IEEE P802.11
Wireless LANs

|  |
| --- |
| **TGbe LB 266 CR for Misc. CIDs** |
| Date: 2023-01-11 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Insun Jang | LG Electronics | 19, Yangjae-daero 11gil, Seocho-gu, Seoul 137-130, Korea |  | insun.jang@lge.com |
| Sunhee Baek |  | sunhee.baek@lge.com |
| Jinsoo Choi |  | js.choi@lge.com |

Abstract

This submission proposes resolutions for following 7 CIDs received for TGbe LB266:

10847, 12805, 11190, 11191, 11740, 11566, 13391

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Revised the followings based on offline discussion
	+ For CID 12805, 11190, 11191, the paragraph was moved in the 35.3.5.1 (Multi-link setup procedure) and 3rd sentence was removed
	+ For CID 11740, the reason of “Rejected” was revised
* Rev 2: For CID 11566, the reason of “Rejected” was revised based on offline discussion.

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.***

**List of CIDs**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Commenter** | **Clause** | **Page** | **Comment** | **Proposed Change** | **Resolution** |
| 10847 | Jinsoo Choi | 35.3.4.2 | 416.64 | A STA can get the benefit of getting the critical update information of other APs by defining a soliciting method for it, otherwise the STA shall awake to obtain the updated critical parameters from those AP's beacons which will occur inefficiency from power saving aspect for STAs in doze state. For example, we can use MLD probe request for retrieving the required critical update information. | As in comment | RejectedThis method related to the comment has been discussed in the group for very long time, especially through doc. 22/61r4, but which didn't reach to any consensus. |
| 12805 | Laurent Cariou | 35.3.5.4 | 424.03 | This first sentence clarifying that we can setup one or more links should be in subclause 35.3.5.1 | as in comment | RevisedAs commented, it is proper for the commented paragraph to move the subclause 35.3.5.1 (Multi-link setup procedure) since it is a general procedure and is not really related to usage and rules of ML IE.In addition, the 3rd sentence in the commented paragraph was already captured in that subclause and removed**TGbe editor, please make changes as shown in doc 11-22/2196r1 tagged as CID 12805** |
| 11190 | Joseph Levy | 35.3.5.4 | 424.03 | The statement that "A non-AP MLD may initiate a multi-link setup with an AP MLD .." is very strange way of describing this critical process. Multi-link setup is an essential part of non-AP MLD (re)associate with an AP MLD. A non-AP MLD can not associate with an without multi-link setup. | Clearly state that multi-link setup is a critical part of non-AP MLD association. | RevisedBy CID 12805, the commented paragraph was moved to subclause 35.3.5.1 (Multi-link setup procedure) and 3rd sentence was removed.And the subcluase clearly stated that multi-link setup happens only between a non-AP MLD and an AP MLD**TGbe editor, please incorporate the changes as shown in 22/2196r1 under CID 12805** |
| 11191 | Joseph Levy | 35.3.5.4 | 424.04 | The description of multi-link (re)setup is very convoluted, confusing, and could be described in a simpler and clearer manner. A non-AP MLD uses (re)association to accomplish multi-link setup. The non-AP MLD chooses a channel supported by the target AP MLD and sends a (Re)Association Request frame containing a Basic Multi-Link element. The AP MLD then replies on the same channel used by the non-AP MLD, with a (Re)Association Response frame, containing a Basic Multi-Link element. The Basic Multi-Link elements continue the requested MLD channels (links) and supported MLD channels (links), respectively. | Clarify and simplify the rules and requirements for mulit-link setup. | RevisedBy CID 12805, the commented paragraph was moved to subclause 35.3.5.1 (Multi-link setup procedure) and 3rd sentence was removed.And the subcluase clearly stated the rules and requirements for multi-link setup**TGbe editor, please incorporate the changes as shown in 22/2196r1 under CID 12805** |
| 11566 | Xiaofei Wang | 35.3.5.4 | 424.32 | If just one link is being requested during MLD association, it is easier to just conduct regular AP/STA assocation, in order to avoid transmitting ML element to save overhead. | as in comment | RejectedThe current spec already clarified whether ML element will be included for single link association.When dot11MultiLinkActivated set to false, the Basic ML element will not be included in (Re)Association Request/Response framesand when dot11MultiLinkActivated set to true, the Basic ML element will be included in (Re)Association Request/Response frames which is sent to a STA affiliated with an MLD.Please see more details in subclauses 35.3.1 and 35.3.5.1. |
| 11740 | Gaurav Patwardhan | 35.3.5.4 | 424.05 | The sentence "When a non-AP MLD initiates a multi-link (re)setup with an AP MLD, a STA that is affiliated with the non-AP MLD shall transmit an (Re)Association Request frame on the link that it desires to use as part of the multi-link (re)setup." does not exclude the case where a non-AP MLD can add a link by sending a (Re)Association Request frame on the new link which it desires to be a part of the existing multi-link setup. Please clarify | as in comment | RejectedCurrent spec disallows a non-AP MLD to add one or more link(s) to existing multi-link setup. In order to change (add/remove) the link set, the non-AP MLD should send (Re)Association Request frame, to perform a new multi-link setup, by including the desired link(s). |
| 13391 | Liwen Chu | 35.3.16.1 | 452.06 | The spec shouldn't mandate medium contending independently. What it should mandate is the minimum coordinate medium access among the STAs of a MLD. | 　 | RejectedEssentially, we don’t have any coordination level between affiliated STAs in MLD. Moreover, it is not easy to define it at this stage in terms of many ML operations including channel access.In addition, we already enabled any exceptionsReferred text“A STA, which is affiliated with an MLD, shall contend for the WM on its link independently from the other STA(s) affiliated with the same MLD, unless explicitly stated otherwise in the subclauses below.” |

**Proposed spec text:**

*TGbe editor: The baseline for this document is 11be D2.3*

*TGbe editor: Please modify the subclause 35.3.5.1 (Multi-link (re)setup procedure) as follows:*

35.3.5.1 Multi-link (re)setup procedure

(#11562)The multi-link (re)setup procedure sets up link(s) between a non-AP MLD and an AP MLD and is completed through the exchange of (Re)Association Request and (Re)Association Response frames. The non-AP MLD and AP MLD shall follow (#10270)the (re)association procedure between MLDs as described in 11.3 (STA authenticationAuthentication and association).

(#11178)NOTE 1—Prior to utilizing (Re)Association Request/Response frame exchange to perform multi-link (re)setup with an AP MLD, the non-AP MLD and AP MLD follow (#10270)the authentication procedure between MLDs as described in 11.3 (STA authenticationAuthentication and association).

(#12805)A non-AP MLD may initiate a multi-link setup with an AP MLD to (re)set up one or more links with AP(s) affiliated with the AP MLD. When a non-AP MLD initiates a multi-link (re)setup with an AP MLD, a STA that is affiliated with the non-AP MLD shall transmit an (Re)Association Request frame on the link that it desires to use as part of the multi-link (re)setup.

(#11562)A (Re)Association Request/Response frame exchange is for a multi-link setup (#11732)only if both the (Re)Association Request frame and the (Re)Association Response frame (#14061)include a Basic Multi-Link element.

*TGbe editor: Please modify the subclause 35.3.5.4 (Usage and rules of Basic Multi-Link element in the context of multi-link (re)setup and authentication between two MLDs) as follows:*

35.3.5.4 Usage and rules of Basic Multi-Link element in the context of multi-link (re)setup and authentication between two MLDs

(#12805)

A STA affiliated with a non-AP MLD that initiates a multi-link (re)setup with an AP MLD shall include a Basic Multi-Link element in an (Re)Association Request frame it transmits.

NOTE 1—When a (Re)Association Request frame is sent from a non-AP EHT STA with dot11MultiLinkActivated set to false, the Basic Multi-Link element is not carried in the (Re)Association Request frame (see Table 9-62 (Association Request frame body(#10532)), Table 9-64 (Reassociation Request frame body(#10532)), and 35.3.1 (General)).