IEEE P802.11  
Wireless LANs

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | LB 266 CR for CID 12538 | | | | | | Date: 2022-09-29 | | | | | | Author(s): | | | | | | Name | Affiliation | Address | Phone | email | | Mahmoud Kamel | InterDigital |  |  | mahmoud.kamel@interdigital.com | | Zinan Lin | InterDigital |  |  |  | | Hanqing Lou | InterDigital |  |  |  | | Rui Yang | InterDigital |  |  |  | |

Abstract

This submission proposes resolutions for CID 12538 in P802.11be D2.1.1:

NOTE – Set the Track Changes Viewing Option in the MS Word to “All Markup” to clearly see the proposed text edits.

**Revision History:**

R0: Initial version

# CID 12538

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page.Line** | **Comment** | **Proposed Change** | **Resolution** |
| 12538 | 36.3.12.7.2 | 657.07 | In the current design of EHT-SIG, some allocation scenarios would require a large number of EHT-SIG Symbols which cannot be accommodated in the U-SIG. One example is 144 users each allocated one 26-tone RU in 320 MHz channel. | Several solutions may be devised to allow for allocations with large number of users. I will bring a contribution to fix this issue. | Revised  Such allocation scenarios are allowed by the current specs, however this large number of EHT-SIG symbols cannot be signalled or accommodated. A sentence should be added to the EHT-SIG clause to disallow these allocation scenarios.  TGbe editor: please incorporate the changes shown in 11-22/1676r0 below. |

DISCUSSION:

The Number of EHT SIG Symbols field in U-SIG2 of the MU-PPDU is 5 bits, hence the maximum number of EHT-SIG symbols that can be signaled is 32 symbols. Some RU or MRU allocation scenarios are allowed by the 802.11be specs, however the number of required EHT-SIG symbols to signal those scenarios cannot be accommodated by the current design of U-SIG.

**Examples**: For any small RU or MRU allocation in each 20 MHz of a 320 MHz bandwidth with a low EHT-SIG MCS (0, 1 or 3) and the EHT-SIG content channels are the same in each 80 MHz:

1. RU Allocation = 0, EHT-SIG MCS = 0, 1, 3
2. RU Allocation = 25, EHT-SIG MCS = 3
3. RU Allocation = 55, EHT-SIG MCS = 0, 3

|  |  |
| --- | --- |
| **Number of EHT SIG Symbols per content channel** | **38** |
|  |  |
| Number of bits of U-SIG Overflow (bits) | 17 |
| Number of bits of 2 RU Allocation-A +CRC + Tail (bits) | 28 |
| Number of bits of 6 RU Allocation-B +CRC + Tail (bits) | 64 |
| Number of Users per content channel (users) | 32 |
| Number of bits of User Specific fields (bits) | 864 |
|  |  |
| Total Number of Bits per content channel (bits) | 973 |
| Number of Data bits per EHT-SIG Symbol (EGT-SIG MCS)  (See Table 36-88 below) | 26 |

Table

Description automatically generated

END OF DISCUSSION

***TGbe Editor: Please insert the following text in Clause 36.3.12.8.2 EHT-SIG content channels in 11be D2.1.1 P685L1 as follows***

Any RU or MRU Allocation in combination with EHT-SIG MCS selection which results in a Number of EHT-SIG Symbols that is larger than 32 symbols shall not be allowed.

“Punctured 242-tone RU (value 26 of RU Allocation field)” shall be used when the preamble portion of corresponding 20 MHz is punctured. In this case, the corresponding 242-tone RU shall not be used for data transmission.