IEEE P802.11  
Wireless LANs

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| 802.11 TGac WG Letter Ballot LB187  Proposed resolutions to comment 4691 | | | | |
| Date: 2012-05-15 | | | | |
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Abstract

This submission contains proposed comment resolutions to comments received during WG letter ballot 187.

The comments included are non-editorial comment 4691 on Subclause 9.19.2.5.

There are 1 such comments: 4691.

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| **CID** | **By** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Proposed Resolution** |
| --- | --- | --- | --- | --- | --- | --- |
| 4691 | Liwen Chu | 109.45 | 9.17a | "The MU backoff procedure introduce the folowing issues: 1, P117, L39 ""In addition, at the end of the transmissions, depending on the transmission results, a secondary AC shall invoke different backoff rocedures defined for either event b) or event c)."" Matching end of transmission to initial transmission C) is bad. 2, It is not clear what to do when there are different acknowledge requirements of A-MPDUs in the first MU PPDU and acknowledge is not received. 3, It is not clear how to do backoff during a MU TXOP. " | Fix the problem. | REVISE. See resolution in document 12/0431r1 |

Resolution was deferred on Allan, David request.

Note: comment indicates clause 9.17a, but that is not correct; comment refers to clause 9.19.2.5

The comment refers to various aspects of the MU Backoff procdure and seeks clarifications.

Comment Part1

*1, P117, L39 ""In addition, at the end of the transmissions, depending on the transmission results, a secondary AC shall invoke different backoff rocedures defined for either event b) or event c)."" Matching end of transmission to initial transmission C) is bad.*

Discussion on Part 1

It is not clear what “at the end of the transmission” means; presumably it refers to the end of the TXOP, but event c) refers to the first frame of the TXOP, hence there is an inconsistency.

Moreover, since the channel access was acquired by the primary AC, the outcome of the initial or last frame exchange feeds back on the backoff for primary AC only. This keep the backoff procedure aligned with the SU case.

**Instructions to the Editor: delete this paragraph (at P117, L39).**

"In addition, at the end of the transmissions, depending on the transmission results, a secondary AC shall invoke different backoff procedures defined for either event b) or event c)."

**Note that this deletionwas already approved in the rsolution of CIDs 4410 4617 in 12/0509r2**

Comment Part 2

*2, It is not clear what to do when there are different acknowledge requirements of A-MPDUs in the first MU PPDU and acknowledge is not received.*

Dicussion on Part 2

*P117L16: The backoff procedure shall be invoked for an EDCAF when any of the following events occurs:*

1. *[…]*

*b) The final transmission by the TXOP holder initiated during the TXOP for that AC was successful*

*and the TXNAV timer has expired.*

*c) The expected immediate response to the initial frame of a TXOP of that AC is not received,*

c) Is very well defined

Regarding b), the following definition is also clear

*For the purposes of this subclause, successful transmission and transmission failure of an MPDU are defined as follows:*

*— After transmitting an MPDU (regardless of whether even if it is carried in an A-MPDU or as part of*

*an MU PPDU) that requires an immediate frame as a response, the STA shall wait for a timeout*

*interval of duration of aSIFSTime + aSlotTime + aPHY-RX-START-Delay, starting at the PHYTXEND.*

*confirm. If a PHYRXSTART.indication does not occur during the timeout interval, the*

*STA concludes that the transmission of the MPDU has failed.*

*A The transmission of an MPDU that does not require an immediate frame as a response is defined*

*as a successful transmission, unless it is one of the non-final (re)transmissions of an MPDU that is*

*delivered using the GCR unsolicited retry retransmission policy (9.19.2.6.2)*

Note: This condition seamlessly applies to MU also; based on above definition of successful transmission

* either all the MPDUs have no-ACK/delayed BA policy: they are successful by definition because no response is expected
* at least one of the A-MPDUs includes MPDUs with immediate BA policy and is successful if there is an immediate BA

To further clarify:

**Instruction to the editor: modify P117L20**

“b) The ~~final~~ transmission of all the MPDUs in the final PPDU transmitted by the TXOP holder ~~initiated~~ during the TXOP for that AC was successful as defined in this subclause and the TXNAV timer has expired*”*

Comment Part 3

*3, It is not clear how to do backoff during a MU TXOP.*

*Parts 1 and 2 clarify the backoff procedure*