IEEE P802.11  
Wireless LANs

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| 802.11 TGac WG Letter Ballot LB187  Proposed resolutions to comments on clause 8.3.1.20 | | | | |
| Date: 2012-02-23 | | | | |
| Author(s): | | | | |
| Name | Company | Address | Phone | email |
| Simone Merlin | Qualcomm | San Diego, CA, USA |  | smerlin@qualcomm.com |
| Menzo Wentink | Qualcomm | Breukelen, the Netherlands |  | mwentink@qualcomm.com |
| Allert Van Zelst | Qualcomm | Breukelen, the Netherlands |  | allert@qualcomm.com |

Abstract

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

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| 4223 | Bin Chen | 35.17 | 8.3.1.20 | AP could suggest the frequency granularity of the Compressed Beamforming Feedback Matrix feeback by STA, to balance the overhead and performance of the network, especially when there is a large number of associated STA and feedback overhead is significant. | May consider to make AP has the right to config the frequency granularity of the Compressed Beamforming Feedback Matrix feedback by STA. | REJECT | MAC |

Ng is a parameter that only the BFee can set appropriately; BFer does not know the frequency selectivity of the channel for a BFee, before sounding.

Also, a single Ng in the NDPA would mean that all the STAs listed in the STA info fields would have to send feedback with same Ng; AP will then have to choose the Ng in a conservative way (low Ng) to be sure the feedback from all the STAs is good enough; this would actually increase the overhead, because for some STAs a higher Ng would have been sufficient.

Overall it does not seem to provide much benefit and it actually may hurt efficiency.

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| 4286 | Brian Hart | 35.15 | 8.3.1.20 | current sounding sequence | Define a sounding sequence - when does it start and especially when does it end? | REVISE | MAC |

**Change the sentence at P35L14 (8.3.1.20 NDPA frame format)**

The Sequence Number subfield in the Sounding Sequence field contains the sequence number to be included in the Sounding Sequence Number subfield of the VHT MIMO control field that is sent with the VHT Compressed Beamforming Report field computed from the VHT NDP following the current VHT NDP Announcement frame.

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| 4287 | Brian Hart | 35.41 | 8.3.1.20 | What is AID if STA is an AP? | Refine definition | REVISE | MAC |

The following textP130L21 (9.31.5) clarifies that an NDPA intended for an AP shall include only one one STA info field, and AID=0

*A beamformer that sends an NDPA frame to a beamformee that is an AP, mesh STA or STA that is a member of an IBSS, shall include a single STA Info field in the NDPA frame and shall set the AID field in the STA Info field to 0.*

The text though may be improved for clarity, as “*sends an NDPA frame to a beamformee that is an AP …”* is not well defined.

**Replace paragraph at P130L21 9.31.5 VHT sounding protocol with the following one**

A VHT NDP Announcement frame with a single STA Info field and addressed to an AP, Mesh STA or to a STA that is a member of an IBSS shall set the AID field in the STA Info field to 0.

A VHT NDP Announcement with multiple STA info fields shall not be used to request a VHT Compresed Beamforming frame from an AP, Mesh STA, or a STA that is a member of an IBSS.

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| 4288 | Brian Hart | 34.46 | 8.3.1.20 | No BSSID in NDPA, so if a client sends broadcast NDPA (e.g. TDLS+AP BFing), AP has to search thru up to thousands of TAs to determine if this NDPA is for it vs some other OBSS AP. Or is a BC NDPA to an AP ruled out elsewhere - if so then indicate via reference / explicit language | As in comment | REVISE | MAC |

See resolution to CID 4287.

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| 4791 | Mark RISON | 35.43 | 8.3.1.20 | May a STA be listed more than once in an NDPA? Perhaps to allow for different types of feedback to be requested? | Add a sentence at the end of the AID Description: "A given AID is not present more than once in an NDPA frame." | REVISE | MAC |

It is useful to clarify the behaviour as suggested by the comment

**Add the following sentence in P130L19**

A VHT NDP Announcement frame shall not include two or more STA Info fields with the same value in the AID subfield.

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 5313 | Wei Shi | 35.25 | 8.3.1.20 | The AID is a 16-bit value in the range 1 to 2007 for the 14 LSBs with the 2 MSBs always set to 1. | Figure 1-29l shows just 12 bits for AID. I think a note in 9.31.5 to say that a beamformee uses the 12 LSBs of an AID for NDPA processing would be useful. | REVISE | MAC |   **Change at P35L41**  Contains the 12 LSBs of the AID of the STA expected to process the  following NDP frame and prepare the sounding feedback. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

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