IEEE P802.11
Wireless LANs

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| LB233 CR MAC Miscellaneous Part 2 |
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Abstract

This submission proposes resolutions of comments received from TGax LB233.

(The proposed change is based on TGax Draft 3.3.)

* CIDs: 16441, 16738, 17046, 15939, ~~15023~~, 15835 (5 CIDs)
* NOTE1- 16441, 16738 were presented in the last September meeting (11-18/1504r0). But, as in a request of members, the resolution has been deferred. But, until now, there is no submission, We rejected those comments.
* NOTE2- 17046, 15939 were presented in the last November meeting (11-18/1780r5). But, in a mistake, those CIDs are missed in the motion list. There is no spec changes from those CIDs
* NOTE3- 15023 should be resolved in 6 GHz discovery proposal.
* NOTE4- 15835 has been updated based on the feedback. (6 CIDs)

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.***

| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| --- | --- | --- | --- | --- | --- |
| 16441 | 78.25 | 9.2.4.6a.5 | It would be useful to have a way to signal that the recipient of DATA MPDUs is experiencing eithe resource constraints or local interference that might cause a complete lack of an acknowledgement transmission and that the failure of an AMPDU originator to receive an acknowledgement when thus indicated should not be a reason to adjust the MCS for the link. | Add a signaling indication to the UPH Control to indicate that the recipient is currently resource constrained and that missing acknowledgement frames should not be construed as indicative of a poor MCS choice for the link. | Rejected-The comment fails to identify a specific issue to be addressed16441. It fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined.  |
| 16738 | 78.60 | 9.2.4.6a.6 | The channel availability bit map has the lowest resolution of 20 MHz. But there may be colocated radios in future in the field. In those case it may be the case that they require finer resolution atleast in the order of 26 tone or 52 tone RU that is interfered or not interfered. This information when communicated to AP, the scheduler in AP can make RU allocation appropriately to that STA | Whenvever only one 20 MHz channel is available out of entire 80 MHz/160 MHz operating channel, then there are two ways to solve this. First way:.There are two bits available in the BQR Control. In that case use that to indicate whether the upper half (10MHz of that 20 MHz Channel) or lower half (lower 10 MHz part of 20 MHz) is free when the Bits b0 to b7 have only one channel 20 MHz set. Second way: Expand the number of bits to indicate finer resolution and change the coding scheme to 26 tone RU by including 7 more bits which will give resolution in order of 26 tone RU | Rejected-The comment fails to identify a specific issue to be addressed. It fails to identify changes in sufficient detail so that the specific wording of the changes that will satisfy the commenter can be determined. |
| 17046 | 243.31 | 11.24.2.8 | "..., it shall not transmit frames to the non-AP HE STA."The restriction shall be applied only in the valid timer (e.g., OBSS PD SR transmit power restriction period). | As in comment. | Revised- The restriction in the BSS color un use event report shall be applied only in the TXOP.But, the proposed changes were already applied in TGax Draft 3.3 from 11-18/1780r5.  TGax editor needs no spec change for thid CIDs. |
| 15939 | 243.26 | 11.24.2.8 | Parse problemThe first sentence of 11.24.2.8 does not parse properly. | Change to "... to inform its associated AP that a BSS color is in use by the non-AP HE STA." | Revised- Agree in principle. But, the proposed changes were already applied in TGax Draft 3.3 from 11-18/1780r5.  TGax editor needs no spec change for thid CIDs. |
| ~~15023~~ | ~~134.01~~ | ~~9.4.2.37~~ | ~~Add a bit to indicate that the reported neighbor is a co-located BSS. This will be useful for discovery of a co-located ER BSS or 6GHz BSS~~ | ~~As in comment~~ | ~~Should be resolved in 6 GHz discovery proposal.~~  |
| 15835 | 138.60 | 9.4.2.162 | Local max transmit power can be defined by the transmit power envelope element, which defines power limits for 20MHz, 40MHz, 80MHz, 160MHz. These limits are for single user transmissions using these bandwidth. 11ax defines operation with UL MU where a STA can transmit on 20MHz or less but not on the primary channel. Clarification should be added to 11ax spec on how to derive the max transmit power if the AP uses transmit power envelope element. | Define the rules to derive max TxPower when operating with UL MU and when the Transmit Power Envelope element is used by the AP. | Revised- Agree in principle. Please refer the discussion part in 11-19/0085r0.TGax editor makes changes as shown in the as specified in 11-19/0085r0. |

**Discussion:**

In the Transmit Power Envelope element, the Local Maximum Transmit Power For X MHz fields (where X = 20, 40, 80, or 160/80+80) define the local maximum transmit power limit of X MHz PPDUs.

In 802.11ax, the X MHz PPDUs’s definition includes all HE PPDUs with the TXVECTOR parameter CH\_BANDWIDTH equal to CBWX.

As of now, for an HE TB PPDU, the local maximum transmit power is constrained by the TXVECTOR parameter CH\_BANDWIDTH and the Local Maximum Transmit Power value associated with the CH\_BANDWIDTH parameter. But, it can cause to exceed the regulatory requirement about the EIRP limit. For example, the the HE TB PPDU occupying only 242-tone RU can have the local maximum transmit power corresponding to 2×996-tone RU.

***TGax Editor: Change the subclause 9.4.2.161 as follows:***

* Transmit Power Envelope element

Local Maximum Transmit Power For *X* MHz fields (where *X* = 20, 40, 80, or 160/80+80) define the local maximum transmit power limit of *X* MHz PPDUs, except when the PPDU is an HE TB PPDU. In which case, Local Maximum Transmit Power For X MHz fields defines the local maximum transmit power limit of the HE TB PPDU of which the bandwidth of the pre-HE modulated fields is X MHz. (#15835) Each Local Maximum Transmit Power For *X* MHz field is encoded as an 8-bit 2s complement signed integer in the range –64 dBm to 63 dBm with a 0.5 dB step. The value of 63.5 dBm indicates 63.5 dBm or higher (i.e., no local maximum transmit power constraint).