IEEE P802.11
Wireless LANs

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| 11ax D4.0 MAC miscellaneous CIDs |
| Date: 2019-08-12 |
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Abstract

This submission proposes resolutions for multiple comments related to TGax D4.0 with the following CIDs:

* 20299, 20770, 20755, 20767, 20956, 21486~~, 20187, 21598~~, 20799, 21290, 21291, 20768, 20135

Revisions:

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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 TGax Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify existing material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

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| **CID** | **PP** | **LL** | **Comment** | **Proposed Change** | **Resolution** |
| 20299 | 249 | 59 | The HE capabilites element doesn't include Maximum A-MPDU Length Exponent field. Delete the word "and HE Capabilites elements" | As in comment. | Accepted  |
| 20770 |  |  | Re CID 16253: if this is not a new requirement, and it already exists in the baseline, then it should not be duplicated. Any clarification should be taken to REVmd | Revert the change proposed at 215.47 | RejectedDiscussion: The commenter is challenging the text of “All of the MPDUs within an A-MPDU have the same TA.” Being added by 11ax. The reason for this text is that in DL HE MU PPDU, several APs can transmit DL A-MPDUs. The added text clearifies that in this case, frames from different APs can’t be in same A-MPDU, i.e. same RU.  |
| 20755 |  |  | Re CID 16163: OK, then a "non-ack-enabled single TID" A-MPDU is just an A-MPDU | Change "HE non-ack-enabled single TID" to "A-MPDU in HE PPDU" throughout | Reject.Discussion: HE PPDU carries various kinds of A-MPDU. Using A-MPDU in HE PPDU creates ambigurity. |
| 20767 | 215  | 21 | Re CID 16228: if that's the argument, then "zero or more" needs to be added everywhere where there's no multiplicity qualifier | As it says in the comment | RejectedDiscussion: in baseline, spec, “aero or more” is used in baseline, but not all places use “zero or more”.  |
| 20956 |  |  | Re CID 16210: still some left | Fix "data enabled A-MPDU context" at 216.13, "ack enabled A-MPDU" at 311.2 (missing hyphen) | RevisedDiscussion:Data enabled A-MPDU context is from 802.11baseline. It should be resolved in 11md. ***TGax editor: change “ack enabled A-MPDU” in P311L2 of 11ax D4.0 To “single-TID ack-enabled A-MPDU”*** |
| 21486 | 295 | 14 | The sentence "A successfullyacknowledged frame transmitted by a non-AP STA in response to a Basic Trigger is a successful frame exchange initiated by the STA as referred to in Clause 11 and Clause 12." doesn't belong to the introduction section 26.1 and should be moved to other sections. | move the sentence "A successfullyacknowledged frame transmitted by a non-AP STA in response to a Basic Trigger is a successful frame exchange initiated by the STA as referred to in Clause 11 and Clause 12. " to other relevant sections. | RejectedDiscussion: This main introductory subclause states that an HE STA follows the rules in clauses 11, clause 12 and so on except as defined in 26. In the meanwhile the cited sentence clarifies that a successfully acknowledged frame sent in response to a Basic Trigger frame is a successful exchange initiate by the STA, which is widely used in baseline subclauses. Hence this introductory subclause is the appropriate location to keep this sentence given that we cite all baseline subclauses of interest, including the ones which use the term. |
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| 20799 | 33 | 32 | Re CIDs 16282/12927(/15606). The problems remain that (a) it is not clear from Clause 3 how an ack-enabled multi-TID A-MPDU and a non-ack-enabled multi-TID A-MPDU (and an ack-enabled A-MPDU (single-TID)) differ and (b) it is not clear from Clause 3 how a non-ack-enabled single-TID A-MPDU differs from a legacy A-MPDU | Make the following points in the definitions in 3.2: (1) an ack-enabled multi-TID A-MPDU includes Data frames not sent under a BA agreement or Management frames, that require acknowledgement, either as 2 TIDs or as Data+Management (2) a non-ack-enabled multi-TID A-MPDU does not include Data frames not sent under a BA agreement that require acknowledgement and does not include Management frames that require acknowledgement (3) a non-ack-enabled single-TID A-MPDU is just a legacy A-MPDU (4) an ack-enabled A-MPDU cannot contain both a Data frame and a Management frame, that require acknowledgement (otherwise the current definition is OK) | RevisedDiscussion: 11-19/1336r3 already made the changes requested by 20799. No further change is needed. |
| 21290 | 305 | 26 | The frame sequence of a TXOP is only known at the end of the TXOP. | Remove the paragraph or rewrite so that the requirements are conditioned on frames already transmitted and not those that are still be transmitted. | Revised.Discussion: The paragraph is rewritten per CID 21289. See 21289.  |
| 21291 | 305 | 7 | This whole section is exteremly cryptic. | Add some description of the problem these rules solve. | Revised.Discussion: this section is the extension of multiple frame exchange in a TXOP in baeline (subclause about **Multiple frame transmission in an EDCA TXOP**). In 6GHz band, the TXOP field in HE SIG-A can be understanded by all STAs. Its TXOP protection is treated same as TXOP protection by using non-HT RTS/CTS in baseline.TGax editor add the following note after paragraph 1 in subclause 26.2.8: NOTE---- In the 6 GHz band, the TXOP field in HE-SIG-A can be understood by all STAs. The TXOP field provides TXOP protection equivalent to non-HT duplicate RTS/CTS. |
| 20768 |  |  | Re CID 16228: if that's the argument, then "zero or more" needs to be added everywhere where there's no multiplicity qualifier | At 222.29 change "Non-EOF-MPDUs" to "Zero or more non-EOF MPDUs". At 222.48 change "Trigger frames" to "Zero or more Trigger frames". At 220.8 change "BlockAck frames" to "Zero or more BlockAck frames" | Rejected.Discussion: at 222.29, it shouldn’t be “zero or more non-EoF MPDUs” since at least one non-EoF MPDU should be aggregated in the A-MPDU in **HE non-ack-enabled single TID immediate response context**. Otherwise the A-MPDU will be covered by Control response context. The same reason is applied to P222L48 bullet. P220L8 is the bullet from the baseline. |
| 20135 | 352 | 6 | These two paragraphs say in a convoluted way the following: An HE STA may include one or more QoS Null frames with Ack Policy field equal to No Ack in an A-MPDU that it transmits to another HE STA. The QoS Null frames may have any TID value and their inclusion is not subject to: 1) the Multi-TID Aggregation Rx Support, Multi-TID Aggregation Tx Support fields in the HE Capabilities element sent by the receiving STA, 2) the TID Aggregation Limit, and Preferred AC subfield of a Basic Trigger frame that solicited the A-MPDU. | As in comment. | RejectedThe two paragraphs described the different scenarios: one is for A-MPDU in HE PPDU other than HE TB PDU, another one is for A-MPDU in HE TB PPDU. |