IEEE P802.11
Wireless LANs

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| **Comment Resolution for Miscellaneous (Part 2)** |
| **Date:** 2013-07-01 |
| **Author(s):** |
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Abstract

This document provides comment resolution for TGah Draft 0.1 Comment Collection 9 with these CIDs: 20, 111, 336, 625, and 914.

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** |
| 20 | 145.60 | 9.32h | A STA can request UL Synch protection also when it has not setup a TWT or RAW, e.g., by sending a PS-Poll and receiving a TWT with a TACK frame as described in section 9.32g.4 | Add support for on-demand UL synch protection. | Revised –TGah editor to make changes shown in 11-13-0817-00-00ah under the heading for CID 20. |

**Discussion:***Proposed resolution is to add support for on-demand UL Synch protection.*

* **Synch frame transmission procedure for uplink traffic**

**Instruction to Editor: *Please make the following changes to the 6th paragraph of subclause 9.32h.1:***

When a STA is requesting for the sync frame transmission, a STA may also request to an AP to protect a time slot in a RAW defined in the Slot Duration field (8.4.2.170b (RPS element)) or a time duration for a TWT time defined in the Nominal Minimum Wake Duration field (8.4.2.170j (Target Wake Time element)) by setting the Time Slot Protection Request field in the Synch Control field to 1. A STA may also request to an AP protection for a TXOP duration after the expiration of a wakeup timer as described in 9.32g.4 (Active Polling procedure for non-TIM STAs), The time slot protection is not requested, if the Time Slot Protection Request field is set to 0. When an AP receives a Sync frame from a STA with the Time Slot Protection Request field set to 1, the AP shall protect a time slot that is assigned for the STA in a RAW or a TWT time of the STA with NAV-setting frame exchanges.

* **Active polling procedure for non-TIM STAs**

**Instruction to Editor: *Please make the following changes to thefollowing paragraphs of subclause 9.32g.4:***

This clause defines the active polling procedure for a STA that can solicit information from AP upon waking up.

Upon waking up and without listening for a beacon, an active polling STA may solicit BSS change sequence and/or current timestamp information from an AP by sending a polling message (PS-Poll). In this polling message, it indicates whether the STA solicits the information of BSS change sequence and/or current timestamp by setting Poll Type bits to 01, or whether the STA solicits the information of Next TWT or Duration to a TBTT by setting Poll Type bits to 10. In addition, a STA that has requested time slot protection for a TXOP duration after the expiration of a wakeup timer, as described in 9.32h.1 (Synchronization (Synch) Frame Operation), may transmit to the UL-Synch capable AP a PS-Poll with the Poll Type subfield in the Frame Control field set to 11.

In response to the received polling message sent by an active polling STA, an AP may send a TACK that its Next TWT Present field is set to 0 and S1G Control Frame Extension field is set to the value corresponding to TACK in FC field with the solicited information to the STA immediately. An AP may also send the STA either a NDP ACK that includes a wakeup timer or TACK in which Next TWT field is set to the value of a TBTT, which the AP uses to direct the STA to check the beacon. STA shall listen to the beacon when the timer with the value as indicated by Duration field of NDP ACK expires or Next TWT of TACK is due. An UL-Synch capable AP may respond with an NDP ACK frame to a PS-Poll with Poll Type subfield set to 11. The NDP ACK frame shall include a wakeup timer in the Duration field by setting the Duration Indication value to 1. The UL-Synch capable AP shall protect the TXOP duration following the expiration of the wakeup timer as described in 9.32h.1 (Synchronization (Synch) Frame Operation.

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 111 | 64.24 | 8.4.2.7.1.3 | In the OLB mode it is not clear how AID N is obtained | Clarify the expression of the Page Index Field especially mod(m,8)(N[5:3]) | Revised – TGah editor to make changes shown in 11-13-0817-00-00ah under the heading for CID 111. |

**Discussion:***Proposed resolution is to better clarify how AID N is obtained.*

* **OLB mode**

**Instruction to Editor: *Modify the third paragraph of sub-clause 8.2.4.2.7.1.3 as follows:***

Each Subblock subfield is 1 octet in length and contains a Subblock of the Partial Virtual Map. A Subblock *m* of the Encoded Block Information field is located in Block *k* where *k* is obtained as Block Offset + *m* / 8. The bit in position *q* of the Subblock *m* which is located in Block *k* indicates that there is traffic buffered for the STA whose AID is *N*, where *N* is constructed by concatenating the Page Index field (*N*[12:11]), the Block *k* (*N*[10:6]), the Subblock offset mod(*m*, 8) (*N*[5: 3]), and *q* (*N*[2:0]) and in sequence from MSB to LSB.

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 336 | 27.15 | 8.2.4.1.2 | It's happening now! | Change "The revision level will be incremented" to "The revision level is incremented" | Accepted – TGah editor to make changes shown in 11-13-0817-00-00ah under the heading for CID 336. |

**Discussion:***Agree with the commenter. Proposed resolution is to change verb to present tense.*

* **Protocol Version field**

**Instruction to Editor: *Modify the first paragraph of sub-clause 8.2.4.1.2 as follows:***

The Protocol Version field is 2 bits in length and is invariant in size and placement across all revisions of this standard. For this standard, the value of the protocol version is 0 for regular MAC frames per 8.2 (MAC frame formats for regular frames) or 1 for short MAC frames per 8.7 (MAC frame format for short frames). All other values are reserved. The revision level is incremented only when a fundamental incompatibility exists between a new revision and the prior edition of the standard. See 9.24.2 (Revision level field processing).

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 625 | 24.7 | 8.2 | Why do we add "for regular frames"? If S1G Control frames are called out, it can be assumed all others are "regular frames". | Remove "for regular frames". | Accepted –TGah editor to make changes shown in 11-13-0817-00-00ah under the heading for CID 625. |

**Discussion:***Agree with the commenter.*

* **Frame formats**

**Instruction to Editor: *Please remove modification of the title of sub-clause 8.2 as follows:***

* **MAC frame formats**
	+ - * 1. **Protocol Version field**

**Instruction to Editor*: Please modify the first paragraph of sub-clause 8.2.4.1.2:***

The Protocol Version field is 2 bits in length and is invariant in size and placement across all revisions of this standard. For this standard, the value of the protocol version is 0 for MAC frames per 8.2 (MAC frame formats) or 1 for short MAC frames per 8.7 (MAC frame format for short frames). All other values are reserved. The revision level will be incremented only when a fundamental incompatibility exists between a new revision and the prior edition of the standard. See 9.24.2 (Revision level field processing).

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 814 | 91.18 | 8.4.1.170k | Specify that the Assymetric BA is optinal features and only applicable to S1G. Add capability indication and related normative text | as in comment. | Accepted –TGah editor to make changes shown in 11-13-0817-00-00ah under the heading for CID 814. |

**Discussion:***Agree with the commenter.*

* **Introduction**

**Instruction to Editor*: Please modify the following paragraph of sub-clause 9.21:***

When dot11S1GOptionImplemented is true, a STA shall support NDP Block ACK frame and shall use NDP Block ACK frame unless the Block Ack response is required to include information that is not present in the fields of the NDP Block Ack frame.

***Insert the following after the third paragraph:***

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. An S1G non-AP STA may initiate an asymmetric Block Ack negotiation with an S1G AP if it has received from the AP a frame containing an S1G Capabilities element with the Asymmetric Block Ack Supported set to true; otherwise it shall not initiate an asymmetric Block Ack negotiation. A non-S1G STA shall not initiate an asymmetric Block Ack negotiation. An S1G AP with dot11AsymmetricBlockAckSupport set to false shall not support asymmetric Block Ack. When used, the responding STA may use a different 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.

* **S1G Capabilities info field**

**Instruction to Editor: *Please change the following subclause as follows::***

The structure of the S1G Capabilities Info field is defined in Figure 8-401dg (S1G Capabilities Info field).

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|  | B0 | B1 | B2 | B3 | B4 | B5 | B6 B7 | B8 |
|  | UplinkSynchCapable | DynamicAID | BATSupport | TIM ADESupport | Non-TIMSupport | TWTSupport | STATypeSupport | Asymmetric Block Ack Supported  |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| * **S1G Capabilities Info field**
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The subfields of the S1G Capabilities Info field are defined in Table 8-191d (Subfields of the S1G Capabilities Info field).

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| * **Subfields of the S1G Capabilities Info field**
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| Subfield | Definition | Encoding |
| … |  |  |
| Asymmetric Block Ack Supported | This bit indicates support of Asymmetric Block Ack | Set to 1 if dot11AsymmetricBlockAckSupport is true.Set to 0 otherwise. |