IEEE P802.11  
Wireless LANs

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| 11ax D3.0 Comment Resolution 27.5.3.2.3 | | | | |
| Date: 2018-08-28 | | | | |
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Abstract

This submission proposes resolutions for multiple comments related to TGax D3.0 with the following CIDs:

* 15084, 15684, 15685, 16404, 16607, 16608, 17117.

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** |
| 15084 | 284 | 7 | TRS Control subfield solicits response from a single STA. Change plural STAs to single STA. | Change the second sentence to: "An AP shall not set any subfields of a TRS Control subfield to a value that is not supported by the recipient STA of the TRS Control subfield." | **Agreed** |
| 15684 | 284 | 17 | Requiring at least one RU allocated for each 20MHz subchannels occupied by DL MU is not necessary because the AP can specify unassigned RUs to any of the 20MHz subchannels | Remove the text: "If an AP transmits one or more Trigger frames or frames carrying a TRS Control subfield, then the frames shall collectively elicit HE TB PPDU responses such that at least one scheduled RU is allocated for each 20 MHz channel occupied by the eliciting PPDU." | **Rejected.**  **Discussion: In UL MU PPDU transmission, each 20MHz channel occupied by Trigger/TRS is required to allocate at least one UL RU. If a 20MHz channel is not covered by any UL RU, the 20MHz channel can’t be protected and get wasted.** |
| 15685 | 284 | 38 | Trigger frame's User Info field TID Aggregation Limit value 0 rule contradicts with the rule of clause 27.4.4.6, ACK Policy for MPDUs in TB PPDU | Clause 27.4.4.6 requires MPDUs in TB PPDU Ack Policy shall be set to immediate ACK or implicit Block Ack Request. But here, when TID Aggregation Limit value is set to 0, requires MPDUs shall not solicit immediate response. Either fix in Clause 27.4.4.6 to include the options of No ACK, or Block Ack policies, or remove the TID Aggregation Limit value 0 from the text. | **Rejected**  **Discussion: subclause 27.4.4.6 talks about the scenario when a STA addressed by the Trigger frame wants to solicit the acknowledgement, the Ack Policy will be set to 00. The text here talks about the scenario when a STA addressed by the Triger frame will transmit Ack/BA. Ack/BA doesn’t solicit responding frame. So The Trigger frame has** TID Aggregation Limit **equal to 0.** |
| 16404 | 283 | 10 | Why the last part on spatial streams in "If a Trigger frame is transmitted in an RU of an HE MU PPDU and the RU is addressed to multiple STAs, then the Trigger frame shall not include any User Info fields addressed to a STA that is identified as recipient of another RU or spatial stream of the same HE MU PPDU."  I'm assuming that in this case multiple STAs are scheduled with DL MU MIMO transmission on this RU. To be sure that STAs can be triggered, you need the STAs to be on this particular RU, but I don't see the relation with the spatial stream. I would have say:  "If a Trigger frame is transmitted in an RU of an HE MU PPDU and the RU is addressed to multiple STAs, then the Trigger frame shall not include any User Info fields addressed to a STA that is identified as recipient of another RU of the same HE MU PPDU." | As in comment. | **Revised**  **Discussion: what the sentence means is that the HE MU PPDU includes MU MIMO within OFDMA and the the Trigger frame in broadcast RU can’t include the User Info for the recipient of another RU or spatial stream(s) of another RU for MU MIMO transmission.**  **TGax editor to make changes in 11-18/1487r0 under CID16404** |
| 16607 | 282 | 64 | MultiBSSID deployments are very common in both enterprise and home environments (eg with guest SSIDs). Lack of device support for multi-BSSID triggers will significantly reduce UL efficiency | Make Rx Control Frame To MultiBSS mandatory for HE STAs | **Rejected**  **Discussion: the control frame addressed to STAs of multiple BSSs can increase the chance of MU PPDU transmission. However it is the enhancement of basic MU operation. With** Rx Control Frame To MultiBSS capability subfield, the feature can be implemented later (after the deployment of basic MU operation). |
| 16608 | 283 | 25 | The Trigger Dependent Common Info subfield contents will vary based on the trigger type and needs not stay the same among AMPDUs | Add the Trigger Dependent Common Info subfield to the exceptions | **Revised**  **Discussion: the commenter is right that the Trigger Dependent Common Info subfields in different A-MPDUs can be different, e.g. when GCR MU-BAR Trigger frames are in different A-MPDUs. Since a single Trigger frame can be in one of S-MPDU in DL MU transmission, S-MPDU should be mentioned.**  **Tgax editor to make changes in 11-18/1487r0 under CID 16608** |
| 17117 | 284 | 29 | delete the "unicast" and add more text if needed even though "when a Trigger frame contains one User Info field" seems enough. This is the only place to use a unicast frame term. |  | **Rejected**  **Discussion: Trigger frame with single User Info field can define random access RU in broadcast frame.** |

**27.5.3.2.3 Allowed settings of the Trigger frame fields and TRS Control subfield**

***TGax editor: change subclause 27.5.3.2.3 as follows (there is no change in the paragraphs not shown):***

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An AP shall not set any subfields of the User Info field of a Trigger frame to a value that is not supported by the recipient STA of the User Info field. An AP shall not set any subfields of a TRS Control subfield to a value that is not supported by the recipient STA of the TRS Control subfield. When an RU is allocated to only one STA the Starting Spatial Stream subfield for that STA shall be set to 0. (15084)

If a Trigger frame is transmitted in an RU of an HE MU PPDU and the RU is addressed to multiple STAs, then the Trigger frame shall not include any User Info fields addressed to a STA that is identified as recipient of another RU of the same HE MU PPDU. If a Trigger frame is transmitted in some spatial streams of an RU of an HE MU PPDU and the frames transmitted in the spatial streams are addressed to multiple STAs, then the Trigger frame shall not include any User Info fields addressed to a STA that is identified as recipient of another RU or other stream streams of the RU of the same HE MU PPDU. (16404)

If an AP transmits a Trigger frame that allocates an RU that spans the entire HE TB PPDU bandwidth and assigns the RU to more than one STA (i.e., for UL MU-MIMO) and with the GI And LTF Type subfield of the Common Info field set to indicate either 2x LTF + 1.6 μs GI or 4x LTF + 3.2 μs GI, the AP may set the MU-MIMO LTF Mode subfield in the Common Info field of the Trigger frame to indicate either HE single stream pilot HE-LTF mode or HE masked HE-LTF sequence mode. Otherwise, the AP shall set the MUMIMO LTF Mode subfield in the Common Info field to indicate HE single stream pilot HE-LTF mode.

An AP that transmits Trigger frames in more than one A-MPDU/S-MPDU in an HE MU PPDU shall set each subfield, except the Trigger Type, More TF, CS Required and Trigger Dependent Common Info subfields, in the Common Info field of the Trigger frame in one A-MPDU/S-MPDU to the same value as the corresponding subfield in the Common Info field of the Trigger frames in the other A-MPDU/S-MPDUs.(16608)

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