IEEE P802.11  
Wireless LANs

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| |  |  |  |  |  | | --- | --- | --- | --- | --- | | BA TA BW Oops | | | | | | Date: 2020-09-15 | | | | | | Author(s): | | | | | | Name | Affiliation | Address | Phone | email | | Matthew Fischer | Broadcom |  |  | [Matthew.fischer@broadcom.com](mailto:Matthew.fischer@broadcom.com) | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |  |  |  |  |  | |

Abstract

Proposed language to update a change which first appeared in D4.0 due to the resolution of SA1 CID 4439. See 11-20-0650r4.

Note that there is no CID for SA2 corresponding to this issue.

**REVISION NOTES:**

**R0**:

initial

**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**

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| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution (Proposed)** |
| 4439 | RISON, Mark |  |  | There are no implementations of HT-delayed BA. HT-delayed BA is not useful, as it impairs throughput. Note: hypothetical use of HT-delayed BA by amendments to 802.11-202x is not relevant to REVmd | Delete 10.25.7 HT-delayed block ack extensions | REVISED (PHY: 2020-07-10 15:29:39Z) - Incorporate the changes in documeent https://mentor.ieee.org/802.11/dcn/20/11-20-0650-04-000m-cids-4438-4439-delete-ht-delayed-block-ack.docx which resolve the comment in the direction proposed by the commenter. |

**Discussion:**

Note that there is no CID for SA2 corresponding to this issue.

As part of the change to remove HT-Delayed BA from the standard, a change was made to the BA frame format subclause, and that change created a significant technical change, the result of which is certainly not what was intended. Another modification to the text is needed to correctly complete the deletion of the HT-Delayed BA feature.

The D3.0 text read as follows:

**9.3.1.8 BlockAck frame format**

**9.3.1.8.1 Overview**

The TA field value is the address of the STA transmitting the BlockAck frame or a bandwidth signaling TA in the context of HT-delayed block ack(#1512). In a BlockAck frame transmitted in the context of HT-delayed block ack(#1512) by a VHT STA in a non-HT or non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field value is a bandwidth signaling TA.

The D4.0 text is:

**9.3.1.8 BlockAck frame format**

**9.3.1.8.1 Overview**

The TA field value is the address of the STA transmitting the BlockAck frame(#4439)(#1512). In a BlockAck frame transmitted in the context of (#4439)non-HT duplicate format and where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT, the TA field value is a bandwidth signaling TA(#4439).

An analysis of the D3.0 text indicates that the second sentence of the paragraph is written as a multi-condition logical statement, of the form:

In a BA frame [with condition A & B & (C + D) & E], the TA field value is a bandwidth signalling TA.

Where:

A = transmitted in the context of HT-delayed block ack

B = by a VHT STA

C + D = in a non-HT **or** non-HT duplicate format

E = where the scrambling sequence carries the TXVECTOR parameter CH\_BANDWIDTH\_IN\_NON\_HT

With the deletion of HT-delayed BlockAck, one must ask the question of what happens to the logical statement.

There are a couple of choices:

1. Condition A can no longer be satisified, because “the context of HT-delayed block ack” no longer exists, and therefore, condition A must be assumed as permanently FALSE and therefore, the entire statement can NEVER be true because condition A exists as a top-level AND term
2. Condition A no longer exists and is simply deleted, leaving the remaining conditions to be evaluated on their own – this is the choice that was made by the authors of 11-20-0650r4 and the voters who approved it

We believe that choice a) is the correct choice, as when HT-delayed BA was still in the standard, the only time that a BA TA field could include a signalling TA value was when HT-delayed BA was in use, i.e. “in the context of”, but with the language that exists in D4.0, it appears that a BA may contain a signalling TA at any time. We do not feel that the group really intended to extend the use of signalling TA to the non-HT delayed BA case.

In support of this position, we note that the first sentence of the same paragraph has also been changed and accurately reflects what we believe to be the intended result, which is that the BA TA field is always the address of the STA transmitting the frame.

See proposed changes for D4.0

**Proposed Changes to TGmd D4.0:**

***TGmd editor: within TGmd D4.0, in 9.3.1.8.1 Overview, change the text as shown:***

**9.3.1.8 BlockAck frame format**

**9.3.1.8.1 Overview**

The TA field value is the address of the STA transmitting the BlockAck frame(#4439)(#1512). (#4439).

**End of proposed changes.**