### IEEE P802.11 Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 11ax D3.2 MAC Comment Resolution for  Section 27.7.7 | | | | |
| Date: 2018-10-26 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Zhou Lan | Broadcom | 250 Innovation Dr, San Jose, CA 95134 | (+1) 408 543 3450 | zhou.lan@broadcom.com |
| Huizhao Wang | Quantenna Communications | Quantenna Communications, Inc. 1704 Automation Parkway, San Jose, CA 95131, USA |  | hwang@quantenna.com |
| Jarkko Kneckt | Apple |  |  | jkneckt@apple.com |
| Pooya Monajemi | Cisco |  |  | [pmonajem@cisco.com](mailto:pmonajem@cisco.com) |
| Chunyu Hu | Broadcom | 250 Innovation Dr, San Jose, CA 95134 |  | Chunyu.hu@broadcom.com |
| Matthew Fischer | Broadcom | 250 Innovation Dr, San Jose, CA 95134 |  | matthew.fischer@broadcom.com |

Abstract

This submission proposes resolutions for comments of TGax Draft D3.2 with the following CID 15696,

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: reflect Jarkko’s comment

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 D3.2 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGax D3.0 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.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 15696 | Huizhao Wang | 331.18 | 27.7.7 | Remove 20MHz-only restriction from HE Subchannel Selective Transmission Operation | Change following text: Line 18: "non-primary 20MHz subchannel" to "non-primary subchannel" Line 26: remove "20MHz-only" Line 50: change "to a non-AP STA" to "to a 20MHz-only non-AP STA" | Revised-  Agree with the comment in principle. Due to the text change per D3.2. Propose to adjust the proposed text change to D3.2.  TGax editor to make the changes shown in 11-18/1900r2 under all the headings that include CID 15696. |

**Discussion:** *None.*

**Proposed text changes to Draft text of TGax D3.2**

***TGax editor: change section 27.7.7 as follows.***

**9.4.2.199 TWT element**

***Change the 22nd and subsequent two paragraphs as follows:***

~~When transmitted by a TWT requesting STA, the TWT Channel field contains a bitmap indicating which channel the STA requests to use as a temporary primary channel during a TWT SP. When transmitted by a TWT responding STA, the TWT Channel field contains a bitmap indicating which channel the TWT requesting STA is allowed to use as a temporary channel during the TWT SP.~~ The TWT Channel field includes a bitmap that provides the channel that is being negotiated by a STA as a temporary channel during a TWT SP. Each bit in the bitmap corresponds to one minimum width channel for the band in which the TWT responding STA's associated BSS is currently operating, with the least significant bit corresponding to the lowest numbered channel of the operating channels of the BSS. In an S1G BSS, the ~~The~~ minimum width channel is equal to the SST Channel Unit field of the SST Operation element if such an element has been previously received or is equal to 1 MHz for a BSS with a BSS primary channel width of 1 MHz and 2 MHz for a BSS with a BSS primary channel width of 2 MHz if no such element has been previously received from the AP to which the SST STA is associated. In an HE BSS, the minimum width channel is equal to 20 MHz. A value of 1 in a bit position in the bitmap transmitted by a TWT requesting STA means that operation with that channel as the primary channel is requested during a TWT SP. A value of 1 in a bit position in the bit-map transmitted by a TWT responding STA means that operation with that channel as the primary channel is allowed during the TWT SP. In an HE BSS, no bits, only one bit or all the four LSBs or all the four MSBs*(#CID 15696)* of the bitmap can have a value of 1. The TWT Channel field is used by an S1G STA as defined in 10.53 (Subchannel Selective Transmission (SST)) and is used by an HE STA as defined in 27.7.7 (HE subchannel selective transmission).(#15031, #15242, #15243) When the TWT channel field is equal to 0 then the HE STAs operate as define in 27.7.2.

***TGax editor: change section 27.7.7 as follows.***

**27.7.7 HE subchannel selective transmission**

**27.7.7.1 General**

An HE STA that supports HE subchannel selective transmission (SST) operation shall set dot11HESubchannelSelectiveTransmissionImplemented to true and shall set the HE Subchannel Selective Transmission Support field in the HE Capabilities element it transmits to 1. An HE STA that does not support HE SST operation shall set the HE Subchannel Selective Transmission Support field in the HE Capabilities element it transmits to 0.

An HE non-AP STA ~~that is a 20 MHz operating STA~~ with dot11HESubchannelSelectiveTransmissionImplemented to true is an HE SST STA*.(#CID 15696)*

An HE AP with dot11HESubchannelSelectiveTransmissionImplemented to true is an HE SST AP.

An HE STA may setup SST operation by negotiating a trigger-enabled TWT as defined in 27.7.2 (Individual TWT agreements) except that:

* The TWT request may have a TWT Channel field with up to one bit set to 1 to indicate which of the secondary channel is requested to contain the RU allocations addressed to(#Ed) the SST STA that is a 20MHz operating STA. *(#CID 15696)*
* The TWT request may have a TWT Channel field with all the four LSBs or all the four MSBs set to 1 to indicate whether the primary 80MHz channel or the secondary 80 MHz channel is requested to contain the RU allocations addressed to the SST STA that is an 80MHz operating STA. *(#CID 15696)*
* The TWT response shall have a TWT Channel field with up to one bit set to 1 to indicate which of the secondary channel ~~is going to~~ will contain the RU allocations addressed to(#Ed) the SST STA that is a 20MHz operating STA. *(#CID 15696)*
* The TWT response shall have a TWT Channel field with all the four LSBs or all the four MSBs to indicate whether the primary 80 MHz channel or the secondary 80 MHz channel will contain the RU allocations addressed to the SST STA that is a 80MHz operating STA. *(#CID 15696)*

**27.7.7.2 SST operation**

An SST STA that successfully sets up SST operation shall follow the rules defined in this subclause.

The HE SST AP follows the rules defined in 27.7.2 (Individual TWT agreements) to exchange frames with the HE SST STA during negotiated trigger-enabled TWT SPs, except that the AP shall ensure that:

* The RUs allocated in DL MU PPDUs and in Trigger frames addressed to the SST STA are within the subchannel indicated in the TWT Channel field of the TWT response and follows the RU restriction rules defined in 28.3.2.8 (RU restrictions for 20 MHz operation) if the SST STA is a 20MHz operating STA. *(#CID 15696)*
* The trigger-enabled TWT SPs do not overlap with TBTTs at which DTIM Beacon frames are sent
* The same subchannel is used for all trigger-enabled TWT SPs that overlap in time

(Existing text here)

**End of proposed changes.**