### IEEE P802.11 Wireless LANs

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| **11ax D3.0 sounding comments** | | | | |
| Date: 2019-01-10 | | | | |
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Abstract

This document contains proposed resolutions for sounding related comments on 802.11ax draft 3.0 (73 CIDs).

* 15687, 15689, 15690, 15692, 15693, 16756

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| --- | --- | --- | --- | --- | --- | --- |
| **cid** | **commenter** | **p.l** | **clause** | **comment** | **proposed change** | **proposed resolution** |
| 15687 | Huizhao Wang | 304.33 | 27.6.2 | Partial or full BW SU feedback has no material relation with whether the sounding sequence is HE non-TB sequence or HE TB sounding sequence | Change the text:"An SU beamformer may solicit full bandwidth SU feedback from an SU beamformee in an HE non-TB sounding sequence. An SU beamformer shall not solicit partial bandwidth SU feedback in an HE non-TB sounding sequence. An SU beamformer may solicit partial bandwidth or full bandwidth SU feedback from an SU beamformee in an HE TB sounding sequence if the SU beamformee indicates support by setting the Triggered SU Beamforming Feedback subfield in the HE PHY Capabilities Information field in the HE Capabilities element it transmits to 1."  To:  "An SU beamformer may solicit full bandwidth SU feedback from an SU beamformee in an HE non-TB sounding sequence. An SU beamformer may solicit partial bandwidth or full bandwidth SU feedback from an SU beamformee in an HE TB sounding sequence or HE non-TB sounding sequence if the SU beamformee indicates support by setting the Triggered SU Beamforming Feedback subfield in the HE PHY Capabilities Information field in the HE Capabilities element it transmits to 1." | Revised - change as shown in <this document> under CID 15687 |
| 15689 | Huizhao Wang | 306.16 | 27.6.3 | Partial or full BW SU feedback has no material relation with whether the sounding sequence is HE non-TB sequence or HE TB sounding sequence | Remove the text:  "An HE beamformer shall not initiate an HE non-TB sounding sequence with an HE NDP Announcement frame that has a Partial BW Info field that indicates less than full bandwidth (see Table 27-4 (Settings for BW, RU Start Index, and RU End Index fields in HE NDP Announcement frame))." | Revised - change as shown in <this document> under CID 15689 |
| 15690 | Huizhao Wang | 307.04 | 27.6.3 | HE non-TB beamformer may suggest to the beamformee on: Ng, codebook size, Nc. And Beamformee may choose to ignore the suggestion from HE non-TB beamformer | Change the text:  "except when the HE NDP Announcement frame contains only one STA Info field, in which case the subcarrier grouping, Ng, codebook size and the number of columns, Nc, in the compressed beamforming feedback matrix to be used for the generation of the HE compressed beamforming and CQI report shall be determined by the recipient of the HE NDP Announcement frame."  To:  "When the HE NDP Announcement frame contains only one STA Info field, in which case the subcarrier grouping, Ng, codebook size and the number of columns, Nc, in the compressed beamforming feedback matrix to be used for the generation of the HE compressed beamforming and CQI report may be accepted by the recipient of the HE NDP Announcement frame to generate the feedback." | Revised - change as shown in <this document> under CID 15690 |
| 15692 | Huizhao Wang | 308.17 | 27.6.3 | Remove the dependancy of HE TB sounding sequence over requesting partial BW feedback | Remove the text:  "and the sequence is an HE TB sounding sequence (see 27.6.2 (Sounding sequences and support))" | Revised - change as shown in <this document> under CID 15692 |
| 15693 | Huizhao Wang | 308.23 | 27.6.3 | Beamformer may suggest to beamformee the parameters of: Nc, Ng, feedback type | Remove the text:  "An HE beamformer that transmits an HE NDP Announcement frame that has only one STA Info field shall set the Nc subfield to 0 and the Feedback Type And Ng subfield to 0 except when the HE NDP Announcement frame requests CQI-only feedback." | Revised - change as shown in <this document> under CID 15693 |

**Revision log:**

R1: initial.

**Discussion:**

The comments point out that there is no relationship between TB or none TB sounding sequences and the requested feedback bandwidth (full or parial). And in none TB sounding sequence, beamformer may choose to provide feedback parameters: Ng, codebook, Nc, feedback type (SU/MU/CQI-Only) to beamformee; beamformee may choose to take these parameters to form feedback or ignor them and use its own configured parameters to form feedback.

***TGax editor: within TGax D3.0, in subclause 27.6.2 Sounding sequences and support, modify the text as shown:***

Page 304.33 change as shown:

An SU beamformer may solicit full bandwidth SU feedback from an SU beamformee in an HE non-TB sounding sequence. An SU beamformer ~~shall not~~ may solicit partial bandwidth SU feedback in an HE TB sounding sequence or an HE non-TB sounding sequence~~. An SU beamformer may solicit partial bandwidth or full bandwidth SU feedback from an SU beamformee in an HE TB sounding sequence~~ if the SU beamformee indicates support by setting the Triggered SU Beamforming Feedback subfield in the HE PHY Capabilities Information field in the HE Capabilities element it transmits to 1. (CID 15687)

***TGax editor: within TGax D3.0, in subclause 27.6.3 Rules for sounding protocol sequences, modify the text as shown:***

Page 306.16 change as shown:

~~An HE beamformer shall not initiate an HE non-TB sounding sequence with an HE NDP Announcement frame that has a Partial BW Info field that indicates less than full bandwidth (see Table 27-4 (Settings for BW, RU Start Index, and RU End Index fields in HE NDP Announcement frame)).~~ (CID 15689)

Page 307.04 change as shown:

except when the HE NDP Announcement frame contains only one STA Info field, in which case the subcarrier grouping, Ng, codebook size and the number of columns, Nc, in the compressed beamforming feedback matrix to be used for the generation of the HE compressed beamforming and CQI report ~~shall~~ may be determined by the recipient of the HE NDP Announcement frame. (CID 15690)

Page 308.17 change as shown:

The HE beamformer shall solicit feedback over full bandwidth ~~when the HE NDP Announcement frame has only one STA Info field or~~ when the STA Info field is addressed to an HE beamformee that has indicated no support for partial bandwidth feedback. The HE beamformer may solicit feedback over full bandwidth or partial bandwidth when the STA Info field is addressed to an HE beamformee that has indicated support for partial bandwidth feedback ~~and the sequence is an HE TB sounding sequence (see 27.6.2 (Sounding sequences and support))~~ (CID 15692)

Page 309.23 change as shown:

An HE beamformer that transmits an HE NDP Announcement frame that has only one STA Info field ~~shall~~ may set the Nc subfield to 0 and the Feedback Type And Ng subfield to 0 except when the HE NDP Announcement frame requests CQI-only feedback. (CID 15693)