IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 11be D4.0 CR for Miscellaneous CIDs | | | | |
| Date: 2023-08-20 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Po-Kai Huang | Intel |  |  | po-kai.huang@intel.com |
|  |  |  |  |  |

Abstract

**Abstract**

This submission proposes resolutions for the following CIDs:

19606, 19283, 19122, 19386, 19408, 19409, 19410, 19618

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Format change.
* Rev 2: Revision based on the discussion during the teleconference call

Interpretation of a Motion to Ado

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGbe D4.0 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe D4.0 Draft. (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 19606 | Xiaofei Wang | 35.1 | 483.10 | MIB setting for the EHT STA does not below in introduction. Introduction should provide overview of clause 35. | move the mib setting to later part of the clause | Revised –  Agree in principle with the commenter. Similar to the corresponding variable introduced in HE, we move the MIB variable to “35.15.1 Basic EHT BSS operation”.  TGbe editor to make the changes shown in 11-23/1384r2 under all headings that include CID 19606 |
| 19283 | John Wullert | 35.3.13 | 547.56 | The phrase "the failed individually address QoS Data frame suggests that there is a specific frame, but the requirement applies to any that meets the subsequent conditions | Reprhase as "An MLD shall continue to deliver a failed individually addressed QoS Data frame belonging..." | Accepted - |
| 19122 | Bo Sun | 3.1 | 53.26 | "...that might involve...." is confusing. It's not clear whether the statement is describing the ESS or the transition. | Change to "...in the same extended service set (ESS), which might involve changing operating mode from STA to MLD, or vice versa. See 4.5.3.2 (Mobility types)." | Revised –  We split the sentence into two.  TGbe editor to make the changes shown in 11-23/1384r2 under all headings that include CID 19122 |
| 19386 | Joseph Levy | 3.1 | 59.26 | Redefining the BSS transition to include transitions from one MLD to another MLD is confusing and not architecturally correct. While it is true that an MLD transition is a multiple BSS transition, the definition does not make this clear. It would be much clearer to define an MLD transition, including the three types of MLD transition 1) MLD to MLD, 2)MLD to STA, and 3)STA to MLD. As all three of these types are necessary for ESS mobility. | Delete the changes to BSS transition and add a new definition for MLD transition that includes all three types of the transition necessary for MLO mobility. | Rejected –  MLD transition is defined in previous draft. However, several comments point out that the protocol is essentially the same with only entity change and inclusion of ML element with the addition of MLD. It may not make sense to have a completely new protocol simply for MLD transision. |
| 19408 | Guogang Huang | 3 | 55.47 | When the Link ID subfield of a Basic Multi-link element is set to the link ID which is different from the link on which the frame included this Basic Multi-link element is transmitted, then the corresponding AP also should be categorized as the reported AP | please modify the definition of the reported AP | Rejected –  An AP needs to have complete profile to be reported (ex MAC address, capabilities, and so on). Simply having link ID in the common Info of a Basic Multi-link element does not really identify an AP. Further, in the case of multiple BSSID, the full information of the corresponding nontransmitted BSSID is in the multiple BSSID element.  *The format of the Link ID Info subfield is defined in 9.4.1.71 (Link ID Info field). The Link ID subfield of the Link ID Info field indicates the link identifier of the AP that is affiliated with the AP MLD which is*  *described in the Basic Multi-Link element and satisfies one of the following: — It is the AP that transmitted the Basic Multi-Link element.*  *— It is the AP that corresponds to a nontransmitted BSSID that is a member of the same multiple*  *BSSID set as the AP that transmitted the Multiple BSSID element containing the profile for the nontransmitted BSSID which includes the Basic Multi-Link element.* |
| 19409 | Guogang Huang | 3 | 55.51 | It's not good to mention specific elements. Because it will require extra effort to maintain it in the future. Please modify the definitions of reported AP and reporting APs. | Change definitions of reported AP and reporting AP to  reported access point (AP): An AP that is not the reporting AP and whose info is included within a referred frame transmitting by a reporting AP. reporting access point (AP): An AP that is transmitting a referred frame. | Rejected –  It is good to mention specific elements so that the definition is precise. The proposed resolution uses “referred frame”, which is not clear about the meaning. |
| 19410 | Guogang Huang | 3 | 55.51 | It's not good to mention specific elements in the definition of the reporting/reported AP. Otherwise, it's hard to maintain in the future. | please revise the definition of the reported AP | Rejected –  It is good to mention specific elements so that the definition is precise. The alternative of using general term creates confusing on the definition of the general terms, which if defined clearly will have to specify specific elements. |
| 19618 | Mark Hamilton |  | 0.00 | Is there somewhere that describes how a non-AP STA becomes a non-AP MLD, and vice-versa? I assume it can happen upon a Resassociation to/from an AP/AP MLD? (Is it possible at an ML (re)setup?) How do the lists of 11.3.5.4.(c) work, for this change, if its to the "same AP MLD and/or one of its affiliates" (if that is allowed)? | Clarify what is allowed, and if this can happen while connected to the same device, what happens to the 11.3.5.4(c) items? | Rejected –  We answer the questions of the commenter below.  All the variations of BSS transition are described in 4.5.3.2 Mobility types: non-MLO to non-MLO, MLO to MLO, MLO to non-MLO, and non-MLO to MLO. ML (re)setup piggy backed on (re)association frme exchange and is about setup links rather than different mobility operations.  11.3.5.4 is about deauthentication. Since authentication only happens two STAs or two MLDs, deauthentication also happens only between two STAs and two MLDs. Now that there is no indepent authentication state between non-AP MLD and each AP affiliated with an AP MLD. (c) below then works between two STAs or two MLDs.  *c) The state for the indicated STA or MLD shall be set to State 1* |

**Discussion:**

*TGbe editor: Change Clause 35.1 as follows (track change on):*

**35. Extremely high throughput (EHT) MAC specification**

**35.1 Introduction**

(#19606)

(…existing texts…)

*TGbe editor: Change Clause 35.15.1 as follows (track change on):*

**35.15 EHT BSS operation**

**35.15.1 Basic EHT BSS operation**

An EHT STA has dot11EHTOptionImplemented equal to true. (#19606)

The basic EHT-MCS and NSS set is the set of <EHT-MCS, NSS> tuples that are supported by all EHT STAs that are members of an EHT BSS. The basic EHT-MCS and NSS set is established by the STA that starts the EHT BSS, and is indicated by the Basic EHT-MCS And NSS Set field of the EHT Operation parameter in the MLME-START.request primitive. Other EHT STAs determine the basic EHT-MCS and NSS set from the Basic EHT-MCS And NSS Set field of the EHT Operation element in the BSS Description derived through the scan mechanism (see 11.1.4.1 (General)).

(…existing texts…)

*TGbe editor: Change Clause 35.3.13 as follows (track change on):*

**35.3.13 Multi-link device individually addressed data delivery without block ack negotiation**

(…existing texts…)

An MLD shall continue to deliver a(#19283) failed individually addressed QoS Data frame belonging to a TID without block ack negotiation to an associated MLD on the setup links subject to additional constraints (see

35.3.7 (Link management)) until any of the following conditions occurs:

(…existing texts…)

*TGbe editor: Change Clause 3.1 as follows (track change on):*

**3.1 Definitions**

(…existing texts…)

**basic service set (BSS) transition:** [BSS transition] ~~Change~~Movement of an association by a station (STA) or non-AP multi-link device (MLD) from one BSS or AP MLD to another BSS or AP MLD in the same extended service set (ESS). The movement(#19122) might involve changing operating mode from STA to MLD, or vice versa. See 4.5.3.2 (Mobility types).

(…existing texts…)