IEEE P802.11
Wireless LANs

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| LB266 CR for CID 12064 |
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Abstract

This submission proposes resolutions for the following CID for TGbe LB266:

• 12064

**Revisions:**

* Rev 0: Initial version of the document.

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| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 12064 | 487.14 | 35.5.2.3.1 | The operation of UORA with regards to Multi-link operation is unclear. In 11ax, a non-AP STA can not contend for an eligible RA-RU or decrement its OBO counter if it does not have pending frames for the AP. When a frame is mapped to two or more links, can it decrement multiple OBO counters at the same time? | Clarify UORA operation for MLO in a separate clause. For example 36.5.4.3 | RevisedAgree in principle with the commenter.UORA operation for MLO should be described in the spec.TGbe editor to make the changes shown in 11-22/1726r0 under all headings that include CID 12064  |

**Discussion:**

Based on the 802.11be D2.2 draft, the behavior of an EHT STA when contending on an RA-RU is based on it being an HE STA. Hence, in a non-AP MLD, two or more affiliated STAs act like two or more HE STAs contending on RA-RUs independently on their respective links.

In the baseline UORA procedure, it is mentioned a non-AP STA shall not contend for an eligible RA-RU or decrement its OBO counter if it does not have pending frames for the AP. Because STAs affiliated with a non-AP MLD share the same set of pending frames, we propose to clarify the UORA procedure for non-AP MLDs as follows.

***TGbe editor: Insert the following subclause 35.3.25 UORA procedure in multi-link operation in the latest version of TGbe draft (#12064)***

**35.3.26 UORA procedure in multi-link operation (#12064)**

A non-AP STA affiliated with a non-AP MLD shall follow the rules defined in 26.5.4 (UL OFDMA-based random access), with additional rules as defined in this subclause.

Each non-AP STA affiliated with a non-AP MLD shall maintain and update its own internal OCW and internal OBO counter independent of other non-AP STAs affiliated with the non-AP MLD. Each time the non-AP MLD associates with a different AP MLD and prior to the initial attempt of RA-RU transmission of an affiliated non-AP STA towards it, a non-AP STA affiliated with the non-AP MLD shall set the value of its OCW to the OCWmin value and shall initialize its OBO counter in the range 0 to OCW as defined in 26.5.4.3 (Transmission procedure for UORA).

If a non-AP MLD has pending frames for the AP MLD with which the non-AP MLD associates, each non-AP STA affiliated with the non-AP MLD may contend for an eligible RA-RU or decrement its OBO counter independently until all pending frames has been sent.

If a non-AP STA affiliated with a non-AP MLD transmits an HE TB PPDU that contains a frame that solicits an immediate response in an RA-RU and the expected response is not received, the transmission is considered unsuccessful. Otherwise, the transmission is considered successful. After each successful HE TB PPDU transmission in an RA-RU, a non-AP STA affiliated with the non-AP MLD shall set the value of its OCW to the OCWmin value and shall initialize its OBO counter in the range 0 to OCW as defined in 26.5.4.3 (Transmission procedure for UORA). A non-AP STA affiliated with a non-AP MLD shall follow the retransmission procedure defined in 26.5.4.4 (Retransmission procedure for UORA) if the transmission is not successful. A non-AP STA affiliated with the non-AP MLD shall maintain its value of OCW and OBO counter regardless of whether an HE TB PPDU transmission by another non-AP STA that is affiliated with the same non-AP MLD is successful or not.