IEEE P802.11
Wireless LANs

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| 802.11 TGac WG Letter Ballot LB187Proposed resolutions to comments on Clause 10.38.4 |
| Date: 2012-03-09 |
| Author(s): |
| Name | Company | Address | Phone | email |
| Kaiying Lv | ZTE Corporation | #10 South Tangyan Road  |  | lv.kaiying@zte.com.cn |
| Bo Sun | ZTE Corporation | #10 South Tangyan Road  |  | sun.bo1@zte.com.cn |

Abstract

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

The comments assigned to the author in Clause 10.38.4 are: 4465, 4677 and 5426

# Comments

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| 4465 | Brain Hart | 10.38.4 | 143.34 | "may discard without setting NAV ... does not include the primary channel" Need ot define where this discarding happens. Since the PHY-SAP does not allow for off-channel packets being sent to the MAC, therefore I assume the discarding happens at the PHY layer. Then this should be turned into a note | Convert to a note: "Note: the PHY may discard PPDUs that do not overlap the primary 20, and so the MAC does not update its NAV ... " |  |

**Discussion:**

The cited statement covers frames that lie completely within the operating sub-band of the PHY, so they are not “off-channel” but, for example, not on the primary channel. E.g. a 20 MHz reception that lies at say, the 2nd 20 MHz sub band within an 80 MHz operating sub-band.

It might be useful to get some indication of the arrival of such frames at the MAC, for the purpose of, for example, determining the relative level of occupancy of a secondary channel to assist in making a decision to change channels or reduce operating bandwidth.

Note that the existing language also leaves as a possible, optional mode of behaviour, the choice for the MAC to actually use DUR field information received from such a frame. Not certain if that is a good idea, but it is there and the suggested change would eliminate that choice and that has to be considered before eliminating it.

Now we have the situation that the PHY can receive an on-primary packet where NAV has to be set, and an off-primary packet where NAV does not have to be set, and the PHY has no way to tell the MAC which is which – so the MAC can’t do its job. That’s broken.

Two choices: a) PHY doesn’t send up off-primary packets; b) we add a new RXVECTOR parameter indicating on/off-primary-ness, and use this to refine when NAV is set/not set.

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| 4677 | Kaiying Lv | 10.38.4 | 143.39 | This paragraph states that STA may discard a frame without setting its NAV, but not defines the STA's action after discarding the frame. When the medium is indicated as idle following the end of reception of the discarded frame, the STA whose NAV has not been updated shall use EIFS or EIFS+AIFS[AC]-DIFS to provide enough time for another STA to acknowledge the frame discarded by this STA,before this STA commences transmission. | add a note here such as"Note--if a STA discards without setting its NAV a frame carried in a) or b) as described above, it shall use EIFS or EIFS+AIFS[AC]-DIFS before transmission,when it determines that the medium is idle following the end of reception of the frame that has been discarded." | **ACCEPT** |

**Discussion:**

The 802.11ac D2.0 text states:

“A STA may discard without setting its NAV a frame carried in a) an SU VHT PPDU with Group ID and Partial AID fields that indicate that the STA cannot be a recipient of the frame according to 9.17a (Group ID and Partial AID in VHT PPDUs) or b) an MU VHT PPDU containing a Group ID field for which either the STA is not a member or the STA is a member but the number of space time streams assigned to the user position of the STA for that group is zero.”

Since the STA without setting or updating its NAV may commence transmission whenever its previous NAV value count down to zero, it may not provide enough time for the intended recipient to acknowledge the frame which is discarded by this STA. So it is necessary to define the STA's action after discarding the frame.

**Proposed resolution:**

Please add text on page 143 line 45 as below:

If a STA discards a frame without setting its NAV as described a) or b) above, the STA shall invoke

1. EIFS or EIFS+AIFS[AC]-DIFS following the frame that has been discarded; or
2. ACKTxTime + SIFS + AIFS[AC] following the frame that has been discarded, where ACKTxTime is the time expressed in microseconds required to transmit an ACK or a Block ACK frame including preamble, PLCP header and any additional PHY dependent information, at the estimated PHY rate.

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| 5426 | Yusuke Asai | 10.38.4 | 143.39 | In this Draft, there are two similar terms; "VHT SU PPDU" and "SU VHT PPDU." These phrases seem to have identical meaning and should be unified. Ditto the terms of "VHT MU PPDU" and "MU VHT PPDU." | Change "SU VHT PPDU" to "VHT SU PPDU." In addition, change "MU VHT PPDU" to "VHT MU PPDU." | **ACCEPT** |

**Discussion:**

It is an editorial change.

**Proposed resolution:**

Please change page 143 line 39 as below:

A STA may discard without setting it s NAV a frame carried in a) an ~~SU~~ VHT SU PPDU with Group ID and Partial AID fields that indicate that th e STA cannot be a recipient of the frame according to 9.17a (Group ID and Partial AID in VHT PPDUs) or b) an ~~MU~~ VHT MU PPDU co ntaining a Group ID field for which either the STA is not a member or the STA is a me mber but the number of space time streams assigned to the user position of the STA for that group is zero.

Please change page 69 line 54 as below:

NOTE 1—An AP that sets MU Beamformer Capable to 1 can transmit an ~~MU~~ VHT MU PPDU with only one non-zero MU[ p] NSTS subfield.……