IEEE P802.11
Wireless LANs

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| 11ax D5.0 comment resolution of various cubclauses |
| Date: 2019-11-08 |
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Abstract

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

* 22062, 22276, 22343, 22394.

Revisions:

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** |
| 22062 | 235 | 37 | "At most one Management frame that does not solicit acknowledgement" | remove "does not" | **Accepted** |
| 22276 |  |  | There is no reason to require all Trigger frames to be first in the A-MPDU (after any immediate ack). The point of having multiple Trigger frames is to mitigate corruption, but having them all bunched up means they are more vulnerable to periodic interference. The AP should be allowed to decide where best to place multiple Trigger frames, if it decides to include them | Delete "The Trigger frames are the first MPDUs of the A-MPDU unless the A-MPDU alsocarries an Ack or BlockAck frame in which case the Trigger frames are includedimmediately after the Ack or BlockAck frame." in the tables in the referenced subclause | Rejected.Dsicussion: this (all Trigger frames are at the beginning of A-MPDU) can gave the destinated STAs more time to prepare the HE TB PPDU. |
| 22343 | 235 | 26 | "At most one Data frame with a TIDthat does not correspond to an HT-immediate block ack agreement" -- it is not clear that the rightmost cell excludes ack policy No Ack | As it says in the comment | Revised.Discussion: Per the rightmost colomn for a TID without BA agreement, a QoS Data frame will be be EoF MPDU to solicit Ack/M-BA. Some clarification text will be added.TGax editor to make change in 11-19/2020r1 under CID 22343 |
| 22394 |  |  | CID 20770. OK, but you still can't change existing legacy behaviour | Change "All of the MPDUs within an A-MPDU have the same TA." to "All of the MPDUs within an A-MPDU sent by an HE STA to another HE STA have the same TA." | RejectedThe added text doesn’t change the legacy behavior since the added text is always true to the STAs other than 11ax STAs. |

**9.7.3 A-MPDU contents**

***TGax editor: change Table 9-532b as following:***

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| * A-MPDU contents in the HE ack-enabled single-TID immediate response context
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| MPDU | Conditions |
| Ack | If the preceding PPDU contains an MPDU that requires an Ack frame response, a single Ack frame at the start of the A MPDU. | At most one non-EOF MPDU(#20925) that is an Ack, Compressed BlockAck, or Multi-STA BlockAck frame(#20626) is present |
| HT-immediate BlockAck | If the preceding PPDU contains an implicit or explicit block ack request for a TID for which an HT-immediate block ack agreement exists, at most one Compressed BlockAck frame for this TID at the start of the A-MPDU.If the preceding PPDU contains explicit block ack requests for multiple TIDs or a multi-TID A-MPDU, at most one Multi-STA BlockAck frame at the start of the A-MPDU. |
| Action No Ack | Non-EOF MPDUs(#20925) that are Action No Ack frames. |
| Data frames not sent under an HT-immediate block ack agreement | At most one Data frame with a TID that does not correspond to an HT-immediate block ack agreement and has Normal Ack or HTP Ack ack policy. (#22343) | One EOF MPDU(#20925) that is either a QoS Data frame with Normal Ack or HTP Ack ack policy(#20545), or a Management frame that solicits an immediate response, one or more non-EOF MPDUs(#20925), each of which is a QoS Null frame with No Ack ack policy(#20545), or a Trigger frame. The Trigger frame is a Basic Trigger, BSRP Trigger or BQRP Trigger frame. |
| Data frames sent under an HT-immediate block ack agreement  | At most one QoS Data frame with a TID that corresponds to an HT-immediate block ack agreement |
| QoS Null frame with No Ack ack policy | QoS Null frames with No Ack ack policy.(#20545) |
| Management frame | At most one Management frame that does not solicit acknowledgment(#20926) |
| Trigger | Basic Trigger, BQRP Trigger or BSRP Trigger frames.The Trigger frames are the first MPDUs of the A-MPDU unless the A-MPDU also carries an Ack or BlockAck frame in which case the Trigger frames are included immediately after the Ack or BlockAck frame.(#20699) See NOTE 2. |
| NOTE 1—Only an HE AP(#20841) is allowed to include a Trigger frame in the A-MPDU. Multiple Trigger frames in one A-MPDU increases robustness. The content of all Trigger frames in the A-MPDU is the same.NOTE 2—The BSRP Trigger and BQRP Trigger frames can be aggregated with other MPDUs in the A-MPDU if the receiver has indicated the support of receiving these Trigger frame types in the BSRP BQRP A-MPDU Aggregation field of the HE Capabilities element.NOTE 3—The single Management frame that solicits the acknowledgement in ack-enabled single-TID A-MPDU is treated as single-TID frame, e.g. soliciting Ack of TID 15 in multi-STA BlockAck frame.(#20133)  |