IEEE P802.11
Wireless LANs

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| CC36 Comment Resolution CID 7888  |
| Date: 2021-9-3 |
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Abstract

This submission proposes comment resolution(s) for the following CID(s) received in CC36 related to EMLSR operation for group address frames:

* 7888

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Updated based on comments during the MAC call and offline discussion.
* Rev 2: Updated based on offline discussions.

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| **CID** | **Commenter** | **Clause Number** | **Page.****Line** | **Comment** | **Proposed Change** | **Resolution** |
| 7888 | Yongho Seok | 35.3.15 | 281.47 | "The AP MLD shall initiate a frame exchange sequence with the non-AP MLD on one of the enabled links by transmitting an initial Control frame to the non-AP MLD with the limitations specified above."This should be limited to an individually addressed frame exchange sequence. And, clarify the reception of the group addressed frame in the EMLSR mode. | As in the comment. | Revised.Agree with the commenter. A procedure for a group addressed frame for a non-AP MLD operating in the EMLSR mode has been added.TGbe editor to make the changes with the CID tag (#7888) in doc.: IEEE 802.11-21/1483r2[https://mentor.ieee.org/802.11/dcn/21/11-21-1483-02-00be-cc36-cr-cid 7888.docx] |

**Discussion:**

r0:

When a non-AP MLD is operating in EMLSR mode, an AP affiliated with an AP MLD initiates frame exchange sequences by transmitting a MU-RTS or BSRP frame addressed to one of the STAs affiliated with the non-AP MLD. However, this is not applicable for a group address frame because the group address frame is for all associated non-AP MLDs.

A simple solution to this problem is to transmit group addressed frames immediately following a Beacon frame containing DTIM transmission. A non-AP MLD in the EMLSR mode knows when DTIM beacon will be transmitted so can receive group addressed frames following the DTIM beacon.

r1:

One of the feedbacks on r0 was that the original text in r0 was too concise and may need more details. Here are the changes highlighted in yellow. I borrowed the same structure that is used in 11.2.3 (Power management in a non-DMG infra) below for the EMLSR case:

*“If any non-GLK STA in its BSS is in PS mode, the AP shall buffer all non-GCR-SP group addressed BUs that*

*arrive via the DS and deliver them to all non-GLK STAs immediately following the next Beacon frame*

*containing a DTIM transmission.”*

And added the broadcast TWT SP case as Gaurang suggested.

r2: Added reference to 35.3.14 (multi-link group addressed frame delivery and reception) and clarified a non-AP MLD follows the same rules defined in 11.2.3.7 (receive operation for STAs in PS mode) to determine when to end the reception of group addressed frames.

**35.3.16 Enhanced multi-link single radio operation**

When a non-AP MLD is operating in the EMLSR mode with an AP MLD supporting the EMLSR mode the
following applies:

…

— The AP MLD shall initiate a frame exchange sequence with the non-AP MLD on one of the enabled
links by transmitting an initial Control frame to the non-AP MLD with the limitations specified
above.

~~(#7888)— An AP affiliated with the AP MLD shall transmit group addressed BUs immediately following a Beacon frame containing a DTIM transmission.~~

— (#7888) If any non-AP MLD with dot11EHTEMLSROptionImplemented equal to true that is associated with an AP MLD with dot11EHTEMLSROptionImplemented equal to true is operating in EMLSR mode, the AP MLD shall buffer all non-GCR-SP group addressed BUs that arrive via the DS and deliver the non-GCR-SP group addressed BUs following the rules defined in 35.3.14 (Multi-link group addressed frame delivery and reception). A non-AP MLD that is operating in EMLSR mode that switched to a link to receive non-GCR-SP group addressed BUs shall return to the listening operation after receiving all non-GCR-SP group addressed BUs following the rules defined in 11.2.3.7 (Receive operation for STAs in PS mode). ~~An AP affiliated with the AP MLD, that is operating on one of the EMLSR links of the non-AP MLD, shall deliver the non-GCR-SP group addressed BUs immediately following the next Beacon frame containing a DTIM transmission or during broadcast TWT SPs within that beacon interval as defined in 26.8.3.2 (Rules for TWT scheduling AP).~~

~~NOTE – An AP affiliated with the AP MLD, that is not operating on one of the EMLSR links of any non-AP MLD in the EMLSR mode, delivers the non-GCR-SP group addressed BUs following the rules described in 11.2.3 (Power management in a non-DMG infrastructure network).~~