IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Comment resolution for 9.2.4.1.X | | | | |
| Date: 2017-01-17 | | | | |
| 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 |
| George Cherian | Qualcomm Inc. |  |  |  |
| Abhishek Patil | Qualcomm Inc. |  |  |  |

Abstract

This submission proposes resolutions for multiple comments related to TGax D1.0 with the following CIDs (15):

* 3151, 3152, 4721, 5819, 6249, 6252, 7392, 7708, 8367, 8368, 8642, 9355, 9618, 7298

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 TGax Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify existing material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

# PARS I

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P** | **L** | **Comment** | **Proposed Change** | **Resolution** |
| 3151 | Ahmadreza Hedayat | 19 | 40 | This setnece is not clear and needs rewritting: "An HE AP indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Info field of frames it transmits". A STA indicates that it can set a bit to 1 by setting another bit to 1? | As in the comment | Revised –  Agree in principle with the comment that the sentence can be written better. Proposed resolution rephrases the sentence to better reflect the intention (i.e., that the STA sets a capability bit to 1 to indicate that it supports setting the More Data bit in the control response frames it transmits to 1).  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 3151. |
| 3152 | Ahmadreza Hedayat | 19 | 49 | This setnece is not clear and needs rewritting: "An HE TDLS peer STA indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Capability element it transmits." | As in the comment | Revised –  Agree in principle with the comment that the sentence can be written better. Proposed resolution rephrases the sentence to better reflect the intention (i.e., that the STA sets a capability bit to 1 to indicate that it supports setting the More Data bit in the control response frames to 1).  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 3152. |
| 4720 | Alfred Asterjadhi | 19 | 25 | I am aware that ANA is going to determine the assigned subtype value for this field once the LB approval has reached 75%. But the table has the value 0011 striked out, which logically means that the value 0011 would be the one assigned for this purpose. Ask ANA to allocate 0011 for the Subtype value or if ANA does not know yet then find a way that it is clear that the number is not assigned yet. Also we already have the term Trigger defined in REVmc so it would be good to have a unique name that would avoid confusion. It could be as simple as UL Trigger. | As in comment. | **RE-ASSIGN TO EDITOR** |
| 4721 | Alfred Asterjadhi | 19 | 35 | There is a bunch of elements that have the QoS Info field, namely QoS Capabilities, EDCA Parameter Set, MU EDCA parameter elements. Add a note so that it is clear where this field is contained, so that it is known what "frames" contain it. Also B7 of the QoS Info field when transmitted by AP is currently reserved. Need to add the exception that for an HE AP that bit is actually the same as the non-AP STA case (More Data Ack). | As in comment. | Revised –  Agree in principle with the comment. Proposed resolution accounts for the suggested change, although not as a note but rather as a declarative statement.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 4721. |
| 5819 | Huizhao Wang | 19 | 40 | "More Data Ack" in QoS Info Field is reserved for HE AP. Need to change the QoS Info field for HE AP to have the "More Data Ack" defined | Change the QoS Info field reserved Bit7 to "More Data Ack" for HE AP as well | Revised –  Agree with the comment. Proposed resolution accounts for the suggested change.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 5819. |
| 6249 | John Coffey | 19 | 35 | The sentence is ambiguous. When we have a list of cases followed by a condition, are we supposed to interpret the condition as applying only to the last element of the list, or to the entire list? Here the "from which it has received" is a condition; does this condition apply to both the non-HE STA and HE STA cases, or only to the HE STA case? | Clarify the meaning. | Revised –  Agree in principle with the comment. Proposed resolution is to split the sentence in two so that it is clear tha the condition applies to both STAs.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 6249. |
| 6252 | John Coffey | 19 | 45 | The sentence is ambiguous. When we have a list of cases followed by a condition, are we supposed to interpret the condition as applying only to the last element of the list, or to the entire list? Here the "that has" is a condition; does this condition apply to both the non-HE STA and HE STA cases, or only to the HE STA case? | Clarify the meaning. | Revised –  Agree in principle with the comment. Proposed resolution is to split the sentence in two so that it is clear tha the condition applies to both STAs.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 6252. |
| 7392 | Laurent Cariou | 19 | 35 | A STA sending a BA should be able to set the more data bit to 1 to indicate to the originator that it has buffered traffic and would like to access the medium to transmit it (ressource request) | Modify the procedure so that any STA sending a BA to set the more data bit to 1 to indicate an UL resource request | Rejected –  A STA already has two buffer status delivery options which provide the amount of data the STA has buffered in its queues (in units of BLAH octets). The STAs should use those methods to provide a precise indication of their queues. A 1 bit indication to the AP does not help the AP to allocate resources for UL scheduling. |
| 7708 | Mark Hamilton | 19 | 40 | Bad use of "can". This does not appear to be a declarative statement that this is defined elsewhere, but rather a future potential statement. | Change "can" to "might". Same thing at P19L49. | Revised –  Agree in principle with the comment. Proposed resolution is to use “supports” instead of “can”.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 7708. |
| 8367 | Po-Kai Huang | 19 | 40 | There are two issues for the sentence "An HE AP indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Info field of frames it transmits." First, in 9.4.1.17, there are description saying that More Data Ack subfield is reserved for AP. Hence, the description in 9.4.1.17 contradicts with the description in 9.2.4.1.8. Second, the sentence seems to contradict with the meaning of More Data Ack subfield becuase in 9.4.1.17, it mentions that setting the More Data Ack subfield to 1 indicates that a STA can process Ack frames with the More Data bit in the Frame Control field equal to 1 and remain in the awake state. | Delete the sentence "An HE AP indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Info field of frames it transmits." | Revised –  Agree with the first issue identified by the comment. Proposed resolution is to resolve the issue. Disagree in principle with the second issue. This capability bit is being used to indicate support of setting the More Data field to 1 as well. Please refer to subclauses 11.2.2.6 (AP operation during the CP), 27.7.2 (Individual TWT agreements), 27.7.3 (Broadcast TWT operation). Proposed resolution is to reword the sentence, inline with suggestions from other CIDs, to clarify better the intention.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 8367. |
| 8368 | Po-Kai Huang | 19 | 47 | For the sentence "An HE TDLS peer STA indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Capability element it transmits," it seems that the sentence contradicts with the meaning of More Data Ack subfield becuase in 9.4.1.17, it mentions that setting the More Data Ack subfield to 1 indicates that a STA can process Ack frames with the More Data bit in the Frame Control field equal to 1 and remain in the awake state. | Delete the sentence "An HE TDLS peer STA indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Capability element it transmits." | Revised –  Disagree in principle with the comment. This capability bit is being used to indicate support of setting the More Data field to 1 as well. Please refer to subclauses 11.2.2.6 (AP operation during the CP), 27.7.2 (Individual TWT agreements), 27.7.3 (Broadcast TWT operation). Proposed resolution is to reword the sentence, inline with suggestions from other CIDs, to clarify better the intention.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 8368. |
| 8642 | Sigurd Schelstraete | 19 | 35 | Define non-HE STA | See comment | Rejected –  The terms is already self-defined and needs no further definition. It essentially is a STA that is not an HE STA. Similar approach has been followed in baline, where non-VHT STA, non-HT STA are also not defined in such an explicit way. |
| 9355 | Weimin Xing | 19 | 40 | In 802.11 baseline, the Bit 7 of QoS Info field when sent by an AP is reserved. In 802.11ax, we allow that AP can set the More Data Ack subfield to 1 in the QoS Info field of frames it transmits. Please change the meanings of the Bit7 in the QoS Info when sent by an AP. | As in comment | Revised –  Agree with the comment. Proposed resolution accounts for the suggested change.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 9355. |
| 9618 | Yongho Seok | 19 | 40 | "An HE AP indicates that it can set the More Data subfield to 1 by setting the More Data Ack subfield to 1 in the QoS Info field of frames it transmits." This is a procedure of an HE non-AP STA. Change "HE AP" to HE non-AP STA". | As per comment. | Rejected –  This is a procedure that is defined for the HE AP, where the AP declares its capability of setting the MD to 1 to indicate its STA that is has BUs for it. Please refer to subclauses 11.2.2.6 (AP operation during the CP), 27.7.2 (Individual TWT agreements), 27.7.3(Broadcast TWT operation). |
| 7298 | Kwok Shum Au | 19 | 41 | The description "in the QoS Info field of frames it transmits" is not clear. | Replace "in the QoS Info field of frames it transmits" with "in the QoS Capability element it transmits". | Revised –  Agree in principle with the comment. Proposed resolution accounts for the suggested change clarifying where the field is contained.  TGax editor to make the changes shown in 11-16/0148r0 under all headings that include CID 7298. |

**Discussion: *None.***

* Type and Subtype subfields

Change the row below and insert a new row immediately after it in Table 9-1 (Valid type and subtype combinations) as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| * Valid type and subtype combinations | | | |
| Type value B3 B2 | Type description | Subtype value B7 B6 B5 B4 | Subtype description |
| 01 | Control | 0000–~~0011~~<ANA> | Reserved |
| 01 | Control | <ANA> | Trigger |

* More Data subfield

TGax Editor: *Change the paragraphs below of this subclause as follows (#CID 3151, 3152, 4721, 7708, 7298, 8368):*

Change the 4th and 5th paragraphs as follows:

An AP optionally sets the More Data subfield to 1 in Ack frames sent to a non-DMG non-HE STA and in Ack, BlockAck and Multi-STA BlockAck frames sent to an HE STA. An HE AP indicates that it supports*(#7708)* setting the More Data subfield to 1 in these control response frames by setting the More Data Ack subfield to 1 in the QoS Info field of elementsit includes in frames transmitted to the STA. The QoS Info field is present in the QoS Capability, EDCA Parameter Set, and MU EDCA Parameter Set elements transmitted by an HE AP.*(#3151, 4721, 7298, 8367)*

The AP can set the More Data subfield to 1 to indicate that it has pending transmission for the STA if it has received from the STA a frame that contains a QoS Capability element in which the More Data Ack subfield is equal to 1 and the STA:

* Is in PS mode and has one or more ACs that are delivery enabled (see 11.2.2.6 (AP operation during the CP)) or
* Is a TWT requester or a TWT scheduled STA (see 27.7 (TWT operation))

*(#6249)*

A TDLS peer STA optionally sets the More Data subfield to 1 in Ack frames sent to a non-HE STA and in Ack, BlockAck, and Multi-STA BlockAck frames sent to an HE STA. An HE TDLS peer STA indicates that it supports *(#7708)* setting the More Data subfield to 1 in these control response frames by setting the More Data Ack subfield to 1 in the QoS Info field of the QoS Capability element it includes in frames transmitted to the STA.*(#3152, 4721, 8368).*

The TDLS peer STA can set the More Data subfield to 1 to indicate that it has pending transmission for the STA if it has received from the STA a TDLS Setup Request frame or TDLS Setup Response framethat has the More Data Ack subfield equal to 1 in the QoS Capability element and the STA:

* Has TDLS peer PSM enabled (see 11.2.2.6 (AP operation during the CP)) or
* Is a TWT requester or a TWT scheduled STA (see 27.7 (TWT operation)).
* .  *(#6252)*

**9.4.1.17 QoS Info field**

TGax Editor: *Replace ”Reserved” with “More Data Ack” under B7 of Figure 9-82 (QoS Info field when sent by an AP with More Data Ack) (#CID 4721, 5819, 8367, 9355)*

TGax Editor: *Change the paragraph below of this subclause as follows (#CID 4721, 5819, 8367, 9355):*

Non-AP STAs set the More Data Ack subfield to 1 to indicate that they can process Ack frames with the More Data bit in the Frame Control field equal to 1 and remain in the awake state. Non-AP STAs set the More Data Ack subfield to 0 otherwise. An HE AP sets the More Data Ack subfield to 1 to indicate that it can generate Ack, BlockAck, and Multi-STA BlockAck frames with the More Data bit in the Frame Control field equal to 1; otherwise the AP sets the More Data Ack subfield to 0. For non-HE APs, the More Data Ack subfield is reserved. *(#4721, 5189, 8367, 9355)* An HE TDLS peer STA uses the More Data Ack subfield to indicate support for both processing and generating these control response frames.*(#8367, 8368)*