IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Comment resolutions for 27.7.7 | | | | |
| Date: 2018-09-01 | | | | |
| 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 |
| Abhishek Patil | Qualcomm Inc. |  |  |  |
| George Cherian | Qualcomm Inc. |  |  |  |

Abstract

This submission proposes resolutions for multiple comments related to TGax D3.0 with the following CIDs (5 CIDs):

* 15696, 15914, 16462, 17047, 17143

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.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 15696 | Huizhao Wang | 331.18 | 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 in principle with the comment. The proposed resolution is to clarify that any STA can negotiate residing in a 20 MHz subchannel, independent of its capabilities.  TGax editor to make the changes shown in 11-18/1468r0 under all headings that include CID 15696. |
| 15914 | Liwen Chu | 331.14 | 1, 20MHz operation STA should be allowed for this operation. 2, The rules related to operation chanel change should be defined. | As in the comment | Revised –  Agree in principle with the comment.  For item 1: the proposed resolution is to clarify that any STA can negotiate residing in a 20 MHz subchannel, independent of its capabilities.  For item 2: it is misleading to call them operation channels since it may give the impression that the BSS has switched to that channel which is not true. Resolutoin clarifies the rules for switching between the primary channel of the BSS and the subchannel that is indicated in the TWT Channel field.  TGax editor to make the changes shown in 11-18/1468r0 under all headings that include CID 15914. |
| 16462 | Ming Gan | 331.55 | It says non-AP STA shall not access the medium on the secondary channel using a DCF and EDCAF. However, the latter sentence says the non-AP can do it once some condition is met. They conflict each other. | Change new operation channel to primary channel | Revised –  Agree in principle with the comment that the statement may be misleading. The text is organized such that it does not leave room to ambiguity of the expected behavior from the STA side.  TGax editor to make the changes shown in 11-18/1468r0 under all headings that include CID 16462. |
| 17047 | Yongho Seok | 331.59 | "A STA that receives a PPDU on the secondary channel shall update its NAV according to 27.2.4 (Updating two NAVs)." Please clarify how to update the NAV from the PPDU received on the secondary channels. | As in comment. | Revised –  Subclause 27.2.4 is clear on how the NAV is updated based on a received PPDU.  Agree in principle to clarify that this is not really a secondary channel but a subchannel.  TGax editor to make the changes shown in 11-18/1468r0 under all headings that include CID 17047. |
| 17143 | Zhou Lan | 331.14 | There is no technical reason to limit 20MHz only device to have the capability to operate on the seconeary channel. Enhance the spec to allow other type of device to have this capability | as in the comment | Revised –  Agree in principle with the comment. The proposed resolution is to clarify that any STA can negotiate residing in a 20 MHz subchannel, independent of its capabilities.  TGax editor to make the changes shown in 11-18/1468r0 under all headings that include CID 17143. |

**Discussion: *None.***

**TGax Editor: *Change the subclause below as follows (#CID 15696, 15914, 17047, 17143):***

**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 with dot11HESubchannelSelectiveTransmissionImplemented to true is an HE SST STA.

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 intended for the SST STA
* 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 contain the RU allocations intended for the SST STA

**27.7.7.1 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 restriction for 20 MHz operation)
* 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

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

* Shall be available in the subchannel indicated in the TWT Channel field of the TWT response at TWT start times
* Shall not access the medium in the subchannel using DCF or EDCAF
* Shal not transmit unless it has performed CCA until a frame is detected by which it can set its NAV, or until a period equal to NAVSyncDelay has transpired, whichever is earlier.
* Shall respond to Trigger frames addressed to it as defined in 27.5 (MU operation) and 27.7.2 (Individual TWT agreements)
* Shall update its NAV according to 27.2.4 (Updating two NAVs) when it receives a PPDU in the subchannel

An HE SST STA may include a Channel Switch Timing element in (Re-) Association Request frames it transmits to an SST AP to indicate the time required by the STA to switch between the primary channel and a subchannel. The received channel switch time informs the SST AP of the duration of time that the SST STA might not be available to receive frames before the TWT start time and after the end of the trigger-enabled TWT SP.

NOTE—An HE SST STA in PS mode is not required to move to the primary channel after the end of the trigger-enabled TWT SP.*(#15696, 15914, 17047, 17143)*