IEEE P802.11
Wireless LANs

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| LB266-CR-for-Clause-9.4.2.5.1 |
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Abstract

This submission proposes CR for CID 12600, 12601, 12602 (LB266).

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: modifications due to offline discussions.
* Rev 2: minor editorial changes

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** | **Pg/Ln** | **Section** | **Comment** | **Proposed Change** | **Resolution** |
| 12600 | Arik Klein | 194/11 | 9.4.2.5.1 | The APSD feature is per affiliated non-AP STA, not per non-AP MLD. However, the bit in the TIM is set per non-AP MLD - thus the current description in the sentence is insufficient for the non-AP MLD case. Please add a condition for setting the bit to 1 in TIM of AP MLD for the case where APSD is not used, as proposed. | consider adding the following sentence after the existing sentence: "If none of STAs affiliated with non-AP MLD are using APSD, and any individually addressed MSDUs/MMPDUs for that non-AP MLD are buffered and any of the APs affiliated with AP MLD associated with the non-AP MLD is prepared to deliver them, then bit number N in the traffic indication virtual bitmap is 1" | **Revised**According to 35.3.12.2 the U-APSD Flag setting has to be identical for all STAs affiliated with non-AP MLD, thus de-facto the U-APSD flag setting is per non-AP MLD. Still, need to revise the existing paragraph for STA not affiliated with an MLD and add another sentence as proposed **TGbe editor please implement changes as shown in doc 11-22/1496r2 tagged as 12600.** |
| 12601 | Arik Klein | 194/15 | 9.4.2.5.1 | The APSD feature is per affiliated non-AP STA, not per non-AP MLD. However, the bit in the TIM is set per non-AP MLD - thus the current description in the sentence is insufficient for the non-AP MLD case. Please add a condition for setting the bit to 1 in TIM of AP MLD for the case where APSD is used and at least one nondelivery-enabled AC exists, as proposed. | consider adding the following sentence after the existing sentence: "If all STAs affiliated with non-AP MLD are using APSD, and any individually addressed MSDUs/MMPDUs for that non-AP MLD are buffered in at least one nondelivery-enabled AC (if there exists at least one nondelivery-enabled AC), then bit number N in the traffic indication virtual bitmap is 1" | **Revised**According to 35.3.12.2 the U-APSD Flag setting has to be identical for all STAs affiliated with non-AP MLD, thus de-facto the U-APSD flag setting is per non-AP MLD. Still, need to revise the existing paragraph for STA not affiliated with an MLD and add another sentence as proposed with some modifications **TGbe editor please implement changes as shown in doc 11-22/1496r2 tagged as 12601.** |
| 12602 | Arik Klein | 194/19 | 9.4.2.5.1 | The APSD feature is per affiliated non-AP STA, not per non-AP MLD. However, the bit in the TIM is set per non-AP MLD - thus the current description in the sentence is insufficient for the non-AP MLD case. Please add a condition for setting the bit to 1 in TIM of AP MLD for the case where APSD is used and all ACs are delivery-enabled, as proposed. | consider adding the following sentence after the existing sentence: "If all STAs affiliated with non-AP MLD are using APSD, all ACs are delivery-enabled, and any individually addressed MSDUs/MMPDUs for that non-AP MLD are buffered in any AC, then bit number N in the traffic indication virtual bitmap is 1" | **Revised**According to 35.3.12.2 the U-APSD Flag setting has to be identical for all STAs affiliated with non-AP MLD, thus de-facto the U-APSD flag setting is per non-AP MLD. Still, need to revise the existing paragraph for STA not affiliated with an MLD and add another sentence as proposed **TGbe editor please implement changes as shown in doc 11-22/1496r2 tagged as 12602.** |

*TGbe editor: Please note baseline is 11be D2.1.1 and REVme D1.3*

* + - 1. **TIM element**
				1. **General**

***Change the ninth paragraph as follows:***

When the TIM is carried in a non-S1G PPDU, the traffic indication virtual bitmap, maintained by the AP, ~~or~~ the mesh STA or the AP MLD that generates a TIM, consists of 2008 bits, and it is organized into 251 octets such that bit number *N* (0  *N*  2007) in the bitmap corresponds to bit number (*N* mod 8) in octet number *N*/ 8 where the low order bit of each octet is bit number 0, and the high order bit is bit number 7. When the TIM is carried in an S1G PPDU, the traffic-indication virtual bitmap has the hierarchical structure shown in Figure 9-152 (Hierarchical structure of traffic-indication virtual bitmap carried in an S1G PPDU). Each bit in the traffic indication virtual bitmap corresponds to traffic buffered for a specific neighbor peer mesh STA within the MBSS that the mesh STA is prepared to deliver1, or for a STA that is not affiliated with an MLD within the BSS that the AP is prepared to deliver at the time the Beacon frame is transmitted, or for a non- AP MLD that APs affiliated with the AP MLD are prepared to deliver at the time the Beacon frame is transmitted. Bit number *N* indicates the status of buffered, individually addressed MSDUs/MMPDUs for the STA or the non-AP MLD whose AID is *N*, or group addressed MSDUs/MMPDUs for the STAs whose group AID is *N*. It is set as follows:

* If the STA (#12600) is not affiliated with an MLD and is not using APSD, and any individually addressed MSDUs/MMPDUs for that STA are buffered and the AP or the mesh STA is prepared to deliver them, then bit number *N* in the traffic indication virtual bitmap is 1.
* If the STA (#12601) is not affiliated with an MLD and is using APSD, and any individually addressed MSDUs/MMPDUs for that STA are buffered in at least one nondelivery-enabled AC (if there exists at least one nondelivery-enabled AC), then bit number *N* in the traffic indication virtual bitmap is 1.
* If the STA (#12602) is not affiliated with an MLD and is using APSD, all ACs are delivery-enabled, and any individually addressed MSDUs/ MMPDUs for that STA are buffered in any AC, then bit number *N* in the traffic indication virtual bitmap is 1.
* (#12600) If all STAs affiliated with non-AP MLD are not using APSD and any individually addressed MSDUs/MMPDUs for that non-AP MLD are buffered, then bit number *N* in the traffic indication virtual bitmap is 1 (see NOTE below)
* (#12601) If all STAs affiliated with non-AP MLD are using APSD and any individually addressed MSDUs/MMPDUs for that non-AP MLD are buffered in at least one nondelivery-enabled AC (if there exists at least one nondelivery-enabled AC in each of the affiliated STAs) then bit number *N* in the traffic indication virtual bitmap is 1 (see NOTE below)
* (#12602) If all STAs affiliated with non-AP MLD are using APSD whereas all ACs are delivery-enabled per each affiliated STA and any individually addressed MSDUs/ MMPDUs for that non-AP MLD are buffered in any AC, then bit number *N* in the traffic indication virtual bitmap is 1. (see NOTE below)

NOTE: The existence of individually addressed MSDUs/MMPDUs buffered for that non-AP MLD is based on the rules defined in 35.3.12.4

Otherwise, bit number *N* in the traffic indication virtual bitmap is 0.

Straw Poll:

Do you support to incorporate the proposed draft text in this document 11-22/1496r2 to the next revision of TGbe Draft 2.1.1, for addressing the following CIDs: 12600, 12601, 12602?

Result: Yes/No/Abstain