IEEE P802.11
Wireless LANs

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| Comment resolutions for Misc 11ax CID |
| Date: 2019-09-15 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Pooya Monajemi | Cisco Systems, Inc. | 170 West Tasman DrSan Jose, CA 95134 | +1-408-853-2667 | pmonajem@cisco.com |
| David Kloper | Cisco Systems, Inc. | 170 West Tasman DrSan Jose, CA 95134 | +1-408-526-5041 | dakloper@cisco.com |
| Brian Hart | Cisco Systems, Inc. | 170 West Tasman DrSan Jose, CA 95134 | +1-408-914-0633 | brianh@cisco.com |
| Eldad Perahia | HPE | 3333 Scott Blvd, Santa Clara, CA 95054 |  | eldad.perahia@hpe.com |
| Gaurav Patwardhan | HPE | 3333 Scott Blvd, Santa Clara, CA 95054 |  | gaurav.patwardhan@hpe.com |

Abstract

This submission proposes resolutions for multiple comments related to TGax D4.0 with the following CIDs (2 CIDs):

* 20013, 21172

Revisions:

* Rev 1: Added normative text in cl 26, minor edits.
* 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.***

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| **CID** | **Commenter** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 20013 | Abhishek Patil | 123.28 | The current spec allows an AP to disassociate a STA for any reason. It would be beneficial if a 6GHz AP provides specific reasons for disassociation. For example, if the STA is too aggressive in using EDCA or not respecting the EDCA parameters provided by the AP | Add appropriate status codes to indicate such association rejection in 6GHz | Revised –Agree in principal with the comment. Exact text is added below. TGax editor to make the changes shown in 11-19/1610r1 under all headings that include CID 20013. |
| 21172 | Pooya Monajemi | 123.26 | Draft 4.0 does not add any Reason Codes. An AP currently has the right to deny association to Clients or steer them to other BSSID / bands for unspecified reasons. In order to improve QoS, especially in the 6 GHz band, an AP may choose to expel Clients for excessive usage of OMI which is negatively impacting the BSS, and that exceeds some Policy for said usage within the cell. It would be better to be able to signal this, rather than using the Unspecified Reason code on Deauth/Disassociation, or the Unspecified Status code on (Re)association Responses. | 1) Add Section 9.4.1.7, directing the insertion of a new Reason Code into table 9-51;2) Add a new Status Code into table 9-52;Rather than allocating a code for all subcases, a single general code might be added to both tables for OMI\_EXCEEDS\_POLICY with meaning of "The usage of OMI has been determined to exceeded system policy" | Revised –Agree in principal with the comment. Exact text is added below.TGax editor to make the changes shown in 11-19/1610r1 under all headings that include CID 21172. |

**Discussion (#CIDs 20013, 21172):**

In order to improve efficiency in high density scenarios, 11ax draft has introduced capabilities such as ULMU operation. The QoS and efficiency gains, however, will be diminished if assocated STA’s opt out of operating in efficient modes. In high density and traffic situations where multi-user efficiency gains are vital to the BSS performance and QoS, an AP may seek to disassociate some STAs in order to improve efficiency in the BSS, and transition them to a different band or channel. Currently the 11ax draft offers no reason codes to be included in the disassociation frames for these STAs.

***TGax Editor: Add section 9.4.1.7 to the draft, and* *insert the following row into Table 9-51 (Reason codes) in numerical order and update the Reserved row*** ***(#CIDs 20013,21172):***

* Reason Code field

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| Reason code | Name | Meaning |
| <ANA> | ULMU\_DISABLE\_EXCEEDS\_POLICY | Disassociated because STA’s usage of UL MU Disable or UL MU Data Disable has been determined to exceed or violate system policy. |
| <ANA>–65 535  |  | Reserved |

* Status Code field

TGax Editor Change Table 9-52 (Status codes) as follows (maintaining numeric order and updating the reserved range) (#CIDs 20013,21172):

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| * Status codes
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| Status code | Name | Meaning |
| 18 | REFUSED\_BASIC\_RATES\_MISMATCH | Association denied due to requesting STA not supporting all of the data rates in the BSSBasicRateSet parameter, the Basic HT-MCS Set field of the HT Operation parameter, or the Basic VHT-MCS and NSS Set field in the VHT Operation parameter, or the Basic HE-MCS and NSS Set field in the HE Operation parameter.(#20012) |
| 124 | DENIED\_HE\_NOT\_SUPPORTED | Association denied because the requesting STA does not support HE features. |
| <ANA> | ULMU\_DISABLE\_EXCEEDS\_POLICY | (Re)Association denied because the requesting STA’s usage of UL MU Disable or UL MU Data Disable has been determined to exceed or violate system policy. |

* UL MU operation
* General

TGax Editor Change section 26.5.2.1 as follows (#CIDs 20013,21172):

(#20047)A non-AP HE STA with dot11HTVHTTriggerOptionImplemented equal to true shall set the HT And VHT Trigger Frame Rx Support field to 1 in the HE MAC Capabilities Information field in HE Capabilities elements that it transmits. A non-AP HE STA with dot11HTVHTTriggerOptionImplemented equal to false shall set the HT And VHT Trigger Frame Rx Support field to 0.

An HE AP that disassociates an HE non-AP STA may set the reason code to ULMU\_DISABLE\_EXCEEDS\_POLICY to indicate that the non-AP STA is being disassociated due to excessive duration of operation with UL MU Disable or UL MU Data Disable bits set to 1.