IEEE P802.11
Wireless LANs

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| LB 200 comment resolution for 8.4.2.170b  |
| Date: 2014-02-12 |
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Abstract

This submission proposes comment resolutions for the clause 8.4.2.170b from TGah Draft 1.0 for the following CIDs: 1117, 1122, 1419, 1420, 1421, 2240, 2586, 2587, 2671, 2733, 2894, 2956, 2957, 2958.

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** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1117 | 87.09 | 8.4.2.170b | "The RAW is a Regular RAW."Well, I'm certainly glad it isn't an irregular RAW.But this statement is about as useful as that chocolate teapot. | Replace "Regular RAW" with something more descriptive. Make this change globally. | Revised- Tgah editor to make changes shown in 11-14-0273r0 under the heading for CID 1117. |

***CID 1117:***

***Discussions:*** *a more proper name is Generic RAW.*

***TGah editor: Replace all occurrences of ‘Regular RAW’ with ‘Generic RAW’ throughout the draft.***

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1122 | 87.47 | 8.4.2.170b | "1.7ms" -- magic numbers are evil, because when you're maintaining this in son-of-.11ah, folks will have no idea where this came from. | Either relate to defined attributes/characteristics, or add a NOTE-- explaining its derivation. | Revised- Tgah editor to make changes shown in 11-14-0273r0 under the heading for CID 1122. |
| 2240 | 87.47 | 8.4.2.170b | where is the 1.7ms coming from? Why 1.7ms? | Please clarify | Revised- Tgah editor to make changes shown in 11-14-0273r0 under the heading for CID 2240. |
| 1419 | 87.46 | 8.4.2.170b | define "eligible STAs" | replace it as "TIM STAs" | Revised- Tgah editor to make changes shown in 11-14-0273r0 under the heading for CID 1419. |

***CID 1122, 1419, 2240:***

***Discussions:***

*Only paged STAs are eligible to use the Triggering Frame RAW.*

*STAs are only allowed to send specific trigger frames in Triggering Frame RAW described in 9.20.5.4. Once the frame type is restricted, we do not need to limit the frame duration. The restriction is addressed in 9.20.5.4 by 11-14/234r2.*

***TGah editor: Modify the paragraph starting from page 101 L6 of TGah Draft 1.2 as the following:***

When the RAW type is Triggering Frame RAW, each ~~eligible~~ paged STA belonging to the RAW group is allowed to send ~~up to~~ one specific trigger frame as described in 9.20.5.4 (Slotted channel access procedure in RAW) during its assigned slot ~~with frame duration less than 1.7 ms~~. The procedure of slot assignment is described in 9.20.5.3 (Slot assignment procedure in RAW).

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1420 | 90.29 | 8.4.2.170b | PRAW Start offset is defined based on the end of Beacon or Probe Response, and therefore in the periodic RAW it is not clear how it will be used for non-TIM STAs, this may cause the following confusions:1- If the original RPS element is in Probe Response with a periodic RAW indication, the next RAW occures when?2- for protecting non-TIM STA, the protected interval will change in each beacon based on the "end of beacon"?! | re-define the PRAW Start offset based on TBTT or TSBTT instead of end of beacon | Revised – The comment is resolved by the resolution for CID 2894. |
| 1421 | 90.29 | 8.4.2.170b | it is not clear how the PRAW start offset and the RAW start time coexists in a Periodic RAW. Is it overwrite on the RAW Start? Also define the TBD reference | clarify or remove and replace it with RAW start time and define the TBD. | Revised – The comment is resolved by the resolution for CID 2894. |
| 2894 | 90.29 | 8.4.2.170b | To figure out the start time of each PRAW, it needs both PRAW start offset and RAW Start Time subfield. PRAW start offset subfield indicates the T(S)BTT that the first window of the PRAW appears, and RAT Start Time indicates the start time within the (short) beacon interval. Therefore, the explanation on PRAW Start Offset subfield should be modified accordingly. | Modify the sentence from "The PRAW Start Offset subfield indicates the offset value in TU from the end of the (Short) Beacon frame that the first window of the PRAW appears from" to "The PRAW Start Offset subfield indicates the offset value to a (short) beacon frame that the first window of the PRAW appears in unit of short beacon interval". | Revised – Agree with the commenter in principle.TGah editor to make changes shown in 14/0273r0 under the heading for CID 2894 |
| 2586 | 90.23 | 8.4.2.170b | A behavior of PRAW is not defined when PRAW Validity subfield is set to 0. | Insert the following text at the end of the 2nd last paragraph.---If the PRAW Validity subfield is set to 0, the PRAW which have same PRAW Start Offset value is canceled. | Revised – The comment is resolved by the resolution for CID 2957. |
| 2957 | 90.27 | 8.4.2.170b | PRAW Validity subfield should be able to indicate the PRAW lifetime is infinite. | When PRAW validity is of value 255 (set to all ones), the PRAW is valid throughout the lifetime of the BSS. | Revised – Agree with the commenter in principleTGah editor to make changes shown in 14/0273r0 under the heading for CID 2957 |
| 2587 | 90.29 | 8.4.2.170b | In the subclause 8.4.2.170b (RPS element), The PRAW Start Offset subfield is specified as the offset value in TU from the end of the (Short) Beacon frame that the first window of the PRAW appears from.When a non-AP STA receives a (Short) Beacon including RPS element with PRAW allocation, it cannot determine whether it is the first Beacon after the PRAW allocation or not, while the non-AP STA might miss previous Beacons. So, the non-AP STA cannot calculate the start time of the "first" windows of the PRAW.To synchronize PRAW and TWT, it is necessary to define the start time of the first windows of the PRAW based on TSF. | Change the length the PRAW Start Offset subfield to 8 octets, and change the last paragraph of 8.4.2.170b as follows:---The PRAW Start Offset subfield contains a value that defines a TSF time for when the first windows of the PRAW appears. | Revised – The comment is resolved by the resolution for CID 2958. |
| 2671 | 89.29 | 8.4.2.170b | The unit of PRAW Start Offset subfield should be 2TU instead of TU otherwise it cannot cover the entire Beacon Interval. | As stated in the comment. | Revised – The comment is resolved by the resolution for CID 2958. |
| 2958 | 90.29 | 8.4.2.170b | Unit of PRAW Start Offset should be in BI or short BI, instead of TU. | When dot11ShortBeaconOptionImplemented is false, the unit of PRAW start offset is beacon interval. When dot11ShortBeaconOptionImplemented is true, the unit of PRAW start offset is short beacon interval. | Revised – Agree with the commenter in principle.TGah editor to make changes shown in 14/0273r0 under the heading for CID 2958 |
| 2733 | 90.30 | 8.4.2.170b | TBD is found | as commented | Revised – Agree with the commenter in principleTGah editor to make changes shown in 14/0273r0 under the heading for CID 2733 |
| 2956 | 90.23 | 8.4.2.170b | Unit of PRAW Periodicity should be beacon interval (instead of short beacon interval) if dot11ShortBeaconOptionImplemented is false. | As in comment. | Rejected – Use of Short Beacon frame is mandatory for S1G STAs. |

**Discussion:**

*CID 2894, 2958, 2733 – Agree with the commenter of CID 2894 in principle.Under current text, it is not clear the how PRAW Start Offset subfield value and RAW Start Time subfield are differently used for. As the commenter of CID 2894 mentioned, PRAW start offset subfield indicates the TSBTT that the first window of the PRAW appears, and RAW Start Time subfield indicates the start time within the (short) beacon interval. Also, as the PRAW Start Offset value indicates the offset value to the TSBTT, use of TU for the unit is not efficient at all. So, the proposed resolution is to clarify the language and to use short beacon interval for the unit value.Moreover, as starting point is clearly set at the end of current frame that includes RPS element, TBD regarding reference point can be deleted.*

*CID 2957 – Agree with the commenter of CID 2957 in principle. It is possible that an AP may not specify exact Validity value for lots of reasons which may include the case that an AP will permanently allocate a PRAW for the rest of the life time. Other example is the case that an AP is not sure when modification of current PRAW allocation will happen. To account for all these scenarios, the proposed resolution is to set the PRAW Validity subfield to zero to indicate that the PRAW validity value is not determined.*

* RPS element

**CID 2733, 2894, 2957, 2958:**

**TGah Editor*: Change the last four paragraphs of this subclause as follows:***

The Periodic Operation Parameters subfield ~~is 3 octets in length and it~~ comprises the PRAW Periodicity, PRAW Validity, and PRAW Start Offset sub-subfields.

The PRAW Periodicity subfield indicates the period of current PRAW occurrence in the unit of short beacon interval~~, and is of length 8 bits~~.

The PRAW Validity subfield indicates the number of periods that the PRAW repeats~~, and is of length 8 bits~~. The value of PRAW Validity subfield is equal to the number of remaining PRAW occurrences, except when the PRAW Validity subfield is set to 0, which indicates the PRAW validity value is not determined.

The PRAW Start Offset subfield indicates the offset value ~~in TU~~ from the end of the ~~(Short) Beacon~~ frame that carries current RPS element to the Short Beacon frame that the first window of the PRAW appears ~~from,~~ in unit of short beacon interval~~and is of length 8 bits (Reference point details is TBD)~~.