IEEE P802.11
Wireless LANs

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |
| --- |
| TLC Signaling |
| Date: 2019-03-01 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Matthew Fischer | Broadcom |  |  | Matthew.fischer@broadcom.com |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

 |

Abstract

Proposed language to create a mechanism in the Block Ack to signal a request by a receiver to Temporarily Limit the Connection.

The proposed changes address CID 2656 of LB236 on TGmd D2.0.

Changes are referenced to TGmd D2.2.

**REVISION NOTES:**

**R0**:

initial

**R1**:

Update to D2.2

**END OF REVISION NOTES**

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 TGmd Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGmd Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGmd Editor: Editing instructions preceded by “TGmd Editor” are instructions to the TGmd editor to modify existing material in the TGmd draft. As a result of adopting the changes, the TGmd editor will execute the instructions rather than copy them to the TGmd Draft.***

**CIDs**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2656 | Matthew Fischer | 9.3.1.8.1 | 825 | It would be nice to have the ability to inform the transmitter of an AMPDU that missing acknowledgements for some MPDUs are not due to a poor MCS choice, but instead, to local interference that occurred during the AMPDU reception. An indication of such occurence should be signaled in the BA. | Add a mechanism in the BA frame to allow a recipient transmitting the BA to indicate to the originator that missing acknolwedgements within the BA frame are due to local interference or buffer constraints and not a poor MCS choice. | Revise - TGmd editor to make changes as shown in 11-19/0306r0 that are marked with CID 2656 which create a new bit in the BA control field to indicate that there is a temporary receive resource constraint at the transmitter of the BA. |

**Discussion:**

**Proposed Changes to TGmd D2.2:**

**9.3.1.8.1 Overview**

***TGmd editor: within TGmd D2.2, in Figure 9-42 – BA Control field, change bit B5 from reserved to TLC as shown, adjusting the reserved field size and bit locations as appropriate:***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 B4 | B5 | B6 B11 | B12 B15 |
|  | BA Ack Policy | Multi TID | Compressed Bitmap | GCR Mode | TLC **(#2656)** | Reserved | TID\_INFO |
| Bits: | 1 | 1 | 1 | 2 | 1 | 6 | 4 |

**Figure 9-42—BA Control field**

***TGmd editor: within TGmd D2.2, in an appropriate location within 9.3.1.8.1 Overview, insert the following paragraph:***

The TLC subfield is set to 1 to indicate that the STA transmitting the frame containing this subfield is requesting a temporarily limited connection. The field is set to 0, otherwise. **(#2656)**

***TGmd editor: within TGmd D2.2, insert the following new subclause in an appropriate location (suggested to be immediately following 10.26.10 (DMG block ack with flow control)):***

**10.26.10a Temporarily Limited Connection Signaling (#2656)**

A STA may set the TLC subfield to 1 in a Block Ack frame to indicate a request to the receiving STA that it should temporarily limit the rate of transmission of octets of MMPDUs and MSDUs to the transmitting STA. If the Block Ack is transmitted in response to the receipt of an A-MPDU, the lack of indication of acknowledgement of some of the MPDUs from that A-MPDU should not be assumed to have been due to bit errors. The determination of which unacknowledged MPDUs should not be assumed to have been due to bit errors is beyond the scope of the standard.

A STA that receives a Block Ack with the TLC subfield equal to 1 may temporarily limit the rate of transmission of octets of MMPDUs and MSDUs to the STA that transmitted the Block Ack. The determination of the meaning of temporarily is beyond the scope of the standard. The amount of reduction in the rate of transmission is beyond the scope of the standard.

A STA may set the TLC subfield to 0 in a Block Ack frame transmitted to indicate a request to the receiving STA that it should not limit the rate of transmission of octets of MMPDUs and MSDUs to the transmitting STA.

A STA that receives a Block Ack with the TLC subfield equal to 0 should not limit the rate of transmission of octets of MMPDUs and MSDUs to the STA that transmitted the Block Ack.

**End of proposed changes.**