IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB205 MAC Resolution to Comments in D3.0 Subclauses 8.4.1.6, 8.4.1.15a, 8.4.1.52, 8.4.2.1 | | | | |
| Date: 2014-12-1 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
| Zander Lei | I2R | 1 Fusionopolis Way #21-01 Connexis, Singapore | +65 6408 2436 | leizd@i2r.a-star.edu.sg |
| Shoukang Zheng | +65 6408 2252 | skzheng@i2r.a-star.edu.sg |
| Yuan Zhou | +65 6408 2472 | yzhou@i2r.a-star.edu.sg |

Abstract

This submission proposes resolution to comments in D3.0 subclauses 8.4.1.6, 8.4.1.15a, 8.4.1.52, 8.4.2.1, and 8.4.2.6. There are 14 CIDs addressed: 5013, 5248, 5200, 5098, 5162, 5163, 5249, 5250, 5001, 5251, 5164, 5165, 5166, and 5167

Revision History:

Rev1: Revised according to suggestions in the conf call for CIDs 5248, 5166, 5251

**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.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page.Line** | **Clause** | **Comment** | **Propose Change** | **Resolution** |
| 5013 | 99.46 | 8.4.1.6 | When dot11ShortBeaconInterval is equal to true, the unit of Listen Interval parameter is not clear, is it Beacon Interval or should it be Short Beacon Interval? | If we follow the example of DTIM Period, the unit should be Short Beacon Interval when dot11ShortBeaconInterval is equal to true and Beacon Interval otherwise. Please clarify. | Revised.  Agreed in principle.  TGah editor to make the changes shown in 11-14/1575r1 under all headings that include CID 5013. |
| 5248 | 99.49 | 8.4.1.6 | There is no Listen Interval field in association response frames (certainly there isnt one for non-S1G STAs). Fix this inconsistency. I think what this needs to specify is that the value of the Listen Interval is indicated in the AID Response element included in the (Re-) Association Response. Correct? Also ensure that behavior in P340L55 is inline with this. | As in comment. | Revised.  Agreed in principle.  TGah editor to make the changes shown in 11-14/1575r1 under all headings that include CID 5248. |

**[CIDs 5013, 5248]**

**Instruction to TGah editor: Please modify the subclause 8.4.1.6 (Listen Interval field) of TGah D3.0 as follows (the changes from D3.0 is highlighted in red):**

**8.4.1.6 Listen Interval field**

***Change the first paragraph of sub-clause 8.4.1.6 as follows:***

The Listen Interval field is used to indicate to the AP how often an S1G STA with dot11NonTIMModeActivated equal to false or a non-S1G STA in power save mode wakes to listen to Beacon frames. ~~and i~~It is also used to indicate to an AP the duration during which an-S1G STA with dot11NonTIMModeActivated equal to true is required to transmit at least one frame that is addressed to the associated AP. The value of ~~this parameter is~~ the Listen Interval parameter ~~of the MLME-ASSOCIATE.request or MLME-REASSOCIATE.request~~ used by MLME primitives is determined from the Listen Interval field as described in this subclause and is expressed in units of (short) b~~B~~eacon i~~I~~nterval. The length of the Listen Interval field is 2 octets. ~~The Listen Interval~~ ~~field~~ ~~an Association Response frame is used by the recipient STA to set its listen interval to a value of ListenInterval that is different from the value of ListenInterval in the corresponding Interval field Association (Reassociation) Request frame based on AP's buffer management consideration.~~

The Listen Interval field is illustrated in Figure 8-68 (Listen Interval field).

**10.2.2.2 Non-AP STA Power Management modes**

… (last paragraph of page 340)

An S1G non-AP STA that has transmitted an Association Request frame with the Non-TIM Support field equal to 1 and that receives an Association Response frame with the Non-TIM Support field in the S1G Capabilities element equal to 1 shall set the dot11NonTIMModeActivated to true. Otherwise, it shall set the dot11NonTIMModeActivated to false. The STA shall operate in the negotiated PS mode during association unless a PS mode switch is negotiated as described in 10.44a (Dynamic AID assignment operation) or a temporary PS mode switch has occurred as described in 9.42b.2 (Rescheduling of awake/doze cycle). The STA shall update its Listen Interval parameter to the value of the ~~Listen~~ AID Response Interval field in the AID Response element of the (Re-) Association Response frame.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 5200 | 102.01 | 8.4.1.1.5a | Originator Parameter is not a good name. Change it to Originator Prefered MCS field. | As in comment. | Revised.  Agreed in principle.  Instruction to 11ah Editor:  Replace “Originator Parameter” with “Originator Preferred MCS” throughout the Draft |
| 5098 | 37.59 | 6.3.29.3.2 | "OriginatorParameter" is a poor choice of name - it is not descriptive of its purpose | Replace with a name that relates to its purpose, e.g. "SuggestedMCS" | Revised.  Agreed in principle.  Instruction to 11ah Editor:  Replace “OriginatorParameter” with “OriginatorPreferredMCS” throughout the Draft |
| 5162 | 102.04 | 8.4.1.1.5a | "The Originator Parameter field is used in ADDBA Response frame to signal the preferred MCS used for eliciting A-MPDUs from the data originator."  This sentence is mislaeding since Originator Parameter field is used to signal the difference between preferred MCS and the MCS sued for ADDBA frame. | Change the sentence per the comment. | Rejected.  To be consistent, the draft has already been updated in line with the commented sentence. The sentence “… to signal the difference…” has already been removed in Draft3.0. |
| 5163 | 106.06 | 8.4.1.52 | Change B7 of "Rx NSS" to "Rx NSS Type" | As in comment. | Accepted.  Instruction to 11ah Editor:  Please replace "Rx NSS" (below B7 in **Figure 8-114a)**  with "Rx NSS Type" |
| 5249 | 106.07 | 8.4.1.52 | B7 of this field is the Rx NSS Type. Replace the rightmost "Rx NSS" subfield with "Rx NSS Type" | As in comment. | Accepted.  It is superceded by the resolution for CID5163. |
| 5250 | 110.52 | 8.4.2.1 | There is no "Probe Response Option" element defined anywhere else in the draft. Remove the "Probe Response Option" row from the table. | As in comment. | Revised. Agreed in principle.  Instruction to 11ah Editor:  1. Remove "Probe Response Option " from Table xxx  2. Replace “Probe Response Optino” with “Short Probe Response Option” of column “Information” (order 20) in Table 8-41  3. Modify 2nd column of S1GM4.4 in table B.4.26a.1 AnnexB (pg525) as “Signaling Short Probe Response Option element in Probe Request frame” |
| 5001 | 110.09 | 8.4.2.1 | S1G is asking for 30 elements. This seems excessive. | Combine elements which don't need their own ID for a clear purpose (e.g. because they need to be specifically Requested) into a single ID with a sub-ID. | Rejected.  The commenter failed to identify a specific problem and propose actionable resolution.  (All elements presented have requested their own IDs with distinct functionalities.) |
| 5251 | 111.19 | 8.4.2.6 | As indicated below the DTIM Period is set to dot11ShortBeaconDTIMPeriod which is a multiple of short beacon interval. So I think that the DTIM period should indicate the number of (short) beacon interval. On a general note I think there are still inconsistencies between the use of short beacon interval and beacon interval which should depend on the fact that the AP activates TSBTTs or not and additionally to the procedure we are referring to.. | Review the draft and ensure that the references and expected behaviors related to the beacon interval, short beacon interval, DTIM interval, etc, are consistent throughout the draft. | Revised.  Agreed in principle.  TGah editor to make the changes shown in 11-14/1575r1 under all headings that include CID 5251. |
| 5164 | 113.17 | 8.4.2.6 | The text here is not alligned with the fact that the TIM element in S1G PPDU doesn't match to the whole virtual bitmap. | Change the text according to the comment. | Rejected.  The commented text is meant for illustrating the encoding results of a specific example. It is not necessary to repeat the general rule layed out in previous sections. |
| 5165 | 114.41 | 8.4.2.6 | Change "When the TIM is carried in an S1G PPDU, the Partial Virtual Bitmap field..." to "When the TIM with no 0 the Partial Virtual Bitmap field is carried in an S1G PPDU, the Partial Virtual Bitmap field..." | As in comment. | Revised.  Agreed in principle.  TGah editor to make the changes shown in 11-14/1575r1 under all headings that include CID 5165. |
| 5166 | 115.33 | 8.4.2.6 | Change to "The Inverse Bitmap subfield is set to 1, if the Encoded Block Information field is encoded based on the inverted version of the Block..." | As in comment. | Accepted.  TGah editor to make the changes shown in 11-14/1575r1 under all headings that include CID 5166. |
| 5167 | 116.04 | 8.4.2.6 | Change to "...is defined by the Encoding Mode subfield and explained within the subclause for each of the encoding modes." or "...depends on the Encoding Mode subfield and is explained within the subclause for each of the encoding modes." | As in comment. | Revised.  Agreed in principle.  TGah editor to make the changes shown in 11-14/1575r1 under all headings that include CID 5167. |

**[CID 5251,5165,** **5166, 5167]**

**Instruction to TGah editor: Please modify the subclause 8.4.2.6 (TIM element) of TGah D3.0 as follows:**

…

(page 111, line 19)

The DTIM Period field indicates the number of (short) beacon intervals between successive DTIMs. If all TIMs are DTIMs, the DTIM Period field has the value 1. The DTIM Period value 0 is reserved. The DTIM period field is a single octet. If dot11ShortBeaconInterval is equal to true, the DTIM Period field is set to dot11ShortBeaconDTIMPeriod. If dot11ShortBeaconInterval is equal to false, the DTIM Period field is set to dot11DTIMPeriod.

…

(page 114, line 41)

When the TIM with a non-zero Partial Virtual Bitmap field is carried in an S1G PPDU, the Partial Virtual Bitmap field is constructed with one or more Encoded Block subfields ~~if at least one bit in the traffic indication virtual bitmap is equal to 1~~ as shown in Figure 8-124d (Partial Virtual Bitmap field). The Encoded Block subfield consists of the Block Control subfield, the Block Offset subfield, and the Encoded Block Information subfield as shown in Figure 8-124e (Encoded Block subfield). When dot11MultipleBSSIDActivated is true, the Partial Virtual Bitmap field contains zero or more Encoded Block subfields that contain BSS AIDs.

... …

(page 115, line 33)

The Inverse Bitmap subfield is set to 1, if the Encoded Block Information field is encoded based on the inverted version of the Block, which inverts each bit value of the Block. The Inverse Bitmap subfield is set to 0, otherwise.

... …

(page 116, line 4)

The ~~meaning of the~~ Encoded Block Information subfield is defined depending ~~depends~~ on the Encoding Mode subfield and explained within the subclause for each of the encoding modes.

... …