IEEE P802.11
Wireless LANs

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| **CIDs for: Section 9.3.1.23** **MU BAR CIDs** |
| **Date:** 2016-10-17 |

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Abstract

This submission proposes resolutions for multiple comments related to TGax D0.5 with the following CIDs :

* 6 and 7

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** | **Commenter** | **PP** | **Comment** | **Proposed Change** | **Resolution** |
| 6 | Ahmadreza Hedayat | 23 | The current definition of MU-BAR becomes repetitive for multicast MU-BAR, since it would require the BAR-Control and BAR information to be sent for each responding multicast STA, while these fields can be within the common info for multiocast MU-BAR. | Either create another type for Multicast MU-BAR. Or depeniong on an indication for (GCR) multicast, allow BAR Control and BAR Info fields to be within the Common Info field. | Revised. Section 9.3.1.23 is revised to include a new variant GCR MU-BAR. TGax editor: Please apply the text changes in document 16/1461r0 noted under this CID. |
| 7 | Ahmadreza Hedayat | 23 | For a multicast MU-BAR frame that requests BA from GCR STAs, presence of the GCR group-address is benefitial for the responding STAs (since such STAs are already identified with a GCR group-address). | Either add a new subfield in the Common Info of MU-BAR (in the Trigger type dependent field) to represent the GCR group-address. Or set the RA address of the MU-BAR to the GCR group-address. | Revised. Section 9.3.1.23 is revised to include a new variant GCR MU-BAR. TGax editor: Please apply the text changes in document 16/1461r0 noted under this CID. |

## Discussion:

## In GCR services, an AP seeks BA from a group of STAs, practically with similar BAR control attributes. Given this fact, a regular MU-BAR frame that has BAR Control/Info within each Uer Info would be an inefficient design, since same exact content of BAR Control/Info gets repeated for each STA within the GCR group. To avoid this, a new variant is suggested where the BAR Control/Info is within the Common Info field.

## 9.3.1.23 Trigger frame format

***TGax Editor: Add a new entry to Table 9-25a with description “GCR MU-BAR”. CIDs (6, 7)***

***TGax Editor: Change clause 9.3.1.23.3 as follows. CIDs (6,7)***

The Trigger frame solicits and allocates resources for UL MU transmissions a SIFS(#2195) after the PPDU that carries the Trigger frame(#368). The Trigger frame also carries other information required by the responding STA to send an HE trigger-based PPDU(#718).

The frame format for the Trigger frame is as defined in Figure 9-52c (Trigger frame).

The Duration(#1297) field is set as defined in 9.2.5 (Duration/ID field (QoS STA)).

The RA field of the Trigger frame is the address of the recipient STA.(#262) If the Trigger Frame has one User Info field then the RA of the Trigger Frame is the STA's MAC Address. If the Trigger Frame has multiple User Info fields then the RA of the Trigger Frame is the broadcast address.(#102) If the trigger type is GCR MU-BAR, the RA field is set to the MAC address of the group for which reception status is being requested.

***TGax Editor: Add a new clause after 9.3.1.23.3 as follows. CIDs (6,7)***

## 9.3.1.23.3a GCR MU-BAR variant

The Trigger Dependent Common Info field of the GCR MU-BAR variant Trigger frame is defined in Figure 9-52ii (Trigger Dependent Common Info field for GCR MU-BAR variant Trigger frame). GCR MU-BAR frame does not have a Trigger Dependent User Info field.

The BAR Control subfield is defined in 9.3.1.8 (BlockAckReq frame format).

The BAR Information subfield is defined in 9.3.1.8 (BlockAckReq frame format). The Fragment number

field is set according to Table 9-24a (Fragment Number subfield encoding for the Compressed BlockAck

variant) for a compressed BAR variant and Table 9-24b (Fragment Number subfield encoding for the Multi-

STA BlockAck variant) for a Multi-TID BAR variant.



**Figure 9-52ii Type Dependent Common Information field for GCR MU-BAR variant Trigger frame**

***TGax Editor: Change the following clause accordingly. CIDs (6,7)***

**10.24 Block acknowledgement (block ack)**

**10.24.10 GCR block ack 10.24.10.3 GCR block ack BlockAckReq and BlockAck frame exchanges**

***Change the following 2nd and 3rd paragraphs as follows:***

When the retransmission policy for a group address is GCR Block Ack, an originator shall not transmit more than the GCR buffer size number of A-MSDUs with RA set to the GCR concealment address and the DA field of the A-MSDU subframe set to the GCR group address before sending a BlockAckReq frame to one of the STAs that has a GCR block ack agreement for this group address. The RA field of the BlockAckReq frame shall be set to the MAC address of the destination STA. Upon reception of the BlockAck frame, an originator may send a BlockAckReq frame to another STA that has a block ack agreement for this group address, and this process may be repeated multiple times. If the originator has a GCR block ack agreement with one or more of the HE STAs for this group address, the originator may send an(#2817) MU-BAR frame (MU-BAR variant Trigger frame(#1532) or GCR MU-BAR variant Trigger frame(#6,7)) to one or more of the HE STAs(#1213). Upon reception of the BlockAck frame from one or more HE STAs, the(#2818) originator may send an(#2817) MU-BAR frame to one or more other(#413) HE STAs that have a GCR block ack agreement(#21), and this process may be repeated multiple times.(#136)