IEEE P802.11
Wireless LANs

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| Proposed Draft Text for MLO Multi-Link Group Addressed Data Delivery |
| Date: 2020-09-21 |
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Abstract

This submission proposes draft text for the MLO Multi-Link Group Addressed Data Delivery based on the following portions of the SFD:

Revisions:

Rev 0: Initial version of the document.

Rev 1: Some wording changes based on comments.

Rev 2: Updated based on Motion 131, #SP199.

Rev 3: Moved the text corresponding to motion 122, #SP155 to NSTR operation subclause; moved the text corresponding to motion 131, #SP199 to “MAC data service” subclause; Wording changes based on received comments during the call.

1. 802.11be supports the following group addressed frames delivery mechanism in R1:
* An AP MLD should not cause a STA affiliated to a non-STR non-AP MLD to transmit an MPDU that overlaps with group addressed frames in a constrained link if another STA affiliated to the same non-STR non-AP MLD is expected to be receiving group addressed frames.

[Motion 122, #SP155, [10] and [171]]

1. 802.11be supports the following loopback prevention mechanism of the group address frame in the MLO in R1.
* An AP MLD that broadcasts the group addressed MPDU received from a non-AP MLD with which it has done multi-link setup shall set the SA field of the broadcast group addressed MPDU to the MLD MAC address of the non-AP MLD.
* A non-AP MLD filters out the group addressed MPDU with the SA field set to the MLD MAC address of the non-AP MLD.

[Motion 131, #SP199, [19] and [184]]

***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.***

***Change Clause 33.3.10.3 as follows:***

**33.3.10.3 Nonsimultaneous transmit and receive (NSTR) operation**

An MLD which has a pair of links for which the transmission by the STA of the MLD on one of the links of a PPDU using the maximum allowed transmission power on the primary 20 MHz channel of the BSS using any PPDU bandwidth permitted within the BSS that the STA is capable of transmitting causes the inability of the STA of the MLD on the other link to meet the minimum receive sensitivity requirement defined in 34.3.19.2 (Receiver minimum input sensitivity) shall indicate the pair of links as NSTR by setting the TBD field in the TBD elements that it transmits.

An AP that is affiliated with an MLD should not transmit to a STA affiliated with a non-AP MLD, a frame on a link of an NSTR link pair of the non-AP MLD at the same time that the non-AP MLD is transmitting a frame on the other link of the NSTR link pair.

A STA that is affiliated with a non-AP MLD should not transmit a frame on a link of one of its NSTR link pairs at the same time that another STA that is affiliated with the same non-AP MLD is receiving a frame addressed to that receiving STA on the other link of the NSTR link pair.

An AP MLD should not transmit a frame that solicits an immediate response to a STA affiliated to a non-AP MLD on a link that is a member of one or more NSTR link pairs for that non-AP MLD, if the immediate response overlaps in time with group addressed MPDUs scheduled in another link of any of those NSTR link pairs and the non-AP MLD is expected to be receiving those group addressed MPDUs.

(#Motion 122, SP155)

***Change Clause 10.2.7 as follows:***

**10.2.7 MAC data service**

(11ah)Unless the MPDU is delivered via DMS, the STA originating the message receives the message as a group addressed message (prior to any filtering). Therefore, a STA shall filter out group addressed messages that contain their address as the source address(#1018); the point at which such filtering occurs in the processing of received frames is an implementation choice. When dot11SSPNInterfaceActivated is false, group addressed MSDUs shall be propagated throughout the ESS. When dot11SSPNInterfaceActivated is true, group addressed MSDUs shall be propagated throughout the ESS only if dot11NonAPStationAuthSourceMulticast in the dot11InterworkingEntry identified by the source MAC address in the received message is true.

An AP MLD that broadcasts the group addressed MPDU received from a non-AP MLD with which it has done multi-link setup shall set the SA field of the broadcast group addressed MPDU to the MLD MAC address of the non-AP MLD.

A non-AP MLD shall filter out the group addressed MPDU with the SA field set to the MLD MAC address of the non-AP MLD.

 (#Motion 131, SP199)

**Straw Poll: Do you support to incorporate the proposed draft text in this document 11-20/1411r3 to the TGbe Draft 0.1?**

**Result: Yes/No/Abstain**