IEEE P802.11
Wireless LANs

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| 11ax Spec Text on Sounding Mode Reduction  |
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Abstract

This submission contains spec text to be incorporated in P802.11ax D1.0 related to 11ax sounding mode reduction as discussed per 11/16-1133r1.

***Editing instructions formatted like this are intended to be copied into the TGax Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGax Editor: Editing instructions preceded by “TGax Editor” are instructions to the TGax editor to modify or insert material in the TGax draft. As a result of adopting the changes, the TGax editor will execute the instructions rather than copy them to the TGax Draft.***

**TGax Editor: *Instruction:*** *Insert the paragraph below at the end of 25.6.2 Rules for HE sounding protocol sequences in page 100 of D0.4.*

**25.6.2 Rules for HE sounding protocol sequences**

Supporting SU-type feedback over full BW is mandatory for HE beamformee participating in HE sounding protocol with a single beamformee.

The beamformer initiating HE sounding protocol with one beamformee, shall not request MU-type feedback, CQI feedback, and SU-type partial bandwidth feedback, i.e., RU start index and RU end index do not cover full bandwith, in NDP accouncement.

Supporting MU-type feedback over full BW is mandatory for HE beamformees participating in HE sounding protocol with more than one beamformee.

Supporting SU-type feedback over partial BW is optional for HE beamformees participating in HE sounding protocol with more than one beamformee. The beamformer shall not request partial BW SU-type feedback in NDP announcement if the beamformee does not claim support for parital BW SU-type feedback in the HE capabilities field as in 9.4.2.213 (HE Capabilities Element).

Supporting MU-type feedback over partial BW is optional for HE beamformees participating in HE sounding protocol with more than one beamformee. The beamformer shall not request partial BW MU-type feedback in NDP announcement if the beamformee does not claim support for parital BW MU-type feedback in the HE capabilities field as in 9.4.2.213 (HE Capabilities Element).

Supporting CQI-only feedback with any RU start index and RU end index is optional for HE beamformees participating in HE sounding protocol with more than one beamformee.The beamformer shall not request CQI-only feedback with any RU start index and RU end index in NDP announcement if the beamformee does not claim support CQI-only feedback in the HE capabilities field as in 9.4.2.213 (HE Capabilities Element).

**9.4.2.213 HE Capabilities element**

**TGax Editor: *Insert a 3 new fields, each of 1 bit in length, in the corresponding Figures in 9.4.2.213 HE Capabilities element of D042.***

SU-Type partial BW Feedback Capable

MU-Type partial BW Feedback Capable

CQI-only feedback Capable

**TGax Editor: *Insert the paragraphs below at the end of the subclause 9.4.2.213 HE Capabilities element of D0.4:***

SU-Type partial BW Feedback Capable subfield indicates whether the beamformee is capable of SU-Type feedback over partial BW in the HE Compressed Beamforming Report field. It is set to 1 to indicate partial BW SU-Type feedback capable, set to 0 otherwise.

MU-Type partial BW Feedback Capable subfield indicates whether the beamformee is capable of MU-Type feedback over partial BW in the HE Compressed Beamforming Report field and HE MU exclusive beamforming Report field. It is set to 1 to indicate partial BW MU-type feedback capable, set to 0 otherwise.

CQI-only Feedback Capable subfield indicates whether the beamformee is capable of CQI-only feedback with RU start index and RU end index in the HE CQI-only Report field. It is set to 1 to indicate CQI-only feedback capable, set to 0 otherwise.