IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB266 CR for UORA | | | | |
| Date: 2022-09-09 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Greg Geonjung Ko | WILUS Inc. |  |  | greg.ko@wilusgroup.com |
| John (Ju-Hyung) Son |  |  | john.son@wilusgroup.com |
| Sanghyun Kim |  |  | shawn.kim@wilusgroup.com |
| Jin Sam Kwak |  |  | jinsam.kwak@wilusgroup.com |
| Leonardo Lanante | Ofinno |  |  |  |
| Hanqing Lou | InterDigital Inc. |  |  |  |

Abstract

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

13550, 13958, 10802, 10957, 12491

12492, 14052, 14050

Revisions:

* Rev 0: Initial version of the document
* Rev 1: Update based on comments from Yanjun, Leonardo and Hanqing
* Rev 2: Update based on feedback during the presentation on Oct. 12, 2022

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** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 13550 | Jian Yu | 9.3.1.22.4 | 156.60 | Enable UORA for EHT variant. | As in comment | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 13958 | Geonjung Ko | 9.3.1.22.4 | 165.36 | Need to define how the RA-RU Information subfield is used for the EHT variant User Info field. | Define a method to indicate RA-RUs in the EHT variant User Info field. | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 10802 | Dong Guk Lim | 9.3.1.22.4 | 165.32 | In the EHT, the RA-RU information is not used. so, the text in P165L32 should be modified by considering the next sentence. | Modify the text from P165L32 to L36 with "The RA-RU Information subfield is reserved in the EHT variant User Info field and Trigger Dependent User Info subfields are set as defined in 9.3.1.22.3 (HE variant User Info field). " | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 10957 | RUI YANG | 9.3.1.22.4 | 165.32 | Here it says "The RA-RU Information ... subfields are set as defined in 9.3.1.22.3 (HE variant User Info field).", but in Line 36 of this page, it says "The RA-RU Information subfield is reserved in the EHT variant User Info field." Two sentences appear contradict to each other. . | Change to "In the HE variant User Info field, the RA-RU Information and Trigger Dependent User Info subfields are set as defined in 9.3.1.22.3 (HE variant User Info field) ." | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 12491 | Jeongki Kim | 9.3.1.22.4 | 165.32 | According to line 36 on the same page, the RA-RU Information is reserved. The RA-RU Information should be removed in this indicated sentence. | Change the indicated text to " The Trigger Dependent User Info subfield is set as defined in 9.3.1.22.3 (HE variant User Info field)." | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 12492 | Jeongki Kim | 9.3.1.22.4 | 165.36 | If the RA-RU Information is not used in the EHT variant User Info field, the "RA-RU Information subfield" need to be removed in the Figure 9-92a. We may also remove this sentence. | As in comment | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 14052 | Yanyi Ding | 9.3.1.22.4 | 165.36 | If the RA-RU Information subfield is reserved in the EHT variant User Info field, why does the previous paragraph say the RA-RU Information and Trigger Dependent User Info subfields are set as defined in 9.3.1.22.3? Kind of confusing here. | Revise to make it clear, is the subfield reserved all the time or under a special condition? | Revised  UORA for the EHT variant User Info field proposed in 11-22/1565r1 has not reached sufficient consensus.  The RA-RU Information subfield is removed from the EHT variant User Info field.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #13550. |
| 14050 | Yanyi Ding | 9.3.1.22.3 | 155.64 | Many other limitations are not stated clearly here. Add a reference to 26.5.4.2 Eligible RA-RUs for a better understanding. | Insert a bracket at the end of sentence like (see more details in 26.5.4.2 Eligible RA-RUs) | Revised  Added text for better understanding.  TGbe editor, please make changes as shown in 11-22/1565r2 tagged as #14050. |

Discussion:

We have the following text in the SFD:

An AP may allocate an RA-RU to solicit a response in an EHT TB PPDU.

[Motion 135, #SP231, [48] and [312]]

***TGbe editor: Please note that the baseline is 11be D2.2.***

**9.3.1.22.4 EHT variant User Info field**

***TGbe editor: Please make the following changes in subclause 9.3.1.22.4 (#13550).***

***Insert the following paragraphs:***

The EHT variant User Info field is defined in [Figure 9-92a (EHT variant User Info field format)](#bookmark49) for all Trig- ger frame variants except the NFRP Trigger frame and the MU-RTS TXS Trigger frame.

B0 B11 B12 B19 B20 B21 B24 B25 B26 B31 B32 B38 B39

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| AID12 | RU  Allocation | UL FEC  Coding Type | UL EHT- MCS | Reser ved | SS Allocation | UL Target Receive Power | PS160 | Trigger Dependent User Info |

Bits: 12 8 1 4 1 6 7 1 variable

**Figure 9-92a—EHT variant User Info field format**

***TGbe editor: Please make the following changes in the following paragraphs starting from P176L1 in subclause 9.3.1.22.4 (#13550).***

The SS Allocation subfield of the EHT variant User Info field indicates the spatial streams of the solicited EHT TB PPDU and the format is defined in Figure 9-92b (SS Allocation subfield format of an EHT variant User Info field).

B26 B29 B30 B31

Number Of Spatial Streams

Starting Spatial Stream

Bits: 4 2

**Figure 9-92b—SS Allocation subfield format of an EHT variant User Info field**

The UL Target Receive Power subfield indicates the expected receive signal power, measured at the AP’s antenna connector and averaged over the antennas, for the EHT portion of the EHT TB PPDU transmitted on the assigned RU and is defined in Table 9-53 (UL Target Receive Power subfield in Trigger frame).

If the size of RU or MRU is smaller than or equal to 2996-tone, then PS160 subfield is set to 0 to indicate that RU or MRU allocation applies to the primary 160 MHz channel and set to 1 to indicate that RU or MRU allocation applies to the secondary 160 MHz channel. Otherwise, the PS160 subfield is used to indicate the RU or MRU index along with the RU Allocation subfield. The PS160 subfield is set as defined in Table 9- 53a (Encoding of PS160 and RU Allocation subfields in an EHT variant User Info field).

The Trigger Dependent User Info subfield is set as defined in 9.3.1.22.3 (HE variant User Info field).

***TGbe editor: Please make the following changes in the following paragraphs starting from P181L15 in subclause 9.3.1.22.9 (#13550).***

**9.3.1.22.9 MU-RTS Trigger frame format**

***Change the now-shifted 11th paragraph as follows:***

The UL HE-MCS, UL FEC Coding Type, UL DCM, SS Allocation/RA-RU Information and UL Target Receive Power fields in the HE variant User Info field are reserved in an MU-RTS frame that is not an MU- RTS TXS frame.

The UL EHT-MCS, UL FEC Coding Type, SS Allocation and UL Target Receive Power fields in the EHT variant User Info field are reserved in an MU-RTS frame that is not an MU-RTS TXS frame.

***TGbe editor: Please make the following changes in the following paragraphs starting from P535L17 in subclause 35.7.2 (#13550).***

**35.7.2 EHT sounding protocol**

An EHT beamformer shall not solicit an EHT TB PPDU with a BFRP Trigger frame that indicates a data rate greater than the data rate indicated by the EHT beamformee in the TB Sounding Feedback Rate Limit subfield. The data rate indicated in the BFRP Trigger frame is computed based on the RU Allocation subfield, PS160 subfield, UL EHT-MCS subfield, and SS Allocation subfield in the EHT variant User Info field of the BFRP Trigger frame. The data rate is computed based on 1.6 µs GI.

***TGbe editor: Please make the following changes in the following paragraphs starting from P167L13 in subclause 9.3.1.22.3.***

**9.3.1.22.3 HE variant User Info field**

The RA-RU Information subfield of the User Info field indicates the RA-RU information and the format is defined in [Figure 9-92 (RA-RU Information subfield format)](#bookmark45).

B26 B30 B31

Bits: 5 1

More RA-RU

Number Of RA-RU

**Figure 9-92—RA-RU Information subfield format**

The Number Of RA-RU subfield indicates the number of contiguous RUs allocated for UORA. The value of the Number Of RA-RU subfield is equal to the number of contiguous RA-RUs minus 1. (#14050) A non-AP STA determines whether an RA-RU indicated by the Number Of RA-RU subfield is an eligible RA-RU as defined in 26.5.4.2 (Eligible RA-RUs).