IEEE P802.11
Wireless LANs

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| Proposed Text Changes for BSR |
| Date: 2017-04-25 |
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Abstract

This submission proposes resolutions for BSR comment related to TGax D1.0 with the following CID: 5126.

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** | **Section** | **Pg / Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 5126 | 9.2.4.6.4.5 | P25L32 | While queue size is definitely important to the AP in order to schedule UL MU, there are other metrics that are important as well. For example, knowing that the client is experiencing excessive jitter and latency on the uplink or has low battery life will be useful. | Modify BSR accordingly | AcceptedPlease see document 11-17/YYYYr0 |

**Discussion:**

Obviously queue size is important in scheduling. However, numerous other metrics are necessary in order for the AP to schedule UL MU.

Field experience tells us that the proper access category is not always selected for an application at higher layers in the protocol stack. Therefore it is necessary to allow the station to indicate whether it is experiencing excessive latency or jitter even with BE or BK traffic. This information could be used by the AP to give priority to a STA for UL scheduling even for lower priority queues.

Furthermore, with the emphasis on power sensitive hand held devices, an important queuing metric will be whether the device is experiencing a low battery condition. This information could be used by the AP to give priority to devices with low battery condition.

TGax Editor: Please modify this section as follows:

**9.2.4.6.4.5 Buffer Status Report (BSR)**

The Control Information subfield, when the Control ID subfield is 3, contains buffer status information used for UL MU operation (see 27.5.2.5 (HE buffer status feedback operation for UL MU)).

The format of the Control Information subfield is defined in Figure 9-15f (Control Information subfield format when Control ID subfield is 3).

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 B3  | B4 B5  | B6 B7 | B8 B9 | B10 B17 | B18 B25 | B26 | B27 | B28 |
|  | ACI Bitmap | Delta TID | ACI High | Scaling Factor | Queue Size High | Queue Size All | Latency | Jitter | LowBattery |
| Bits: | 4 | 2 | 2 | 2 | 8 |  | 8 | 1  | 1 | 1 |

**Figure 9-15f—Control Information subfield format when Control ID subfield is 3**

…If a QoS Data frame is fragmented and is carried in an A-MPDU, the queue size values are set according to the rules in 10.9 (HT operation).

The Latency subfield indicates when buffered traffic in a queue has exceeded 20 ms. The value is set to 1 to indicate excessive latency, 0 otherwise.

The Jitter subfield indicates when the STA has a traffic flow with jitter that has exceeded 5 ms. The value is set to 1 to indicate excessive jitter, 0 otherwise.

The Low Battery subfield indicates when a battery power STA is in a low battery state. The value is set to 1 to indicate low battery state, 0 otherwise.