IEEE P802.11
Wireless LANs

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| LB 203 Comment Resolution for 8.4.2.170a and 9.47.1 |
| Date: 2014-8-16 |
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Abstract

This submission proposes resolutions for comments in clause 8.4.2.170a and 9.47.1 of TGah Draft 2.0 with the following CIDs:

-3011, 3012, 3013, 3252, 3371, 3516, 3717, 3718, 3719, 4105, 4107, 4125

Revisions:

* Rev 0: Initial version of the document.

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 “TGah 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** | **Clause** | **Page** | **Line** | **Comment**  | **Proposed change** | **Resolution** |
| 3011 | 8.4.2.170a | 125 | 53 | " during which SST report or Sector report can be done by multiple STAs"What does "doing" a report mean? | Define term or reword into unambiguous language. | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3011, 3516 |
| 3516 | 8.4.2.170a | 125 | 51 | Use of normative verbs such as "may" or "shall" is avoided in clause 8, the single shall statement at the beginning of Clause 8 (see 548.15 in P802.11REVmc D3.0). | Remove use of "may" in clause 8, change from "may be assigned as" to "are assigned" or similar. | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3011, 3516 |
| 3012 | 8.4.2.170a | 126 | 12 | " all the STAs" - all which STAs? | Define an antecedent for "the" or reword. Regardless make it clear which STAs can use it. | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3012 |
| 3013 | 8.4.2.170a | 126 | 43 | " is always set to 1" -- "always" is as unnecessary as including ", even on thursdays" | -> "is set to 1" | **Accept** |
| 3252 | 8.4.2.170a | 128 | 41 | The minimum widht channel can be either 1 MHz or 2 Mhz as defined in the SST Operation element. Make sure there is consistency. | As in comment. | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3252, 3371 |
| 3371 | 9.47.1 | 293 | 31 | Make sure that the signaling in the RPS element is consistent with that of the SST and SST operaiton elements (e.g., Channel units etc). | Please clarify. | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3252, 3371 |
| 3717 | 8.4.2.170a | 124 | 24 | Make Raw Slot Definition optional since not all RAW need it. | As proposed | **Reject** Raw Slot Definition is needed to calculate RAW Duration. All RAWs need it.  |
| 3718 | 8.4.2.170a | 126 | 26 | "In the first RAW Assignment, Start Time Indication equal to 0 indicates that the RAW starts immediately after the S1G Beacon or (Short) Probe Response frame that includes the RPS element."It is really difficult for a STA with first slot to figure out its position and access the slot timely. | Disallow this. | **Reject**This feature is still useful e.g. for non-TIM RAW.  |
| 3719 | 8.4.2.170a | 127 | 40 | "SST Sounding/SST Report or Sector Sounding/Sector Report"Shouldn't the indication be in RAW Type Options Subfield? | Clarify it. | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3719, 4107  |
| 4107 | 8.4.2.170a | 124 | 59 | Clarify the "Bit 0" and "Bit 1" means "B6" and "B7" respectively. | Describe like as "Bit 0 (B6)" and "Bit1 (B7)". | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 3719, 4107 |
| 4105 | 8.4.2.170a | 125 | 27 | As the term "Simplex RAW" is meaning "not Duplex" implicitly, so change the naming of this RAW dsicription. | In Table 8-240b and many other places, substitute "Simplex RAW" with "Auxiliary RAW" or "Miscillaneous RAW". | **Reject**‘Simplex’ means simple here. |
| 4125 | 8.4.2.170a | 123 | 58 | multiple groups of STs can be within one or multiple RAWs. What is a multiple RAW and how it can be accessed remains unclear. | A definition is required for a single and multiple RAWs | **Revise**TGah editor to make the changes shown in 11-14/1069r0 under the heading CID 4125 |

**Discussion:**

**None**

**CID 3011, 3516:**

TGah editor: modify the paragraph starting at Page 125, Line 50 as follows:

When the Sounding RAW is used as an SST Report RAW or a Sector Report RAW, as a response to the preceding SST Sounding RAW or Sector Sounding RAW, ~~single or multiple RAW(s) may be assigned as the SST Report RAW(s) or Sector Report RAW(s) by the AP, during which SST report or Sector report can be done by multiple STAs, regardless of their corresponding TIM bits.~~  STAs in the RAW Group can transmit a report frame to the AP during the SST Report RAW as decribed in 9.47 (Subchannel Selective Transmission (SST))**,** or transmit sector ID feedback frame to the AP during the Sector Report RAW as described in 9.48.5 (Sector training operation), regardless of their corresponding TIM bits.

**CID 3012:**

TGah editor: modify the paragraph starting at Page 126, Line 9 as follows:

When the RAW is used as the omni RAW as indicated by the RAW Type Options subfield, the RAW Assignment subfield for omni RAW the access is not restricted for any specific STA and this duration can be used by ~~all the STAs~~ non-AP STAs to communicate with the AP that has scheduled the omni-RAW ~~even~~ to send the Probe/Association Request. The RAW assignment subfield of the omni RAW also conditionally contains the RAW Start Time, and Periodic Operation Parameters sub-subfields.

**CID 3252, 3371:**

TGah editor: modify the paragraph starting at Page 128, Line 39 as follows:

The format of the Channel Indication subfield is shown in Figure 8-401o (Channel Indication subfield). The Channel Activity Bitmap shows the allowed operating channels for the STAs indicated in the RAW, as defined in 9.21.5.1 (General). Each bit in the bitmap corresponds to one minimum width channel within the current BSS operating channels, with the least significant bit corresponding to the lowest numbered operating channel of the BSS. The minimum width channel, Maximum Transmission Width, UL Acitivity, and DL Acitivity subfields are defined similarly as in ~~Figure~~ 8.4.2.170k (Subchannel Selective Transmission element).

**CID 3719, 4107**

TGah editor: modify Table 8-240b(Interpretation of RAW Type and RAW Type Options) as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| **~~RAW Type~~** | **RAW Type** | **Description** | **RAW Type Options Subfield** |
| ~~Bit 1~~ | ~~Bit 0~~ |
| ~~0~~ | ~~0~~ | 0 | ~~The RAW is a~~ Generic RAW~~.~~ | Bit 0 (Bit 6 of RAW Control subfield): Paged STABit 1 (Bit 7 of RAW Control subfield: RA Frame |
| ~~0~~ | ~~1~~ | 1 | ~~The RAW is a~~ Sounding RAW~~.~~ | ~~0: SST RAW~~* ~~Used as an SST Sounding RAW if Slot Definition Format Indication is set to 0.~~
* ~~Used as an SST Report RAW if Slot Definition Format Indication is set to 1.~~

~~1: Sector Sounding RAW~~* ~~Used as a Sector Sounding RAW if Slot Definition Format Indication is set to 0.~~
* ~~Used as a Sector Report RAW if Slot Definition Format Indication is set to 1.~~

~~2, 3: Reserved~~0: SST Sounding Raw1: SST Report RAW2: Sector Sounding RAW3: Sector Report RAW |
| ~~1~~ | ~~0~~ | 2 | ~~The RAW is a~~ Simplex RAW~~.~~ | 0: AP PM RAW1: Non-TIM RAW2: Omni RAW3: Reserved |
| ~~1~~ | ~~1~~ | 3 | ~~The RAW is a~~ Triggering Frame RAW~~.~~ | Reserved |

TGah editor: modify the paragraph starting at Page 125, Line 40 as follows:

When the RAW type is Sounding RAW, the RAW is either used for SST Sounding/SST Report (SST RAW) or Sector Sounding/Sector Report (Sector RAW) as indicated by the RAW Type Options subfield.

TGah editor: modify the paragraph starting at Page 127, Line 34 as follows:

The Slot Definition Format Indication indicates the number of bits used for Slot Duration Count subfields, i.e., the value y in Figure 8-401m (Format of RAW Slot Definition Subfields), of the Slot Duration Count subfield. If it is set 0, the Slot Duration Count subfield is 8 bits (y=8). If it is equal to 1, the Slot Duration Count subfield is 11 bits (y=11). When the RAW Type is Sounding RAW, the Slot Duration Count subfield is ~~always~~ 8 bits in length (y=8) ~~regardless of the Slot Definition Format Indication and the Slot Definition Format Indication is used to indicate whether the Sounding RAW is used for SST Sounding/SST Report or Sector Sounding/Sector Report as defined in Table 8-240b (Interpretation of RAW Type and RAW Type Options)~~.

TGah editor: modify the paragraph starting at Page 259, Line 54 as follows:

if the RAW is restricted to STAs whose AID bits in the TIM element are equal to 1 (the RAW Type field is equal to ~~00~~0 and the Bit 0 of the RAW Type Options field is equalto 1 or the RAW Type field is equal to ~~11~~3), and *x* is the position index of the AID of the STA when the AIDs are arranged in ascending order and each AID is assigned with a position index, which starts from 0 (see Figure 9-30c (Illustration of the RAW slot assignment procedure (RAW restricted to STAs whose AID bits are equal to 1))); if the RAW is not restricted to STAs whose AID bits in the TIM element are equal to 1 (the RAW Type field is equal to ~~00~~0 and the Bit 0 of the Raw Type Options field is equalto 0 ~~or the RAW Type field is equal to 11~~), *x* is the AID of the STA, otherwise (see Figure 9-30b (Illustration of the RAW slot assignment pro­cedure (RAW not restricted to STAs whose AID bits are equal to 1)));

TGah editor: modify the paragraph starting at Page 292, Line 25 as follows:

When the AP uses a RAW for SST sounding, RAW Type is Sounding RAW, and the RAW Type Options subfield is equal to SST Sounding RAW~~, and the Slot Definition Format Indication indicates that the RAW is used for SST Sounding~~ in the RPS information element (See 8.4.2.170a (RPS element)) transmitted by the AP, the SST sounding sequence within the SST Sounding RAW comprises a series of S1G NDP MAC frames (e.g., NDP CTS frames), each transmitted on one of the channels among those indicated by the Channel Indication field of the RAW, starting with lowest frequency channel and continuing in sequence with the next higher frequency channel if more than one channel is indicated.

TGah editor: modify the paragraph starting at Page 302, Line 55 as follows:

An AP may schedule sector sounding for multiple STAs by RAW in a beacon interval using the RAW Parameter Set element with the RAW Type field equal to Sounding RAW~~,~~ and the RAW Type Options subfield equal to Sector Sounding RAW~~, and the Slot Definition Format Indication indicates that the RAW is used for Sector Sounding~~ (see 8.4.2.170a (RPS element)). During the Sounding RAW, non-AP STAs are prohibited to transmit but can elect to listen to the sector training for the entire RAW. This Sector Sounding RAW may be scheduled as periodic or non-periodic.

Sector training within the Sector Sounding RAW starts with a frame with NDP announcement indicator equal to 1 in the HT control field and is followed in SIFS by a number of NDP CTS frames, each transmitted through different antenna sector starting with Sector ID equal to 0, and separated by SIFS. If the RAW Type~~,~~ and the RAW Type Options Subfield~~, and the Slot Definition Format Indication~~ do not indicate that the RAW is a Sector Sounding RAW, no sector sounding is performed within the RAW.

**CID 4125:**

TGah editor: modify the paragraph starting at Page 123, Line 58 as follows:

~~The RPS element contains parameters necessary for restricting medium access only to one or multiple groups of STAs within one or multiple RAWs. The Information field contains the RAW Assignment fields for one or multiple groups of STAs.~~ The RPS element contains one or more RAW Assignment fields. Each RAW Assignment field contains parameters necessary to restrict medium access to one or multiple STAs within one RAW.