IEEE P802.11
Wireless LANs

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| **TGbe D3.0 LB271 Comment Resolutions****for A-MPDU in EHT PPDU(35.6) – Part 1** |
| **Date:** 2023-06-29 |

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Abstract

This submission proposes resolutions for the following 7 CIDs received for TGbe LB271:

* 17033, 17035, 17036, 17037, 17038, 17040, 17362

Revisions:

- Rev 0: Initial version of the document.

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.***

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| **CID** | **Commenter** | **Clause****(page.line)** | **Comment** | **Proposed Change** | **Resolution** |
| 17033 | Mark RISON | 35.6(596.57) | "An EHT STA that sends a Class 1 frame or a Class 2 frame in an EHT PPDU shall send the frame as an S-MPDU (see Table 9-534 (A-MPDU contents in the S-MPDU context))." -- why does this need to be stated. It's probably true for non-EHT STAs, and if it isn't then why does EHT have to have the new rule? | Delete the cited text | **Rejected**As the EHT PPDU is newly defined in EHT, the rule of S-MPDU in EHT PPDU for EHT STA is included in 11be spec.The rule of S-MPDU in HE PPDU for HE STA is also defined in P3889L47(26.6.1) of REVme D3.0. |
| 17362 | Alfred Asterjadhi | 35.6 (596.51) | Similar behaviors have been defined in 10.12 already (I suspect even duplicate). Please check both subclauses and remove any duplicated normative behavior and eventually ensure that the subclauses cover what is intended (e.g., this subclause to cover anything that is related to EHT). | As in comment. | **Rejected**The paragraph in 35.6 defines A-MPDU lengh limit rules in EHT PPDU for EHT STA, but the paragraph in 10.12.2 defines A-MPDU length limit rules in EHT PPDU for STAs supporting EHT Capabilities element. The entire texts of 35.6 have same formats with the texts of 26.6.1. These paragraphs of 10.12.2 and 26.6.1 are existed same as 35.6. |
| 17035 | Mark RISON | 35.6 (596.60) | "An EHT STA shall not transmit an A-MPDU in an EHT PPDU to a STA that exceeds the maximum A-MPDU length capability indicated in the EHT Capabilities element, HE Capabilities element, VHTCapabilities element, and HT Capabilities element received from the recipient STA." -- this unnecessarily restricts the maximum to the element with the smallest range (HT) | Restrict the rule to the PPDU type (max in HT cap for HT PPDU, etc.)  | **Rejected**The A-MPDU length limit rules for HT PPDU are already defined in P1872L40 (10.12.2) of REVme D3.0. |
| 17036 | Mark RISON | 35.6(597.03) | "The maximum A-MPDU length capability is derived from the Maximum A-MPDULength Exponent Extension subfield in the HE Capabilities element and EHT Capabilities element" not clear: does the subfield have to be set to the same value in both? | Clarify | **Rejected**The Maximum A-MPDU Length Exponent Extension subfield in HE Capabilites element indicates the maximum length of A-MPDU pre-EOF padding in HE PPDU having 2 bits defined in P1362L51(9.4.2.247.2) of REVme D3.0 And the Maximum A-MPDU Length Exponent Extension subfield in EHT Capabilities element indicates the maximum length of A-MPDU pre-EOF padding in EHT PPDU having 1 bit defiend in P293L38 (9.4.2.313.2) of 11be D3.2. |
| 17037 | Mark RISON | 35.6(597.14) | "An EHT STA that sends a VHT Capabilities element, HE Capabilities element, and EHT Capabilitieselement with Maximum A-MPDU Length Exponent Extension subfield greater than 0" -- do they all have to be >0? Do they all have to have the same value? | Clarify | **Rejected**The paragraph describes a case of when Maximum A-MPDU Length Exponent Extension subfield in EHT Capabilities element has greater than 0. As like the paragraph is described, the Maximum A-MDPU Length Exponent in VHT Capabilities element sets to 7 and the Maximum A-MPDU Length Exponent Extension field in HE Capabilities element sets to 3 in this case, which is defined in P617L7 of 11be D3.2. |
| 17038 | Mark RISON | 35.6(597.19) | No need for parens around exponent for 2 | Delete the parens. Ditto lines 33, 46 | **Rejected**The equations are written based on the baseline. All equations defined in 26.6.1 include parentheses around exponent for 2. |
| 17040 | Mark RISON | 35.6(597.09) | "An EHT STA that sends an EHT Capabilities element with Maximum A-MPDU Length ExponentExtension subfield of 0 shall support in reception of an EHT PPDU with an A-MPDU pre-EOF padding withmaximum length as defined in 10.12.2 (A-MPDU length limit rules)." -- but the table in 10.12.2 of maximum A-MPDU length has not been extended for EHT, I think. And anyway the number should fall out of the equations in the paras below | Delete the cited text | **Rejected**Table 10-12a in 10.12.2 is already extended for EHT Capabilities elements in 11be D3.2 (P380L18).  |

**Discussion on CID 17036, 17037 and 17038:**

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|  | **HE PPDU** | **EHT PPDU** |
| **The maximum length of an A-MPDU pre-EOF padding** | **6 500 631 octets** | **15 523 200 octets** |
| **The Maximum A-MPDU Length Exponent Extension subfield** | **2 bits**(In case of sending VHT and HE capabilities elements, the value sets to)* 0: 1 048 573 octets
* 1: 2 097 151 octets
* 2: 4 194 303 octets
* 3: 6 500 631 octets (based on the below function, but originally 8 388 607)

$$min\left(2^{\left(20+α\right)}-1, 6 500 631\right)$$$α: Maximum A-MPDU Length Exponent Extension$ in HE Capabilities element.\*The Maximum A-MPDU Length Exponent subfield in VHT Capabilites element sets to 7 | **1 bit**(In case of sending VHT, HE, and EHT capabilities elements, the value sets to)* 0: 8 388 607 octets
* 1: 15 523 200 octets (based on the below function, but originally 16 777 215)

$$min\left(2^{\left(23+α\right)}-1, 15 523 200\right)$$$α: Maximum A-MPDU Length Exponent Extension$ in EHT Capabilities element.\*The Maximum A-MPDU Length Exponent Exponent subfield in HE Capabilites element sets to 3 |