IEEE P802.11
Wireless LANs

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| **Comment Resolution for Subclause 9.21** |
| **Date:** 2013-07-01 |
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Abstract

This document provides comment resolution for TGah Draft 0.1 Comment Collection 9 with these CIDs: 74, 562, 914, and 915.

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

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

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

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 914 | 135.17 | 9.21.1 | Asymmetric BA case, use of only lower MCS is allowed. | Modify the sentence from "When used, the responding STA may use a different MCS for transmitting the immediate Block Ack control response frame ..." to "When used, the responding STA may use lower MCS for transmitting the immediate Block Ack control response frame ...". | Revised – TGah editor to make changes shown in 11-13-0823-01-00ah under the heading for CIDs 914 and 915. |
| 915 | 135.16 | 9.21.1 | Better capability can imply not only better TX performance but also better RX performance. Therefore, current sentence may not be exactly true. | Modify the sentence from "An asymmetric Block Ack operation may be used when the originator AP has better capability (e.g. higher maximum transmit power) than the recipient STA." to "An asymmetric Block Ack operation may be used when the recipient to the originator link is worse than the originator to the recipient link.". | Revised – TGah editor to make changes shown in 11-13-0823-01-00ah under the heading for CIDs 914 and 915. |

**Discussion:**

*CID 914 – The commenter is correct that for the assymetric BA case only a lower MCS response from the non-AP STA is allowed. Proposed comment resolution is inline with commenter’s view and clarify that asymmetric BA can be used when the non-AP STA is not able to satisfy MCS selection rules for transmitting control response frames.*

*CID 915: Agree in principle. Proposed comment resolution is to specify that the assymetric BA can be used when data selection rules cannot be satisfied by the BA originator which is inline with the concept of a “worse” link.*

* **Introduction**

**Instruction to Editor: *Please make the following changes in subclause 9.21.1:***

An asymmetric Block Ack operation may be used when the S1G non-AP STA cannot satisfy data selection rules for control response frames when transmitting to the S1G AP. When used, the responding STA may use a lower MCS for transmitting the immediate Block Ack control response frame than is computed according to the rules of 9.7. The intended recipient STA maintains a measure of the degree of asymmetry between the AP and the STA and implicitly indicates the value to the originator AP during the Block Ack setup phase. This degree of asymmetry is represented as the difference in MCS values between AP and STA, and referred to as MCSDifference (see 9.21.2). In the Data & Block Ack phase, the originator AP uses the MCSDifference to compute the duration field for A-MPDUs of regular frames as described in Clause 8 (Frame formats) and immediate Block Ack control response frame.

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 74 | 135.49 | 9.21.2 | "Description is wrong: ""theoriginator may set the Block Ack Action field value to BAT ADDBA, indicating that the recipient STArequests that the originator use only BAT frames during the Block Ack session""" | It is not the originator that sends the BAT frames but the Recipient STA. | Revised – TGah editor to make changes shown in 11-13-0823-01-00ah under the heading for CIDs 74 and 562. |
| 562 | 135.46 | 9.21.2 | As the RA field of BAT frame is an AID, a recipient of the BAT frame is limited to non-AP STA. The originator of BAT BA setup shall be non-AP STA. | "Modify the last sentence of the modified 1st paragraph as following.---If the originator if a non-AP STA and the intended recipient is capable of participating in an Immediate Block Ack session and both the originator and the recipient support BAT BA operation, the originator may set the Block Ack Action field value to BAT ADDBA, indicating that the recipient STA requests that the originator use only BAT frames during the Block Ack session." | Revised – TGah editor to make changes shown in 11-13-0823-01-00ah under the heading for CIDs 74 and 562. |

**Discussion:**

*CID 74 and 562 – Th commenters are right. Proposed resolution is to correct the description clarifying that the recipient STA sends the BAT frames and that the originator that sets up a BAT Session is a non-AP STA. In addition proposed to fix some typos in this subclause.*

* **Setup and modification of the Block Ack parameters**

**Instruction to Editor: *Please make the following changes in subclause 9.21.2:***

An originator that intends to use the Block Ack mechanism for the transmission of QoS data frames to an intended recipient should first check whether the intended recipient STA is capable of participating in Block Ack mechanism by discovering and examining its Delayed Block Ack and Immediate Block Ack capability bits. If the intended recipient STA is capable of participating, the originator sends an ADDBA Request frame indicating the TID for which the Block Ack is being set up. For an ADDBA set up between STAs where one is a non-HT STA, the Block Ack Policy and Buffer Size fields in the ADDBA Request frame are advisory and may be changed by the recipient. The Buffer Size field in the ADDBA Request frame is advisory and may be changed by the recipient for an ADDBA set up between HT STAs. If the intended recipient is capable of participating in an Immediate Block Ack session, the S1G originator shall set the Block Ack Action field value to NDP ADDBA Request, unless another type of Block ACK response frame is required to include information that is not present in the fields of the NDP Block Ack frame, indicating that the recipient STA should use only NDP BlockAck frames during the Block Ack session. If the originator is a non-AP STA and the intended recipient is capable of participating in an Immediate Block Ack session and both the originator and the recipient support BAT BA operation, the originator may set the Block Ack Action field value to BAT ADDBA Request, indicating that the originator requests the recipient to use only BAT frames during the Block Ack session.

When the recipient STA accepts, it indicates the type of Block Ack agreement, the type of BlockAck frames and the number of buffers that it shall allocate for the support of this Block Ack agreement within the ADDBA Response frame. Each Block Ack agreement that is established by a STA may have a different buffer allocation. If the intended recipient STA rejects the request, then the originator shall not use the Block Ack mechanism. When the recipient STA accepts an Immediate Block Ack session, it shall indicate which type of BlockAck frames it will use, by transmitting an NDP ADDBA Response for NDP BlockAck frames, by transmitting a BAT ADDBA Response for BAT frames and by transmitting an ADDBA Response for BlockAck frames. The value indicated in the Buffer Size field of the NDP ADDBA Response shall not be greater than the maximum number of MSDUs and A-MSDUs that can be acknowledged with the selected NDP BlockAck frame. This value is 8 for NDP BlockAck (1MHz) frames as described in 8.3.4a.1.5 (NDP Block ACK) and 16 for NDP BlockAck (2MHz) frames as described in 8.3.4a.1.5 (NDP Block ACK). The value indicated in the Buffer Size field of the BAT ADDBA Response shall not be greater than 12.