IEEE P802.11
Wireless LANs

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| Comment Resolution for LB 178 (D1.0): resolutions for MU comments 3476 and 3477 |
| Date: 8 November 2011 |
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Abstract

This document provides resolutions for CIDs 3476 and 3477

This document proposes an amendment to the resolution proposed in DCN 1276r1.

DCN 1276r1 introduced some technical changes to the way the presence of VHT Compressed Beamforming Report field and MU Exclusive Beamforming Report field is indicated. In particular it changed the interpretation of the Remaining Segments and First segment field;

In D1.0 the signalling allowed to indicate up to 8 segments ; the resolution in DCN 1276r1reduced the capability to signal only up to 7 segments.

This document proposes to reinstates the signalling defined in D1.0, which allows to indicate up to 8 segments, while addressing the clarification requested by CID 3477.

Amendments are highlighted and revision-tracked.

Further amendments highlighted in yellow

## Comments

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Clause** | **Duplicate of CID** | **Resn Status** | **Comment** | **Proposed Change** | **Resolution** |
| 3476 | 33.04 | 4 | 8.4.1.37 |  |  | Don't use shall in the frame formats section. This normative statement belongs in 9.30.5. Also, note that there are three flavors of report: null, su and mu. Any statement about format needs to account for null. | State that this field reflects value in NDPA. Statements regarding format of the VHT Compressed Beamforming frame can be made in 8.5.16.2. | P – Resolution provided in 11/1276r0 |
| 3477 | 62.30 | 30 | 8.5.16.2 |  |  | This section should describe the three formats: null: su and mu. | Add text to describe the three format: null if Remaining Segments = all ones. Su if Remaining segments < all ones and Feedback type = SU, MU if Remaining segments < all ones and Feedback type = MU. | P – Resolution provided in 11/1276r0 |

## Discussion

As noted by commenter (#3476), the “shall” statements need to be removed. Also, the Feedback Type field is not the only field that determines the format of the VHT Compressed Beamforming Report frame. The description for the Feedback Type field as it applies to the frame format is thus, at a minimum, incomplete. Rather than expand the description, delete what is there and insert a complete description in the VHT Compressed Beamforming frame format section. This would also satisfy #3477.

Note that no further changes are needed to 9.30.5. This section all ready has a statement:

“A beamformee shall send a VHT Compressed Beamforming frame with the VHT MIMO Control Feedback Type field set to the same value as the Feedback Type field in the corresponding STA Info field in the NDPA frame.”

that satisfies #3476.

## Resolution

**8.4.1.46 VHT MIMO Control field**

***Change Table 8-ac4 (D1.1) as follows:***

Table 8-ac4—Subfields of the VHT MIMO Control field

|  |  |
| --- | --- |
| **Subfield** | **Description** |
| Feedback Type | Set to 0 for SUSet to 1 for MU |
| Remaining Segments | Indicates(#3282) the number of remaining segments(#2793) for theassociated VHT Compressed Beamforming frame.Set to 0 for the last segment of a segmented frame or the only segmentof an unsegmented frame. Set to a value between 1 and 7 for a segment that is not the last segment of a segmented frame. Set to 7 if the VHT Compressed Beamforming Report field and MU Exclusive Beamforming Report field are not present in the frame.(#3476)In(#3286) a retransmitted segment, the field is set to the same valueassociated with the segment in the original transmission.(#3285) |
| First Segment | Set to 1 for the first segment of a segmented frame or the only segment of an unsegmented frame; set to 0 if it is not the first segments or if the VHT Compressed Beamforming Report field and MU Exclusive Beamforming Report field are not present in the frame..  In(#3286) a retransmitted segment, the field is set to the same value associated with the segment in the original transmission.(#3285) |

In(#3286) a VHT Compressed Beamforming frame not carrying a Compressed Beamforming Report field,

the fields Nc Index, Nr Index, Channel Width, Grouping, Codebook Information, Feedback Type,

and Sounding Sequence Number(#2002) are reserved and set to 0 and the Remaining Segments field is

set to 7.

**8.5.18.2 VHT Compressed Beamforming frame format**

***Change the last paragraph as follows:***

The conditions under which VHT Compressed Beamforming Report field and the MU Exclusive Beamforming Report field are absent are defined in 9.31.5 (VHT sounding protocol); Remaining Segments, Feedback Type and First Segment  subfields of the VHT MIMO Control field are set as defined in Table 8-YY\*.(#3476)(#3477);

Table 8-YY—VHT Compressed Beamforming Report frame fields present

|  |  |  |
| --- | --- | --- |
| **VHT MIMO Control field** | **VHT Compressed Beamforming Report field present** | **MU Exclusive Beamforming Report field present** |
| **Feedback Type** | **Remaining Segments** | **First Segment** |
| SU | 0-7 |  1 | Yes | No |
| SU | 0-6 | 0 | Yes | No |
| MU | 0-7 | 1 | Yes | Yes |
| MU | 0-6 | 0 | Yes | Yes |
| SU or MU\* | 7 | 0 | No | No |

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