IEEE P802.11
Wireless LANs

|  |
| --- |
| D4.0 Sounding Comment Resolutions |
| Date: 2012-11-08 |
| Author(s): |
| Name | Affiliation | Address | Phone | Email |
| Yong Liu | Marvell | 5488 Marvell Ln, Santa Clara, CA 95054 | 4082228412 | yongliu@marvell.com |
|  |  |  |  |  |

Abstract

This document provides resolutions to the following MU comments: 7141, 7257, 7258, 7294, 7308

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 7141 | 171.06 | 9.31.5 | There is no Sounding Sequence field. | Is this supposed to be the "Sounding Dialog Token field", or what? Otherwise delete this sentence. | RevisedThe field name was changed from “Sounding Sequence field” to “Sounding Dialog Token field” in the NDPA frame format, but the corresponding text in 9.31.5 was not changed yet.Make changes under heading CID7141 in 11-12/1292r0 |

**Proposed resolution:**

*Revise P171 L5 in P802.11ac\_D4.0 as follows:*

The value of the Sounding Dialog Token Number subfield in the VHT MIMO Control field shall be set to the same value as the Sounding Dialog Token Number subfield in the Sounding Dialog Token field in the corresponding VHT NDP Announcement frame.

NOTE 1—The VHT beamformer can use the sounding dialog token in the VHT Compressed Beamforming frame(s) of the VHT Compressed Beamforming feedback to associate the feedback with a prior VHT NDP Announcement frame and thus compute the delay between sounding and receiving the feedback. The VHT beamformer can use this delay time when making a decision regarding the applicability of the feedback for the link.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 7257 | 168.39 | 9.31.5 | As written, the VHT sounding protocol does not allow sounding of several SU STAs with a single NDP (see page 168, line 39). Sounding of multiple beamformees is desirable because it reduces the overhead of beamforming. This is true for SU as well as MU. Other sections of the text appear to be SU/MU agnostic (e.g lines 22-65 on page 169). | Allow VHT sounding of more than one SU STA per NDP. |  RejectedIt was decided to not allow a BFmer to sounding multiple SU-only BFmees in order to simplify the design of SU-only BFmee. Specifically, the SU-only BFmee may not need to support Sounding Feedback Poll. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 7258 | 170.65 | 9.31.5 | Clarify requirement: if the transmission duration of the PPDU exceeds the maximum duration, should both the Compressed Beamforming Report information and the MU exclusive Beamforming Report information be omitted? Current use of "and" only suggests that they can not be sent togeher. | Replace "shall not include Compressed Beamforming Report information and any MU exclusive Beamforming Report information" with "shall not include Compressed Beamforming Report information or any MU exclusive Beamforming Report information" | Rejected1) A BFmee has to include all BF feedback information in a single PPDU. 2) If the PPDU exceeds the max PPDU duration, the BFmee cannot send a PPDU back with partial sounding feedback information.3) For 2), The BFmee has no other choice but sending a PPDU back without any sounding feedback information, which is the case specified by the commented text. |

**Discussion:**

The commented text is quoted below:

A VHT beamformee that transmits VHT Compressed Beamforming feedback shall not include the VHT Compressed Beamforming Report information and any MU Exclusive Beamforming Report information if the transmission duration of the PPDU carrying the VHT Compressed Beamforming Report information and any MU Exclusive Beamforming Report information would exceed the maximum PPDU duration.

**Proposed resolution:**

Rejected

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 7294 | 171.31 | 9.31.5 | In this NOTE, it is unclear. Maybe change "than it is" to "than the VHT beamformer is" | Please change as needed. | Rejected1) “It” here means the VHT Beamformee, instead of VHT Beamformer;2) Based on the previous text, the BFmee can only segment a BF feedback if the size of the feedback exceeds the max RX MPDU size at the BFmer side;3) It is possible that the BFmee may support a smaller max RX MPDU size than that of the BFmer, but still the BFmee has to transmit the BF feedback based on the max RX MPDU size at the BFmer side, instead of its own max MPDU size. |

**Discussion:**

The commented text is quoted below:

VHT Compressed Beamforming feedback shall be transmitted in a single VHT Compressed Beamforming frame unless the result would be a VHT Compressed Beamforming frame that exceeds the VHT beamformer's maximum MPDU length capability.

NOTE—The VHT beamformee might therefore have to transmit an MPDU that is bigger than it is capable of receiving.

**Proposed resolution:**

Rejected

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 7308 | 170.27 | 9.31.5 | "... shall set the VHT MIMO Control Feedback Type field" -> "... shall set the Feedback Type subfield of the VHT MIMO Control" | As in comment | RevisedMake changes under heading CID7308 in 11-12/1292r0 |

**Proposed resolution:**

*Revise P170 L27 in P802.11ac\_D4.0 as follows:*

A VHT beamformee that transmits a VHT Compressed Beamforming frame shall set the Feedback Type subfield in the VHT MIMO Control field to the same value as the Feedback Type field in the corresponding STA Info field in the VHT NDP Announcement frame.