### IEEE P802.11 Wireless LANs

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| 11be D2.0 CR for receiving group addressed frames during EMLMR frame exchange | | | | |
| Date: 2022-10-26 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Xiangxin Gu | Unisoc | 2288 Zuchongzhi Road, Shanghai, China |  | Xiangxin.Gu@unisoc.com |
| Yingqiao Quan | Unisoc |  |  | Yingqiao.Quan@unisoc.com |
| Yongjiang Yi | SPRD |  |  | John.Yi@unisoc.com |
| Lei Zhou | H3C |  |  | zhou.leih@h3c.com |
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Abstract

This submission proposes resolutions for the following CIDs:

10128

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Editorial changes

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 D2.2 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe D2.2 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.***

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| **CID** | **Commenter** | **Clause** | **P.L** | **Comment** | **Proposed Change** | **Resolution** |
| 10128 | Xiangxin Gu | 35.3.18 | 466.55 | In many cases, non-AP MLD supporting EMLMR mode has more RF chains needed for EMLMR max NSS.  That means a non-AP MLD can do frame exchange under EMLMR mode on one link and receive group addressed frames on another link at the same time.  It is better to have an option that EMLMR mode enabled without impacting group addressed frame receiving. | Define the mode and corresponding signaling. | **Revised:**  Agree with the commenter in principle.  Propose to add information in EML Control field of EML Operation Notificiation frame to indicate whether the ongoing EMLMR frame exchange shall be ended for group addressed frames transmission on another EMLSR link. If yes, indicate the link.  Tgbe editor: please implement changes as shown in this doc tagged as 10128 |

**Discussion:**

A multi-radio non-AP MLD has 3 affiliated STA1 and STA 2 and STA 3. Each STA supports 2 SS. The non-AP MLD supports EMLMR mode.

**Scenario 1: there are remaining RF chains at the STA affiliated with the non-AP MLD for receiving group addressed frames**

The non-AP MLD setups link 1 and 2 and link 3 respectively with AP 1 and AP2 and AP3 affiliated with an AP MLD and enables EMLMR mode with 4 SS on link 1 and link 2 and link 3.

The EMLMR mode does not use all RF chains of the non-AP MLD. During an EMLMR frame exchange on a link, the non-AP MLD receives group addressed frames on other 2 links with remaining RF chains.

**Scenario 2: the STA for receiving group addressed frames is not an EMLMR STA**

The non-AP MLD enables EMLMR mode with 4 SS on link 1 and link 2. The non-AP MLD receives group addressed frames on link 3.

**Scenario 3: The AP MLD ends ongoing EMLMR frame exchange, only before group addressed frames transmission on the specific EMLMR link.**

The non-AP MLD supports EMLMR mode, and has enabled EMLMR mode with 6 SS on link 1 and link 2 and link 3. The non-AP MLD receives group addressed frames on link 3.

**So it is benifitial for the AP MLD to get to know**

* Whether the ongoing EMLMR frame exchange on a link with the non-AP MLD shall be endded Transition Delay before group addressed frames transmission on another EMLMR link.
* If Y, for which EMLMR link’s group addressed frames transmission the ongoing EMLMR frame exchange shall be ended.

**End of discussion**

**Propose:**

*TGbe editor: Change 9.4.1.74 as follows (track changes on):*

* + - 1. **EML Control field**

The EML Control field is defined in [Figure 9-144i (EML Control field format)](#bookmark94).

B0 B1 B2 B3 B6 B7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| EMLSR  Mode | EMLMR  Mode | End EMLMR Frame Exchange For Multicast on Another EMLMR Link | Link ID Receiving Multicast | Reserved | EMLSR/EMLMR Link Bitmap | MCS Map Cou/nt Control | EMLMR  Supported MCS And NSS Set |

Bits: 1 1 1 4 1 0 or 16 0 or 8 variable

**Figure 9-144i—EML Control field format (10128)**

*TGbe editor: Insert the following paragraph between 7th and 8th paragraph of 9.4.1.70 as follows (track changes on):*

……

(10128) The End EMLMR Frame Exchange For Multicast on Another EMLMR Link subfield is included in a frame sent by a STA affiliated with a non-AP MLD. The subfield is set to 1 if the ongoing EMLMR frame exchange on an EMLMR link shall be ended Transition Delay before group addressed frames transmission on another EMLMR link which is indicated by the Link ID Receiving Multicast subfield in the frame. Otherwise the End EMLMR Frame Exchange For Multicast on Another EMLMR Link subfield is set to 0 and the Link ID Receiving Multicast subfield is reserved. The subfields are reserved in a frame sent by an AP affiliated with an AP MLD.……

*TGbe editor: Insert the following paragraph between 1st and 2nd paragraph of 35.3.18 as follows (track changes on):*

……

(10128) The non-AP MLD shall indicate whether the ongoing EMLMR frame exchange shall be ended for group addressed frames transmission on another link in the End EMLMR Frame Exchange For Multicast on Another EMLMR Link subfield and the link in the Link ID Receiving Multicast subfield of the EML Control field of the EML Operating Mode Notification frame.

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*TGbe editor: Insert the following paragraph before the last paragraph of 35.3.18 as follows (track changes on):*

……

(10128) In case the End EMLMR Frame Exchange For Multicast on Another EMLMR Link subfield is equal to 1, the AP affiliated with the AP MLD shall end the ongoing EMLMR frame exchange with the STA affiliated with the non-AP MLD, Transition Delay before the group addressed frames transmission on the link indicated by the Link ID Receiving Multicast subfield. The STA affiliated with the non-AP MLD on the link indicated by the Link ID Receiving Multicast subfield may receive the group addressed frames. The non-AP MLD shall transit to EMLMR mode Transition Delay after the end of the group addressed frames transmission.

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