IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Comment resolutions for miscellaneous CIDs in 26.17 – part 2 | | | | |
| Date: 2020-08-16 | | | | |
| 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 |
| Menzo Wentink | Qualcomm Inc. |  |  |  |
| Abhishek Patil | Qualcomm Inc. |  |  |  |
| George Cherian | Qualcomm Inc. |  |  |  |

Abstract

This submission proposes resolutions for multiple comments related to TGax D6.0 with the following CIDs (5 CIDs):

* 24152, 24259, 24528, 24543, 24546.

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Incorporated feedback received during the call.

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** |
| 24152 | McCann, Stephen | 460.12 | The value of "n = 1, ..., 15" appears to be for the maximum possible 6 GHz band allocation (e.g. from 5.925 GHz up to 7.125 GHz). What happens for other regulatory domains where not all this band allocation is permitted? | Add a new column or table to Annex E, indicating maximum values for "n" in for this calculation. | Rejected –  The locations of the channels are deterministic in terms of frequency indexing and are independent of the regulatory domain. A STA is expected to comply with the regulatory rules of a certain domain for any type of channel up to the maximum allowed in that regulatory domain and independently of the maximum range being provided in the IEEE802.11ax amendment. Hence if the STA becomes aware that a certain channel is not available in a certain regulatory domain then the STA cannot operate in that channel. Also please note that there is a note that essentially states the same. Quoting here:  “NOTE—PSCs might not all be available in a specific location due to regulatory restrictions. A STA scanning the 6 GHz  band knows where these PSCs are located since their position is fixed.” |
| 24259 | Patil, Abhishek | 460.38 | The condition for not sending a Probe Request frame must include Short SSID | Replace the first occurrence of "SSID" with "Short SSID and/or SSID field" and the second occurrence of "SSID" with "short SSID and/or SSID" in the sentence | Revised –  Agree in principle. However, since the sentence has too many and/or conditions the proposal is to split the sentence for better readibility.  TGax editor to make the changes shown in 11-20/0976r1 under all headings that include CID 24259. |
| 24528 | Hamilton, Mark | 453.34 | What does it mean for a functionality and/or requirement to be "unavailable", and how would the reader/implementer know which ones are? | Delete "unavailable or" | Revised –  Agree in principle that “unavailable” is not appropriate. Proposed resolution is to replace with “not applicable” which refers to procedures related to HT and VHT that are not applicable to 6 GHz band. E.g., DFS channels, generation of certain types of PPDU formats, etc. A suggestion received by a member of the CRC to explicitly call out all these functionalities was evaluated but not deemed appropriate due to the added complexities and additional exceptions that it would have added to the standard.  TGax editor to make the changes shown in 11-20/0976r1 under all headings that include CID 24528. |
| 24543 | Hamilton, Mark | 453.27 | This statement ("A STA operating in the 5 GHz or 6 GHz band that sets dot11HEOptionImplemented to true shall set both dot11VHTOptionImplemented and dot11HighThroughputOptionImplemented to true.") is contradictory (on some aspects) with this statement in 26.17.1 (P453.33) "An HE STA operating in the 6 GHz band shall inherit the functionalities of a VHT STA except that...". So, which is it? Do the statements elsewhere like "... with dot11VHTOptionImplemented set to true shall ..." and "... with dot11VHTOptionImplemented set to true shall ..." apply, or not? | Delete "or 6 GHz". For a STA operating in 6 GHz that has dot11HEOptionImplemented set to true, list what aspects of VHT and HT operation are still true, or say they all are except <the list of ones that aren't>. | Revised –  The subsequent paragraph states that the HE STA shall inherit all VHT/HT functionalities and/or requirements that are unavailable or that are superseded by equivalent requirements, which are provided in the cited subclauses. Proposed resolution is to replace “unavailable” with “not applicable” which addressed CID 24528 as well. A suggestion received by a member of the CRC to explicitly call out all these functionalities was evaluated but not deemed appropriate due to the added complexities and additional exceptions that it would have added to the standard.  TGax editor to make the changes shown in 11-20/0976r1 under all headings that include CID 24543. |
| 24546 | Hamilton, Mark | 456.35 | It's not enough to just set dot11FILSProbeDelay on a STA, to know that it supports FILS discovery. If the intention is to avoid requiring full FILS support (setting dot11FILSActivated), then suggest creating a new MIB attribute, such as dot11FILSDiscoveryActivated, that indicates support for only the FD subset of FILS (and would then imply support for FILS Probe Delay). | Add a new MIB attribute, dot11FILSDiscoveryActivate, which indicates support for the FILS Discovery subset of FILS. In 26.17.2.1 third paragraph, add the requirement to set dot11FILSDiscoveryActivated to the list of 6 GHZ HE STA attributes that must be true. | Revised –  Agree in principle with the comment. Proposed resolution does not add a new MIB variable because that would require definitions and statements added for the non-6G counterpart as well which may add additional ambiguity. Resolution is to add a statement that 6G STAs shall perform a subset of the operations defined for FILS STA and may perform all the other operations defined for a FILS STA.  TGax editor to make the changes shown in 11-20/0976r1 under all headings that include CID 24528. |

**Discussion: *None.***

* HE BSS operation
* Basic HE BSS operation

**TGax Editor: *Change the paragraph below of this subclause as follows (#CID 24528, 24543):***

An HE STA operating in the 6 GHz band is a VHT STA except that it is exempt from following VHT and HT functionalities and/or requirements that are not applicable or that are superseded by equivalent HE functionalities and/or requirements (see Clauses 26 (High Efficiency (HE) MAC specification) and 27 (High Efficiency (HE) PHY specification)), and that it shall use the HE format instead of the VHT, HT\_GF, or HT\_MF format for PPDUs transmitted in the 6 GHz band. Additional HE functionalities and/or requirements for the 6 GHz band are defined in 26.17.2 (HE BSS operation in the 6 GHz band).*(#24528, 24543)*

* HE BSS operation in the 6 GHz band
* Scanning in the 6 GHz band(#22522, #22523)

**26.17.2.3.1 General**

**TGax Editor: *insert the following paragraph below (#CID 24546):***

A 6 GHz STA performs a subset of the operations defined for a FILS STA that are described in 26.17.2.3, and might perform all the other operations defined for a FILS STA.*(#24546)*

A 6 GHz AP may set dot11ColocatedRNRImplemented to true and shall set dot11ShortSSIDListImplemented to true. An AP that is in the same co-located AP set as a 6 GHz AP shall set dot11ColocatedRNRImplemented to true and dot11ShortSSIDListImplemented to true.

* Non-AP STA scanning behavior

…

**TGax Editor: *Change the paragraph below of this subclause as follows (#CID 24259):***

Until the FILSProbeTimer(#22263) reaches dot11FILSProbeDelay, the non-AP STA shall not send a Probe Request frame to the broadcast destination address with the SSID field set to the SSID of an AP for which it has received a Reduced Neighbor Report or Neighbor Report element with the Unsolicited Probe Responses Active subfield(#22518) corresponding to that AP set to 1 and that indicates that the AP is operating in that channel. Until the FILSProbeTimer(#22263) reaches dot11FILSProbeDelay, the non-AP STA shall not send a Probe Request frame to the broadcast destination address with the Address 3 field set to the BSSID of an AP for which it has received a Reduced Neighbor Report or Neighbor Report element with the Unsolicited Probe Responses Active subfield(#22518) corresponding to that AP set to 1 and that indicates that the AP is operating in that channel. Until the FILSProbeTimer(#22263) reaches dot11FILSProbeDelay, the non-AP STA shall not send a Probe Request frame to the broadcast destination address with the Short SSID field set to the short SSID that corresponds to the SSID of an AP for which it has received a Reduced Neighbor Report or Neighbor Report element with the Unsolicited Probe Responses Active subfield(#22518) corresponding to that AP set to 1 and that indicates that the AP is operating in that channel.*(#24259)*

…