IEEE P802.11
Wireless LANs

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| EOF handling in ack-enabled A-MPDU |
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| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jarkko Kneckt | Apple Inc | Cupertino, CA |  | jkneckt@apple.com |
| Yong Liu | Apple Inc |  |  |  |
| Jinjing Jiang | Apple Inc |  |  |  |

Abstract

This submission clarifies the A-MPDU subframes with EOF=0 and EOF =1 handling in ack-enabled A-MPDUs.

R1 – update to the resolution text as discussed in the WED AM1. Highlighted in green.

**Problem:**

The 802.11ax has contradicting or difficult to understand rules for EOF handling in the A-MPDU aggregation of the ack-enabled MPDUs:

- Clause 10.13.6(A-MPDU padding for VHT, HE or S1G PPDU): “An A-MPDU subframe with EOF set to 0 shall not be added after any A-MPDU subframe with EOF set to 1.”

- Clause 9.7.3(A-MPDU contents) defines for ack-enabled multi-TID A-MPDU contents. These tables list the transmission order for A-MPDU contents. For example, Table-9-532b P.237 l 26:” One EOF MPDU(#20925) that is either a QoS Data frame with Normal Ack or HTP Ack ack policy(#20545), or a Management frame that solicits an immediate response, one or more non-EOF MPDUs(#20925), each of which is a QoS Null frame with No Ack ack policy(#20545), or a Trigger frame. The Trigger frame is a Basic Trigger, BSRP Trigger or BQRP Trigger frame.”

* For trigger frames Table-9-532b has explicit rule. Trigger frames shall be transmitted before the data MPDUs: “The Trigger frames are the first MPDUs of the A-MPDU unless the A-MPDU also carries an Ack or BlockAck frame in which case the Trigger frames are included immediately after the Ack or BlockAck frame.”
* The other non-EOF (EOF =0) MPDUs, it seems to be OK to transmit them after the MPDU with EOF =1, but this contradicts the Clause 10.13.6(A-MPDU padding for VHT, HE or S1G PPDU):” An A-MPDU subframe with EOF set to 0 shall not be added after any A-MPDU subframe with EOF set to 1.”

Only the ack-enabled A-MPDUs violate the rule in 10.13.6, so making exception for these A-MPDUs seems to be the easiest resolution for this problem.

**Proposed resolution:**

Define an exception to rule in 10.13.6.

TGax Editor, please modify the sentence:” An A-MPDU subframe with EOF set to 0 shall not be added after any A-MPDU subframe with EOF set to 1.” To:“ An A-MPDU subframe with EOF set to 0 shall not be added after any A-MPDU subframe with EOF set to 1, except if the A-MPDU is an ack-enabled single-TID A-MPDU or ack-enabled multi-TID A-MPDU see 9.7.3(A-MPDU contents)”.