IEEE P802.11  
Wireless LANs

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| D1.0 Comment Resolution, | | | | |
| Date: 2011-07-18 | | | | |
| Author(s): | | | | |
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##### Changes are based on text from 11ac D1.0. Changes indicated by a mixture of Word track-changes and instructions.

PHY CIDs addressed: **2662, 2672, 3044, 3174, 3175, 3397**

***PHY***

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 2662 | Kim, Joonsuk | 8.4.1.40 | 47 | 40 | T | Description on 'Max Nss for SU Present' in Table 8-ac12 is confusing. For example, "when feedback\_type=1…". Feedback\_type of what? Beamforming feedback report? | Clarify it | |  |  |  |  |  |  |  |

**Proposed resolution: Agree**

**Discussion**: When Max Nss For SU Present is set to 1, the Rx Nss is used to indicate to the beamformer the maximum number of spatial streams the beamformee can receive during SU-beamformed transmission under the condition that beamformer is using the feedback information in the MU Exclusive Beamforming Report field to calculate the beamforming steering matrix.

***Change:***

##### 11ac editor to change 22.3.4.7 (P47L40-45) as per highlighted text below.

Set to 1 if Rx Nss indicates the maximum number of spatial streams the beamformee can receive in a single user beamformed transmission under the condition that beamformer is using the feedback information in the MU Exclusive Beamforming Report field (~~when~~ i.e., feedback type = 1 ~~(~~as defined in Table 8-ac4 ~~(~~Subfields of the VHT MIMO Control field~~)~~) was used to calculate the beamforming steering matrix.

##### PHY

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| 2672 | Kim, Youhan | 8.4.2.101 | 55 | 39 | T | Channel Center Frequency Segment X' defines the center 'frequency', but the Encoding says 'channel number'. For example, suppose the BSS uses 80 MHz BW centered at 5210 MHz. What is the exact value to be put in this field? Note that Table 22-18 and Equation (22-89) define PLME MIBs (and their encoding) which basically correspond to the fields in the VHT Operation information field. In Table 22-18 and Equation (22-89), the 'dot11CurrentChannelCenterFrequencyIndex1' is the offset (in 5 MHz units) of the center frequency from 5.0 GHz. | Suggest to refrain from using the word 'channel number' from the 'Encoding' column for 'Channel Center Frequency Segment 1' and 'Channel Center Frequency Segment 2'. Clarify that the actual value to be inserted in these fields is the offset (in 5 MHz) of the center frequency from 5.0 GHz. Or perhaps have some link to Table 22-18 and Equation (22-89)? |

**Proposed resolution: Agree in Principle**

**Discussion**: The use of channel number together with channel starting frequency to calculate the channel center frequency has been adopted (Eq 19-88 in RevMb). To avoid confusion, the clarification on how to calculate the channel center frequency is added.

***Change:***

##### 11ac editor to change 8.4.2.101 (P55L39~L44) as per highlighted text below.

Set to the channel number, in 5 MHz increments from the channel starting frequency, corresponding to the channel center frequency of a 20, 40, 80 or 160 MHz VHT BSS or the channel number, in 5 MHz increments from the channel starting frequency, corresponding to the channel center frequency of segment 1 of a 80+80 MHz VHT BSS.

##### 11ac editor to change 8.4.2.101 (P55L45~L48) as per highlighted text below.

Set to the channel number, in 5 MHz increments from the channel starting frequency, corresponding to the channel center frequency of segment 2 of a 80+80 MHz VHT BSS.

##### PHY

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 3044 | Malinen, Jouni | 8.4.1.40 | 47 | 32 | T | Table 8-ac12 does not include the Reserved subfield. While this is not really used now, it would be better to explicitly define how it is to be set and ignored to allow for future extensions. | Add following row to Table 8-ac12: “Reserved | Set to 0 on transmission. Ignored on reception.” | |  |  |  |  |  |

**Proposed resolution: Disagree**

**Discussion**: There are many instances of subfields which are “reserved”. None are specified as described.

***Change:***

##### None

##### PHY

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 3174 | Perahia, Eldad | 8.4.1.40 | 47 | 31 | T | why is Channel Width dependent on Max Nss For SU Present? | please clarify | |  |  |  |  |  |  |  |
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**Proposed resolution: Agree in Principle**

**Discussion**: When Max Nss For SU Present is set to 1, the Rx Nss is used to indicate to beamformer the maximum number of spatial streams the beamformee can receive in a single user beamformed transmission under the condition that beamformer is using the feedback information in the MU Exclusive Beamforming Report field to calculate the beamforming steering matrix. In this situation, the Channel Width field is reserved to avoid confusion. To change the channel width for the case of MAX Nss for SU Present=1, the VHT Operating Mode Notification frame needs to be sent twice; the first one with the new Channel Width, Rx Nss, and with Max Nss for SU present=0, and the second one with new Rx Nss with Max Nss for SU present=1.

***Change:***

##### 11ac editor to change 22.3.4.7 (P47L31) as per highlighted text below.

Reserved if Max Nss For SU Present is set to 1.Note:To change the channel width, a VHT Operating Mode Notification frame with the new Channel Width and with Max Nss for SU present=0 shall be sent prior to the VHT Operating Mode Notification frame with Max Nss for SU present=1.

##### PHY

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| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 3175 | Perahia, Eldad | 8.4.1.40 | 47 | 49 | T | Which subfield does "this threshold" refer to? | please clarify | |  |  |  |  |  |  |  |
| |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | 3397 | Seok, Yongho | 8.4.1.40 | 47 | 49 | T | The meaning of the sentence is not clear. What is the definition of "threshold" here? | Clarify the sentence. | |  |  |  |  |  |  |  |

**Proposed resolution: Agree**

**Discussion**: When Max Nss For SU Present is set to 1, the Rx Nss is used to indicate to beamformer the maximum number of spatial streams the beamformee can receive in a single user beamformed transmission under the condition that beamformer is using the feedback information in the MU Exclusive Beamforming Report field to calculate the beamforming steering matrix. The threshold refers to the maximum number of spatial streams the STA can receive, Rx Nss.

***Change:***

##### 11ac editor to change 22.3.4.7 (P47L49) as per highlighted text below.

##### A beamformer may ignore ~~this~~ the threshold defined by Rx Nss if SU type feedback beamforming report is used to form a single user beamformed transmission.

Straw Poll: Do you agree to comment resolution presented in 0966r1