### IEEE P802.11Wireless LANs

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| 11ax D0.1 Comment Resolution for Some UL MU CS TBD |
| Date: 2016-07-24 |
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Abstract

This submission proposes resolutions for comments in clause 25.5.2.4 of TGax Draft 0.1 with the following CIDs:

* 177, 2188, 1220, 206, 700

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Revise the resolution for comments to align with the right format.
* Rev 2: Revise the resolution description for CID 700
* Rev 3: Revise the note based on the comment from Mark. The difference are marked with green.

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 D0.1 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax D0.1 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** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 177 | Alfred Asterjadhi | 77.37 | 25.5.2.4 | "Other condtions are TBD" specify whether there are other conditions and remove this item. | As in comment. | Revised –Agree in principle with the commenter. Currently, there is no other indications defined in the spec framework. Hence, delete the TBD indications. Other indications can be added when there are agreement in the spec framework.TGax editor to make the changes shown in 11-16/0886r3 under all headings that include CID 177. |
| 2188 | Tomoko Adachi | 59.37 | 25.5.2.4 | The other TBD conditions should be clarified, or the CS requirement within SIFS after the Trigger frame will be meaningless. | As in comment. | Revised –Agree in principle with the commenter. Currently, there is no other indications defined in the spec framework. Hence, delete the TBD indications. Other indications can be added when there are agreement in the spec framework.TGax editor to make the changes shown in 11-16/0886r3 under all headings that include CID 177. |
| 1220 | Liwen Chu | 58.5 | 25.5.2.4 | TBD about UL MU CS should be removed. | As in comment. | Revised –Agree in principle with the commenter. Currently, there is no other indications defined in the spec framework. Hence, delete the TBD indications. Other indications can be added when there are agreement in the spec framework.TGax editor to make the changes shown in 11-16/0886r3 under all headings that include CID 1220. |
| 206 | Alfred Asterjadhi | 77.35 | 25.5.2.4 | Define the TBD in this sentence, "the length of the HE trigger-based PPDU is below a TBD threshold". | As in comment. | Revised –Agree in principle with the commenter. It has been agreed in 16/643 that CS is not required for the UL MU acknowledgement solicited by the UL MU Respons Scheduling A-Control subfield in the HE variant HT control. Propose to use the threshold value 418 of the Length subfield in the Common Info field of the Trigger frame, which is obtained from the the maximum HE trigger-based PPDU duration 584us that can be solicited by the UL MU Response Scheduling A-Control subfield based on Equation 26-17.The detailed format of UL MU Respons Scheduling A-Control subfield in the HE variant HT control is provided in 16/766 Note that the maximum HE trigger-based PPDU duration solicited by the UL MU Respons Scheduling A-Control subfield in the HE variant HT control is calculated as follows. Specifically, with 4xLTF and 3.2us CP option, the maximum duration is calculated by adding 20us for legacy PHY header, adding 36us for HE PHY header, adding 512us for data symbol, and adding 16us packet extension. The result is then 584us.Also, note that if the duration of HE trigger-based PPDU is 584us, the corresponding value of the Length subfield in the Common Info field of the Trigger is 418 based on Equation 26-17, i.e., 418=[(584-20)/4\*3-3-2].TGax editor to make the changes shown in 11-16/0886r3 under all headings that include CID 206. |
| 700 | Jae Seung Lee | 59.1 | 25.5.2.4 | There are TBDs in the subclause. | Remove the TBDs. | Revised –The TBD condition in 25.5.2.4 are removed.The TBD threshold in P59L35 is replaced wih the threshold value 418 of the Length subfield in the Common Info field of the Trigger frame, which is obtained from the the maximum HE trigger-based PPDU duration 584us that can be solicited by the UL MU Response Scheduling A-Control subfield based on Equation 26-17.Since the TBD value in P59L10 follows similar consideration of the TBD threshold in P59L35, propose to replace the TBD value in P59L10 with the threshold value 418 of the Length subfield in the Common Info field of the Trigger frame.TGax editor to make the changes shown in 11-16/0886r3 under all headings that include CID 700. |

**Discussion:** *None.*

**Propose:**

Revised for CID 177, 2188, and 206 per discussion and editing instructions in 11-16/0886r3.

***TGax editor: Modify the Paragraph on page 59 line 33 as the following:***

The AP shall set the CS Required subfield to 1 except under the following conditions:
— All HE trigger-based PPDU(s) solicited by the Trigger frame containing ACK/BA and the ~~length of
the HE trigger-based PPDU is below a TBD threshold~~ Length subfield in the Common Info field of the Trigger frame is less than or equal to 418.(#206)
— ~~Other conditions are TBD.~~(#177)

NOTE—The threshold value 418 of the Length subfield in the Common Info field of the Trigger frame is obtained from the maximum HE trigger-based PPDU duration, 584 us, that can be solicited by the UL MU Response Scheduling A-Control subfield based on Equation (26-17). This duration is the sum of 20 us for L-STF, L-LTF and L-SIG, 20 us for RL-SIG, HE-SIG-A and HE-STF, 16 us for 4x HE-LTF with 3.2 us GI, 512 us for 32 OFDM symbols in the Data field with 3.2 us GI, and 16 us PE (see 9.2.4.6.4.2 (UL MU response scheduling), 25.5.2.3 (STA behavior), and 26.3.2 (HE PPDU formats)).(#206)

**Propose:**

Revised for CID 1220, and 700 per discussion and editing instructions in 11-16/0886r3.

***TGax editor: Modify the Paragraph on page 59 line 5 as the following:***

A NAV is considered in virtual CS for a STA that is polled from a Trigger frame for UL MU transmission
unless one of the following conditions is met:
— The NAV was set by a frame originating from the AP sending the Trigger frame
— The response generated by the STA contains an Ack frame or a BlockAck frame and the ~~duration of
the HE trigger-based PPDU is less than a TBD value~~Length subfield in the Common Info field of the Trigger frame is less than or equal to 418.(#700)
— The NAV was set by a frame originating from an intra-BSS STA
— The CS Required subfield in the Trigger frame is 0
— ~~Other condition TBD~~(#1220)