IEEE P802.11  
Wireless LANs

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| **Comment Resolution for Miscellaneous** | | | | |
| **Date:** 2013-07-01 | | | | |
| **Author(s):** | | | | |
| **Name** | **Affiliation** | **Address** | **Phone** | **Email** |
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Abstract

This document provides comment resolution for TGah Draft 0.1 Comment Collection 9 with these CIDs: 8, 10, 17, 19, 321 and 581.

Rev 1 – Comment resolution for CID 19 has baseline spec text changed from D0.3 to D1.1 of REVmc.

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** |
| 10 | 91.19 | 8.4.2.170k | Add capabilities indications for support of A-MPDU (excluding Single MPDU) and for support of A-MSDU. Simple sensor devices may not need to support A-MPDu and/or A-MSDU. | as in comment | Revised –  TGah editor to make changes shown in 11-13-0812-01-00ah under the heading for CID 10, 321, and 581. |
| 321 | 44.46 | 8.3.4a | Sensor devices especially 1MHz sensors are simple devices. It is not necessary for them to implement BlockAck. |  | Revised –  TGah editor to make changes shown in 11-13-0812-01-00ah under the heading for CID 10, 321, and 581. |
| 581 |  | 9.11 | "In the subclause 9.11, A STA that has a value of false for dot11HighthroughputOptionImplemented is prohibited to transmit an A-MSDU.  As an S1G STA set dot11HighthroughputOptionImplemented to false.  S1G STA shall be exempted from this constraint." | "Add the modification of the ninth paragraph of the subclause 9.11 as follows (Based on P802.11mc D1.4):  ---  The following rules apply to the transmission of an A-MSDU other than DMG or S1G network:  -- A STA that has a value of false for dot11HighthroughputOptionImplemented shall not transmit an A-MSDU.  -- A STA shall not transmit an A-MSDU to a STA from which it has not received a frame containing an HT Capabilities element." | Revised –  TGah editor to make changes shown in 11-13-0812-01-00ah under the heading for CID 10, 321, and 581. |

**Discussion:**

*CID 321 - The commenter is right. In fact it is not necessary for sensor devices to implement BlockAck. Proposed comment resolution is inline with CID 10 which adds a capability indication for support of A-MPDUs.*

* **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 | B9 |
|  | Uplink  Synch  Capable | Dynamic  AID | BAT  Support | TIM ADE  Support | Non-TIM  Support | TWT  Support | STA  Type  Support | A-MSDU Supported | A-MPDU Supported |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 |
| * **S1G Capabilities Info field** | | | | | | | |

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** | | |
| Subfield | Definition | Encoding |
| … |  |  |
| A-MSDU Supported | This bit indicates support of Aggregated MSDU | Set to 1 if dot11AMSDUSupport is true.  Set to 0 otherwise. |
| A-MPDU Supported | This bit indicates support of Aggregated MPDU | Set to 1 if dot11AMPDUSupport is true.  Set to 0 otherwise. |

* **A-MSDU operation**

**Instruction to Editor: *Please change the 9th paragraph of this subclause as follows (REVmc D1.4):***

The following rules in this paragraph apply to the transmission of an A-MSDU in a network that is not DMG or S1G:

A STA that has a value of false for dot11HighthroughputOptionImplemented shall not transmit an A-MSDU. A STA shall not transmit an A-MSDU to a STA from which it has not received a frame containing an HT Capabilities element.

A S1G STA shall not transmit an A-MSDU to a S1G STA from which it received a frame containing an S1G Capabilities element with the A-MSDU Supported subfield set to false.

* **A-MPDU length limit rules**

**Instruction to Editor: *Please add the following paragraph at the end of this subclause as follows:***

A S1G STA shall not transmit an A-MPDU, except for a VHT Single MPDU, to a S1G STA from which it received a frame containing an S1G Capability element with the A-MPDU Supported subfield set to false.

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 8 | 1048.49 | 9.2.4.2 | An S1G STA may also implement only one single AC similar to DMG STAs to simplify implementation (very beneficial for sensor applications). | Add support for a single AC for S1G STAs | Revised–  TGah editor to make changes shown in 11-13-0812-01-00ah under the heading for CID 8. |

**Discussion:***Agree. Proposed comment resolution is to add support for single AC for S1G STAs inline with what is already possible for DMG STAs.*

**9.2.4.2 HCF contention-based channel access (EDCA)**

**Instruction to Editor: *Please change the following note in subclause 9.2.4.2 of REVmc D1.4):***

NOTE 1(#1101)—A DMG or S1G STA that implements a single AC (see 9.20.2.1 (Reference implementation)) has all of its UP values in Table 9-1 (UP-to-AC mappings) mapped to AC\_BE.(11ad)

**9.20.2 HCF contention-based channel access (EDCA)**

**9.20.2.1 Reference implementation**

**Instruction to Editor: *Please make the following changes in subclause 9.20.1 of REVmc D1.4:***

A DMG or S1G STA may implement a single AC. If the DMG or S1G STA implements a single AC, all UP and frame types shall be mapped to AC\_BE. (11ad)

NOTE—A DMG or S1G STA that implements a single AC has only one queue in Figure 9-22 (Reference implementation model when dot11AlternateEDCAActivated is false or not present(11aa)).

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 19 | 1218 | 9.26 | Enable support for Reverse direction protocol for S1G STAs | as in comment | Revised –  TGah editor to make changes shown in 11-13-0812-03-00ah under the heading for CID 19. |

**Discussion:***Agree. Proposed comment resolution is to enable support for RDP.*

**Instruction to Editor: *Please change the following subclause as follows (Changes related to REVmc D1.1):***

**9.26.1 General(11ad)**

The RD protocol may be supported by an HT STA, S1G STA, and by a DMG STA. The normative behavior of the RD protocol defined in this subclause applies to both types of STAs. For an HT and S1G STA, the RDG/More PPDU subfield and the AC Constraint subfield are present in the HTC field, and for a DMG STA, the RDG/More PPDU subfield and the AC Constraint subfield are present in the QoS Control field.

**9.26.3 Support for RD**

Support of the RD feature is an option for an HT, S1G, and a DMG STA(11ad). It is optional in the sense that a TXOP holder or SP source(11ad) is never required to generate an RDG, and a STA receiving an RDG is never required to use the grant.

An S1G STA indicates support of the RD feature as an RD responder using the RD Responder subfield of the S1G Capabilities Capabilities element. A STA shall set the RD Responder subfield to 1 in frames that it transmits containing the S1G Capabilities element if dot11RDResponderOptionImplemented is true. Otherwise, the STA shall set the RD Responder subfield to 0.

* **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).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 | B4 | B5 | B6 B7 | B8 |
|  | Uplink  Synch  Capable | Dynamic  AID | BAT  Support | TIM ADE  Support | Non-TIM  Support | TWT  Support | STA  Type  Support | RD Responder |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| * **S1G Capabilities Info field** | | | | | | | |

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** | | |
| Subfield | Definition | Encoding |
| … |  |  |
| RD Responder | Indicates support for acting as a reverse direction responder, i.e., the STA may use an offered RDG to transmit data to an RD initiator using the Reverse Direction Protocol described in 9.25 (Reverse Direction Protocol). | Set to 0 if not supported  Set to 1 if supported |

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| **CID** | **P.L** | **SC** | **Comment** | **Proposed Change** | **Resolution** |
| 17 | 179.1 | 11 | make clear that WEP/TKIP shall not be used with 11ah | As in comment | Revised –  TGah editor to make changes shown in 11-13-0812-01-00ah under the heading for CID 17. |

**Discussion:***Agree. Proposed comment resolution is to forbid use of WEP and TKIP for S1G.*

* **RSNA assumptions and constraints**

**Instruction to Editor: *Please add the following at the end of this subclause*: (changes related to REVmc D0.3):**

An HT STA shall not use either of the pairwise cipher suite selectors: “Use group cipher suite” or TKIP to communicate with another HT STA.

A S1G BSS shall not use following cipher suites: WEP-40, WEP-104, TKIP, or Use group cipher suite.