IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| LB 203 Comment Resolution for Miscellaneous part 5 | | | | |
| Date: 2014-09-03 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Alfred Asterjadhi | Qualcomm Inc. | 5775 Morehouse Dr, San Diego, CA 92109 | +1-858-658-5302 | aasterja@qti.qualcomm.com |

Abstract

This submission proposes resolutions for comments in different subclauses of TGah Draft 2.0 with the following CIDs (TOT 11 CIDs):

* 3283, 3260, 3693, 3706, 3707, 3708, 3231, 3417, 3761, 3762, 3763

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.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 3283 | Alfred Asterjadhi | 817.49 | 8.4.2.26 | Which of the Extended Capabilities are defined for an S1G STA. I see for example that DMS field is used (noticed some others as well). But nothing is specified for the other fields. Should we be more specific regarding the fields of this element for S1G STAs? | Clarify the Extended Capabilities element signaling for S1G STAs. | Rejected –    An S1G STA can include an Extended capabilities element to indicate support for the extended features the same way a non-S1G STA does. |
| 3260 | Alfred Asterjadhi | 135.30 | 8.4.2.170f | The Compatibility Information field contains many subfields of the Capability Information field. But some of these subfields are already indicated in the S1G Capabilities element. Make sure there is no conflict between the Capabilitiy Information field and the S1G Capabilities element. Also B13 of the Capability field that is the TSF rollover field in 11ah is used for another indication in TGak: "The 802.11 ANA database has been updated to reflect March's Motion in the WG to allocate capability bit 13 to GLK." | As in comment | Rejected –    For backward compatibility it is appropriate to have the bits of the compatibility field indicate the same information as the capability information field. As for B13 it is appropriate to request TGak using another reserved bit for GLK to avoid conflicts in the B13 location as the 11ak draft is at an earlier stage w.r.t. 11ah (currently B6 and B7 are reserved and therefore available for TGak) . |
| 3693 | Liwen Chu | 73.54 | 8.2.4.1.8 | "Per this paragraph, when a S1G STA transmit the last MSDU in the current TXOP, More Data field is set to 0 since it doesn't have any MSDUs, MMPDU or A-MSDUs buffered for transmission to the frame's recipient during the current SP or TXOP. The frame recipient doesn't know whether it need to be awake to further receive buffered frames or not.  This is also contradict with P304L33 where EOSP is used to indicate whether the SP is end and More Data can be still 1 when EOSP is 0." | S1G STA should follow the same meaning as non-S1G non-DMG STA. | Rejected –  This declarative statement is inline with the normative text of 11ah. For example refer to the bidirectional TXOP procedure where both non-AP and AP can set the More Data field to 1 in a frame they transmit to indicate whether they have BUs for transmission. Under this procedure it is also specified that the non-AP STA “A non-AP STA may transition to the Doze state if it is the intended receiver of a frame with More Data field equal to 0 that is sent by the AP” i.e. in this case the more data indication acts as an EOSP bit.  Other examples are TWT procedure, Power management, etc. |
| 3706 | Liwen Chu | 8.3.3.8 | 90.42 | It is not good to disallow AID allocation through Association Response | Allow AID allocation through Association Response. | Rejected –  The AID Response element is included in (Re-)Association Response frames that includes the AID that is to be assigned to the non-AP STA requesting to (re-)associate. That is why the AID field is not included in these frames (i.e., would contain duplicate information w.r.t. AID Response element) that are transmitted by S1G STAs. |
| 3707 | Liwen Chu | 8.3.3.9 | 92.17 | It is not necessary for the STA to send Reachable Address to the AP in Probe request. It is the job of Association Request or the STA should do it after finishing association. | Remove Reachable Address from Probe Request. | Rejected –  A non-AP STA can send a Probe Request after association as well as described in 10.46 (System information update proceudure): “*The S1G STA shall attempt to either receive the next S1G Beacon frame or transmit a Probe Request frame when it receives a Change Sequence field that contains a value that is different from the previously received Change Sequence field.*” |
| 3708 | Liwen Chu | 8.3.3.9 | 92.19 | It is not necessary for the STA to send Relay Activation to the AP in Probe Request. It is the job of Association Request or the STA should do it after finishing association. | Remove Relay Activation from Probe Request. | Rejected –  A non-AP STA can send a Probe Request after association as well as described in 10.46 (System information update proceudure): “*The S1G STA shall attempt to either receive the next S1G Beacon frame or transmit a Probe Request frame when it receives a Change Sequence field that contains a value that is different from the previously received Change Sequence field.*” |
| 3231 | Alfred Asterjadhi | 8.2.3 | 69.1 | References to PV1 frame and NDP frame formats are missing. Also there are still inconsistencies throughout clause 8 regarding these frames, e.g., 8.2.4.1 describes the Frame Control field of PV0 frames while for PV1 frames it can be found in 8.8. Make the apppropriate changes to keep consistency throughout clause 8. | Change the second sentence of the 1st paragraph as follows: " Figure 8-1 (MAC frame format) depicts the general MAC frame format for PV0 frames, Figure 8-681 (Short frame format) depicts the general MAC frame format for PV1 frames." Also change the last three sentences as follows: " The format of each of the individual subtypes of each PV0 frame type is defined in 8.3 (Format of individual frame types), the format of each of PV1 frames is defined in 8.8 (MAC frame format for Short frames), and the format of NDP MAC frames is defined in 8.9 (NDP MAC frames). The components of management frame bodies are defined in 8.4 (Management and Extension frame body components). The formats of Management frames (PV0 or PV1) of subtype Action are defined in 8.6 (Action frame format details)." | Revised –  Agree in principle with the comment. Proposed resolution accounts for the suggested change.  TGah editor to make the changes shown in 11-14/1124r0 under all headings that include CID 3231. |
| 3417 | Dan Harkins | 8.2.3 | 69.19 | it is not clear why there is a new protocol version for this amendment. It doesn't look like the frame format is any different. | explain how the minimal frame format for a PV1 MPDU differs from the minimal frame format for a PV0 or get rid of the new protocol version. | Revised –  Proposed resolution is to refer to the corresponding subclauses where the minimal frame formats for each of these PV frames are defined.  The design of short frames that have a reduced overhead, and hence reduced transmit times, took into account removing all information that is not required all the time in a normal MAC header( for more details refer to doc 12/857r0 and references therein). |

**Discussion:** *None.*

**8.2.3 General frame format**

***TGah Editor: Change the paragraph below as follows (#3231, 3417):***

The MAC frame format comprises a set of fields that occur in a fixed order in all frames. Figure 8-1 (MAC frame format) depicts the general MAC frame format for PV0 MPDUs and Figure 8-691 (Short frame format) depicts the general MAC frame format for PV1 frames. The first 2 bits of the first subfield (Protocol Version) of the Frame Control Field and the last field (FCS) in Figure 8-1 (MAC frame format) are present in all protocol version 0 (PV0) MPDUs and protocol version 1 (PV1) MPDUs, including reserved types and subtypes. Within PV0 MPDUs, tThe first three fields (Frame Control, Duration/ID, and Address 1) and the last field (FCS) in Figure 8-1 (MAC frame format) constitute the minimal frame format and are present in all these frames, including reserved types and subtypes. Within PV1 MPDUs, the minimal frame format is defined in 8.8 (MAC frame format for Short frames) The fields Address 2, Address 3, Sequence Control, Address 4, QoS Control, HT Control, and Frame Body are present only in certain frame types and subtypes. Each field is defined in (The Frame Body field is of variable size, constrained as defined in 8.2.4.7.1 (General)). The format of each of the individual subtypes of each PV0 frame type is defined in 8.3 (Format of individual frame types), the format of each PV1 frame type is defined in 8.8 (MAC frame format for Short frames), and the format of NDP CMAC frames is defined in 8.9 (NDP CMAC frames). The components of management frame bodies are defined in 8.4 (Management and Extension frame body components). The formats of Management frames bodies (PV0 and PV1) of subtype Action are defined in 8.6 (Action frame format details).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 3761 | Liwen Chu | 229.54 | 9.3.2.7 | "The value of the Address Indicator field is equal to 1" means that the NDP CTS frame is used in the sector training. In this kind of TXOP, different sectors are used for transmission. It is dangerous if the OBSS STA use this TXOP for spatial reuse. The reason is that when the OBSS STA doesn't detect the second direction TX after omni transmission part, the OBSS's transmission may collide with the following directional TX which uses different sectors. | Remove the bullet. | Rejected –  An NDP CTS frame with the value of Address Indicator field equal to 1 and a value of Early Sector Indicator field equal to 0 is sent by an AP to set the NAV of STAs that are not associated to it so that eventual transmissions from its associated STAs are protected from hidden nodes with respect to the STA. |
| 3762 | Liwen Chu | 229.50 | 9.3.2.7 | This is dangerous. When a STA in the BSS doesn't detect the following sectorized TX in the TXOP, the STA may start to transmit data frames to the AP after its backoff counter is 0. This transmission is definitely unsuccessful. | Remove the bullet. | Rejected –  Partially agree with the commenter because the transmission may be unsuccessful rather than definitely being successful. However an AP that sends this frame takes the risk by chosing to send the frame. In addition if the AP wants to avoid potential collisions can precede this NDP CTS frame with a frame that sets the NAV to all OBSS STAs so that none of them accesses the medium for that duration of time. |
| 3763 | Liwen Chu | 229.59 | 9.3.2.7 | The CTS with Address Indicator field being 1 is always transmitted by an AP, so "shall compare the value of the RA/PBSSID field with its own PBSSID value" is not necessary. | Remove the sentence. | Rejected –  The NDP CTS frame with Address Indicator field equal to 1 that is received by an AP is transmitted by another AP. Hence to check the conditions listed above the AP that receives the NDP CTS transmited by another AP shall use its partial PBSSID value to determine whether disregarding or not the Duration field of the frame. |