IEEE P802.11
Wireless LANs

|  |
| --- |
| LB 271 CR for 5.1.5.1 General and 5.1.5.11 AP MLD Role |
| Date: April 1, 2023 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Duncan Ho | Qualcomm Inc |  |  | dho@qti.qualcomm.com |
| Abhishek Patil |  |  |  |
| Gaurang Naik |  |  |  |
| George Cherian |  |  |  |
| Alfred Asterjadhi |  |  |  |
| Yanjun Sun |  |  |  |
| Abdel Karim Ajami |  |  |  |

 Abstract

This submission proposes resolutions for following CIDs received for TGbe LB271:

15495, 15496, 16257, 16364, 16388, 18073, 18074, 18075, 18076, 18077, 16246, 16320

**Revisions:**

* Rev 0: Initial version of the document.
* Rev 1: updated after presentation to TGbe
* Rev 2: updated per Ming’s feedback pn CIDs 16388, 18075, and 18077

***TGbe editor: The baseline for this document is 11be D3.0***

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 TGbe Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe 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** | **Pg/Ln** | **Comment** | **Proposed Change** | **Resolution** |
| 15495 | Chaoming Luo | 5.1.5.1 | 77.56 | Change "appropriate MLD upper MAC sublayer"to "appropriate upper MAC sublayer"since there are multiple upper MAC sublayers: AP MLD upper MAC and affiliated AP upper MACs. | As in comment | Accepted. |
| 15496 | Chaoming Luo | 5.1.5.1 | 78.26 | Make it consistency to use "MLD lower MAC sublayers" in P78L26, P78L31, and P78L33 | As in comment | Revised.**TGbe editor, please make the changes as shown in this document below.** |
| 16257 | Stephen McCann | 5.1.5.1 | 76.57 | doze and awake states take articles (see the baseline). | If "doze state" is missing an article, change "doze state" to "the doze state" throughout the draft. | Accepted. |
| 16364 | Michael Montemurro | 5.1.5.1 | 75.26 | This note is not needed. This is an inappropriate location to state that TID-to-Link mapping is optional. | Delete the cited note. At 75.21, change "then through" to "then optionally through" | Accepted. |
| 16388 | Massinissa Lalam | 5.1.5.1 | 76.58 | In Figure 5-2a, the note 2 "TID-to-link mapping controls which link an MPDU can be transmitted" should be "TID-to-link mapping controls over which link an MPDU can be transmitted". Same comment applies to Figure 5-2b. | As in comment | Revised.In Figure 5-2a, change the note 2 "TID-to-link mapping controls which link an MPDU can be transmitted" to "TID-to-link mapping controls in which link an MPDU can be transmitted". Make the same change to Figure 5-2b.**TGbe editor, please make the changes described above.** |
| 18073 | Abhishek Patil | 5.1.5.1 | 75.22 | The start of the paragraph describes an MSDU (i.e., a single MSDU) being passed to the appropriate MLD lower MAC sublayer based on its TID. However, the later part of the sentence describes MPDUs (plural). | Remove the 's' from 'MPDUs' | Accepted. |
| 18074 | Abhishek Patil | 5.1.5.1 | 75.22 | An MPDU is passed to the appropriate MLD lower MAC sublayer based on its TID. | Add " (based on the TID of the MPDU) " between 'MPDU' and 'down' | Accepted. |
| 18075 | Abhishek Patil | 5.1.5.1 | 75.23 | In most cases (i.e., typical scenarios) the MPDU is passed to one of the MLD lower MAC sublayer for transmission (and, at retry, can be passed to the same or a different lower MAC sublayer to which the TID is mapped to). However, for duplication reasons, an MPDU might be passed to more than one MLD lower MAC sublayer. Therefore, add the 's' in 'sublayers' in () --> "subylayer(s)". | As in comment | Revised.**TGbe editor, please make the changes as shown in this document below.** |
| 18076 | Abhishek Patil | 5.1.5.1 | 78.23 | Clarify that each affiliated AP has a different GTK. Furthermore, clarify that this sentence is with respect to a non-AP MLD. | As in comment | RevisedThe actual line number should have been 3. Agreed in principle.Change the sentence “The GTK of the corresponding affiliated STA is used to decrypt the group addressed MPDUs and MMPDUs received on a link” to “The GTK of the associated AP with which a non-AP STA affiliated with a non-AP MLD is associated used to decrypt the group addressed MPDUs and MMPDUs received on a link where the non-AP STA is operating on.” |
| 18077 | Abhishek Patil | 5.1.5.1 | 78.26 | The bullet on Block Ack scoreboarding can be simplified. The 1st sentence is sufficient. Same comment and suggested change for bullet on L57 of this page. | Delete the sentence starting 'Optionally' and provide reference to 35.3.8 (similar to the T2LM bullet). | Revised.**TGbe editor, please make the changes as shown in this document below.** |
| 16246 | Stephen McCann | 5.1.5.11 | 80.23 | typo "a AP" | Change "a AP" to "an AP" in the title of Figure 5-12 | Accepted. |
| 16320 | Juseong Moon | 5.1.5.11 | 80.23 | Name of the figure 5-12, "a AP" is not correct. | Please change as: "an AP". | Accepted. |

**TGbe editor, for CID 15496, please make the following changes:**

5.1.5.1 General

[…]

The MLD upper MAC sublayer functions include:

[…]

* Block Ack scoreboarding for individually addressed frames (in collaboration with the MLD lower MAC sublayers(#15496)). Optionally, the MLD upper MAC sublayer delivers successful status records of MPDUs and/or scoreboard context control information on Block Ack scoreboarding at one of the setup links to other setup links
* MLD level management information exchange/indication via the MLD lower MAC sublayer(s)(#15496)

**TGbe editor, for CID 18075, please make the following changes:**

5.1.5.1 General

[…]

During transmission, an MSDU from the MAC SAP goes through the processes shown in the left hand side of Figure 5-2a (MAC data plane architecture (MLO) for unicast data frames), then through the TID-to-link mapping process (see 35.3.7.1 (TID-to-link mapping)) that forwards the MPDUs down to one or more of the MLD lower MAC sublayers(#18075) and then to the corresponding PHY SAP.

**TGbe editor, for CID 18077, please make the following changes to pg78 line 26 and line 57:**

* Block Ack scoreboarding for individually addressed frames (in collaboration with the MLD lower MAC sublayer). Optionally, the MLD upper MAC sublayer delivers successful status records of MPDUs and/or scoreboard context control information on Block Ack scoreboarding at one of the setup links to other setup links (see 35.3.8 (Block ack procedures in Multi-link operation)).

Do you agree to the resolution provided in doc 11-23/xxxxr0 for the following CIDs?

15495, 15496, 16257, 16364, 16388, 18073, 18074, 18075, 18076, 18077, 16246, 16320