IEEE P802.11
Wireless LANs

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| 802.11 TGac WG Letter Ballot LB188LB188 MAC comment resolutions |
| Date: 2012-07-15 |
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Abstract

The document provides the comment resolution for the CIDs: 6122, 6775, 6373, 6375, 6381, 6805.

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| 6122 | 151.18 | 10.2.1.4a | If "must not" is needed in a note. The note should be changed to normative text.The note language is not clear. | Change to "A VHT AP shall not transmit VHT BlkAck Req after a MU PPDU and VHT Beamforming Report Poll after a VHT group NDPA frame if TXOP \_PS\_NOT\_ALLOWED has already been set to 0 in the current TXOP and it does not want the STAs in a group and in Awake state to enter the Doze state." |
| 6775 | 151.18 | 10.2.1.4a | "must" is a term that is specifically deprecated in IEEE standards. | Replace "must" with "does". |

**Proposed resolution:**

CID 6122: Revised: See the comment resolution for CID 6122 in 11-12/0915r0.

CID 6775: Accepted.

**Discussion:**

The current text is more general and applies to transmission of any VHT SU PPDU that may follow the MU PPDU, the intention of which is not to allow the STA to enter Doze state. The note here is to clarify the effect of sending VHT SU PPDU that might unintentionally cause the STA to enter doze state rather than a rule by itself.

**Proposed Text Change (P151, L18):**

NOTE—A VHT AP does not transmit VHT SU PPDUs in the current TXOP if the AP has already transmitted a VHT

PPDU with the TXVECTOR parameter TXOP\_PS\_NOT\_ALLOWED set to 0 in the same TXOP and does not want the

STAs that are in Awake state to enter the Doze state.

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| 6373 | 151.1 | 10.2.1.4a | NUM\_STS = 0 is in conflict with NUM\_STS definition in Table 22-1. | Fix NUM\_STS for MU in Table 22-1. |

**Discussion:**

For MU PPDU, in a TXVECTOR, the value of USER\_POSITION is an index of user in GROUP\_ID that has corresponding non-zero NUM\_STS (present per user from 1 to NUM\_USER). The value of NUM\_STS in the VHT-SIG-A is set to 0 for the remaining users (i.e. 4 – NUM\_USERS). If there is an user (member of a group) that corresponds to one of these remaining users in a GROUP\_ID, the value of NUM\_STS is 0 for iteself. Hence, the RXVECTOR has NUM\_STS value that is in the range 0-4 for MU.

**Proposed Resolution:**

Accepted. See the comment resolution for CID 6373 in 11-12/0915r0.

**Proposed Change:**

*Change the description of ‘value’ for NUM\_STS in table 22-1 as follows:*

Indicates the number of space-time streams.

Integer: range 1-8 for SU, 1-4 per user in TXVECTOR, 0-4 in RXVECTOR for MU.

NUM\_STS summed over all users is less than or equal to 8.

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| 6375 | 151.13 | 10.2.1.4a | If the Duraiton/ID is set to the remainder of the Txop then this effectively mandates multiple protection right? | If the intention is as described in the comment then perhaps this could be integrated into 8.2.5.2. |

**Proposed resolution:**

Rejected. See the discussion for CID 6375 in 11-12/0915r0.

**Discussion:** It is evidient from the text in place that, the NAV-Set sequence is required only for the TXOP in which TXOP\_PS\_NOT\_ALLOWED is 0. It mandates the protection for such a TXOP but it is independent of whether the TXOP protection corresponds to single or multiple protections.

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| 6381 | 151.43 | 10.2.1.4a | A STA that goes into Txop power save may not update its NAV according to the value set by the frame that put it into power save. Similarly, a STA that finds a VHT-SIGA error also does not set its NAV. In the latter, the STA is required to do EIFS before it can transmit again. Perhaps we should also add this for a STA that goes into Txop power save. | Add the use of EIFS prior to transmission for a STA that wakes up from Txop power save. |

**Proposed Resolution:**

Rejected. See the discussion for CID 6381 in 11-12/0915r0.

**Discussion:**

The comment is not clear. If the VHT-SIG-A is received in error, then there is no PHY-RXSTART.Indication and hence it is not required to perform EIFS. It is mentioned that the STA will wait until it receives PHY-RXSTART.indication.

From the text in P151, L43-48:

“If a VHT STA that is in TXOP power save mode and has entered Doze state during a TXOP is changing its state to Awake shall not access the medium until

— it receives a PHY-RXSTART.indication, or

— a period equal to the ProbeDelay has transpired.”

It is implicit that whether or not the STA is required to perform EIFS is based on the RXERROR parameter of the corresponding PHY-RXEND-indication.

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| 6805 | 150.55 | 10.2.1.4a | Change "conditions exists" to "conditions is met" | As in comment. |

**Proposed Resolution:**

Accepted. Changed as suggested.

**Change Text as follows on the page 150 line 52-53 as:**

“If the AP allows non-AP VHT STAs to enter Doze state during a TXOP, then a non-AP VHT STA that is in VHT TXOP power save mode may enter the Doze state till the end of that TXOP when one of the following conditions is met”

**References:**

1. IEEE Draft P802.11ac\_D3.0
2. IEEE 11-12-0752-03-00ac-lb188-comments-tgac-d3-0.xls