If the B54 in the Common Info field is equal to 0 in an MU-RTS Trigger frame, an EHT AP shall not set the B55 in the Common Info field to 1." | As in comment | RejectedThe commenter is correct that B55 is equal to 0, B54 can be set to 1 in the last two rows of table 9-45a. However, even without those two rows, the rest rows of the table (i.e. the first 3) are sufficient for a receiver to know how to respond to an MU-RTS, as the response can only be a CTS frame. The objective of the existing spec text is indeed to prohibit the use of the last two rows as they don’t bring additional value for MU-RTS, which helps to get more deterministic STA behaviors. |
| 12509 | Jeongki Kim | 35.2.2.1 | 404.01 | For more clarification, change "NOTE--Refer to9.3.1.22.1 (General)" to "NOTE--Refer to Table 9-45a9.3.1.22.1 (General)" | As in comment | RevisedAgree with the commenter in principleTgbe editor please implement changes as shown in doc 11-22/1177r0 tagged as #12509 |
| 13887 | Ming Gan | 35.2.2.1 | 404.08 | Change "is not" to " shall not be" | Change "is not" to " shall not be" | Accepted. |
| 13847 | Sanghyun Kim | 35.2.2.1 | 404.10 | Missing hyphen between the 'MU' and 'RTS' | please insert hyphen | Accepted |
| 13976 | Geonjung Ko | 35.2.2.1 | 404.10 | Missing hyphen between "MU" and "RTS" | Add hyphen | Accepted |
| 13888 | Ming Gan | 35.2.2.2 | 404.22 | The reference is not correct, should 35.5.2.3 Non-AP STA behavior for UL MU operation | update the reference | Accepted |
| 10995 | Yanjun Sun | 35.2.2.2 | 404.22 | Instead of 35.5.2.2.4, a better reference would be subclause 9.3.1.22.1 (General) | As in comment | RevisedTgbe editor, the resolution is the same with that for CID 13888 |
| 13319 | Muhammad Kumail Haider | 35.2.2.2 | 404.22 | An non-AP --> A non-AP | as in comment | Accepted |
| 13977 | Geonjung Ko | 35.2.2.2 | 404.22 | Change "An non-AP" to "A non-AP". | As in comment | RevisedTgbe editor, the resolution is the same with that for CID 13319 |
| 10922 | Wookbong Lee | 35.2.2.2 | 404.35 | RU Allocation subfields in the basic trigger frame can indicate RU allocation including puncturing (disabled subchannel), I don't know why MU-RTS needs to inform the whole bandwidth and puncturing separately. | Why not use the same RU Allocation subfield in the basic trigger frame and MU-RTS? | RejectedThe comment fails to identify a technical issue and is asking for a question. The answer here is to recap the past discussions. The group has debated on this topic in the past and the agreement was to allow RU only (i.e. excluding MRU) in the RU Allocation subfield for MU-RTS for simplicity. The current text in D2.0 is aligned with the agreement and the related SP text is provided below as a reference.Straw poll #413Do you agree that• The CTS response to MU-RTS supports all the modes in 11ax and 320MHz non-HT duplicate transmission;• The CTS response to MU-RTS supports transmitting on non-contiguous 20MHz subchannels; • The CTS response to MU-RTS is transmitted on the 20MHz subchannel(s) that are overlapped with the large size RU indicated by its own RU allocation subfield;• The CTS response to MU-RTS shall be transmitted including the primary 20MHz channel. Note: This SP is for R1. [#SP413][21/0485r3 (EHT LTF clarification, Xiaoggang Chen, Intel), SP#2, No objection] |

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.***

**35.2.2 MU-RTS trigger/CTS frame exchange procedure for EHT STAs**

**35.2.2.1 MU-RTS Trigger frame transmission**

… …

***TGbe editor: Please update the 2nd paragraph at P403L51 in D2.0 as follows (track change enabled):***

If (#11130) a non-AP EHT STA is addressed in an MU-RTS Trigger frame from an EHT AP and any of the following conditions is met, the User Info field addressed to an EHT STA in the MU-RTS Trigger frame

shall be an EHT variant User Info field:

— The bandwidth of the (#11130) EHT MU PPDU or non-HT duplicate PPDU carrying the MU-RTS Trigger frame is 320 MHz.

— The (#11130) EHT MU PPDU or non-HT duplicate PPDU carrying the MU-RTS Trigger frame is punctured.

**35.15.2 PPDU format selection**

***TGbe editor: Please add a new bullet the 3rd paragraph at P526L58 in D2.0 as follows (track change enabled)***

An EHT STA shall send Control frames following the rules defined in 10.6.6 (Rate selection for Control

frames) and 26.15.2 (PPDU format selection) with the following additional exception:

— A Control frame sent by an EHT AP as a response to an EHT TB PPDU may be carried in any PPDU

format that is supported by the intended receivers.

— A Trigger frame that is not an MU-RTS Trigger frame may be carried in any PPDU format that is

supported by the intended receivers subject to the restrictions in 35.5.2 (EHT UL MU operation).

— An MU-RTS Trigger frame shall not be carried in a VHT MU PPDU, an HE MU PPDU, or an EHT MU PPDU whose TXVECTOR parameter EHT\_PPDU\_TYPE is not set to 1 (see 35.2.2.1 (MU-RTS Trigger frame transmission)).(#11130)

… …

***TGbe editor: Please update NOTE at P404L1 in D2.0 as follows (track change enabled):***

NOTE—Refer to (#12509) Table 9-45a (Valid combinations of B54 and B55 in the Common Info field, B39 in the User Info field, and solicited TB PPDU format) on valid combinations of B54 and B55 in the Common Info field, B39 in the User Info field, and User Info field variant.