IEEE P802.11  
Wireless LANs

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| D1.0 Comment Resolution | | | | |
| Date: September 14, 2011 | | | | |
| Author(s): | | | | |
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Abstract

This document provides resolution for the following CIDs:

3782, 2300, 2129, 2130, 2131, 3059, 3085, 3131, 3178, 2914, 3181, 3198, 3046, 3253

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The comments are based on D1.0.

Edits for the proposed resolutions are based on D1.0.

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | | **SuggestedRemedy** |
| 3782 | 8.4.2.100 | 50 | 54 | T | Is the word "optional" appropriate here? If a STA wants to declare that it is VHT capable, it has to have some non-optional VHT capabilities. | Remove the words "additional optional" | |

**Discussion:**

The information carried in the The VHT capability element shall be essential to the VHT STA. As stated in line 52, “A VHT STA declares that it is a VHT STA by transmitting the VHT Capabilities element.”

The information is not “additional optional.”

**Proposed Response:**

**AGREE.**

Delete “additional optional”

**Proposed Resolution Text:**

The VHT Capabilities element contains a number of fields that are used to advertise ~~additional optional~~ VHT capabilities of a VHT STA.

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 2300 | 8.4.2.100.1 | 50 | 52 | T | Can a VHT STA declare that it is a VHT STA by transmitting only the VHT Capabilities element without transmitting the HT Capabilities element? If not this should be specified. | Replace line with "A VHT STA declares that it is a VHT STA by transmitting the VHT Capabilities element along with the HT Capabilities element." |

**Discussion:**

It is the responsibility of a STA to announce its capability.

Since the 11ac specification only covers VHT capablility of a VHT STA, it is not necessary to address the HT behavior in this specification.

**Proposed Response:**

**DISAGREE.**

**Proposed Resolution Text:**

N/A

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | | **SuggestedRemedy** |
| 2129 | 8.4.2.100.2 | 51 | 4 | T | "The VHT Capabilities Info field is 4 octets in length. The structure of this field is defined in Figure 8-ac11." The length is already given in the diagram. Putting the same information in two different places is just asking for trouble keeping the two synchronized. | "The structure of the VHT Capabilities Info field is defined in Figure 8-ac11." | |
| 2130 | 8.4.2.100.3 | 53 | 51 | T | "The VHT Supported MCS Set field is 8 octets in length. This field is used to convey the combinations of MCSs and spatial streams a STA supports for both reception and transmission." The length is already given in the diagram. Putting the same information in two different places is just asking for trouble keeping the two synchronized. | "The VHT Supported MCS Set field is used to convey the combinations of MCSs and spatial streams a STA supports for both reception and transmission." | |
| 2131 | 8.4.2.100.3 | 54 | 1 | T | "The Rx MCS Map subfield and the Tx MCS Map subfield are each 2 octets in length and have the structure shown in Figure 8-ac13." | "The Rx MCS Map subfield and the Tx MCS Map subfield have the structure shown in Figure 8-ac13." | |

**Discussion:**

Agree with the commentor on these three CIDs

The text is changed as suggested.

**Proposed Response:**

**Agree.**

**Proposed Resolution Text:**

**CID 2129**

*Replace*

"The VHT Capabilities Info field is 4 octets in length. The structure of this field is defined in Figure 8-ac11.",

with

"The structure of the VHT Capabilities Info field is defined in Figure 8-ac11."

**CID 2130**

*Replace*

"The VHT Supported MCS Set field is 8 octets in length. This field is used to convey the combinations of MCSs and spatial streams a STA supports for both reception and transmission."

*With*

"The VHT Supported MCS Set field is used to convey the combinations of MCSs and spatial streams a STA supports for both reception and transmission."

**CID 2131**

*Replace*

"The Rx MCS Map subfield and the Tx MCS Map subfield are each 2 octets in length and have the structure shown in Figure 8-ac13."

*With*

"The Rx MCS Map subfield and the Tx MCS Map subfield have the structure shown in Figure 8-ac13."

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| 3059 | 8.4.2.100.2 | 51 | 9 | T | Does the maximum VHT (A-)MPDU size apply to all PHY packets or does it applies only to VHT packets? | specify that the maximum A-MPDU size in VHT capabilities only applies to VHT PPDUs and the maximum A-MPDU size in HT capabilities only applies to HT PPDUs and the |

**Discussion:**

Clauses 9.11 and 9.12.2 clearly specify the definitions and the operations of A-MPDU for HT and VHT packets.

**Proposed Response:**

**DISAGREE**

**Proposed Resolution Text:**

N/A

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3085 | 8.4.2.100.2 | 53 | 22 | T | Maximum AMPDU Length Exponent Indicates the maximum length of A-MPDU that the STA can receive. It should indicate the Pre EOF A-MPDU length | change the description according to the description in the A-MPDU length limit rules |

**Discussion:**

Clauses 9.12.2 clearly specifies “A VHT STA shall be capable of receiving A-MPDUs where the AMPDU pre-EOF padding length is up to the value indicated by the Maximum A-MPDU Length Exponent field in its VHT Capabilities element.”

**Proposed Response:**

**AGREE**

**Proposed Resolution Text:**

*Replace*

Indicates the maximum A-MPDU that the STA can receive.

*With*

Indicates the maximum A-MPDU pre-EOF padding length that the STA can receive.

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| 3131 | 8.4.2.100.2 | 53 | 27 | T | Clarify if the VHT link adaptation should be set to a non zero vaue only when +HTC-VHT capable is set to 1 | Clarify it |

**Discussion:**

Agree in Princple.

**Proposed Response:**

**COUNTER** with the proposed changes

**Proposed Resolution text:**

Append the followig sentence in the Defintion field of the VHT Link Adaptation Capable subfield entry in Table 8-ac13.

“The value of the VHT Link Adaptation Capable field shall be ignored if “+HTC-VHT Capable” field is set to 0.”

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3178 | 8.4.2.100.2 | 51 | 48 | T | there is no definition for Supported Channel Width Set in Table 8-ac13 | at least use the 11n definition, "Indicates the channel widths supported by the STA." |

**Discussion:**

The definition field should not be blank.

**Proposed Response:**

**AGREE**

**Proposed Resolution text:**

Insert the following sentence in the Defintion field of the Supported Channl Width Set subfield entry of Table 8-ac13.

“Indicates the channel widths supported by the STA. See 10.25 VHT BSS operation”

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 2914 | 8.4.2.100.2 | 51 | 40 | T | 3839B/7935B max A-MSDU lengths leave only 256B for buffer overhead, which is not sufficient for Linux. | 1) Change the max A-MSDU lengths to 3583B/7679B instead (allowing 512B buffer overhead); 2) Allow VHT STA to set 7679B for max A-MSDU length in a VHT PPDU and set 3839B for max A-MSDU length in a HT PPDU |

**Discussion:**

**WITHDRAWN** by the commentor.

**Proposed Response:**

**N/A**

**Proposed Resolution text:**

N/A

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3181 | 8.4.2.100.2 | 53 | 12 | T | "Indicates whether or not the STA is in VHT TXOP Power Save mode when included in Association/Reassociation Requests and Probe Request frames" reads like its an operational condition not a capability. | please clarify |

**Discussion:**

The description is indeed operational.

**Proposed Response:**

**AGREE**

**Proposed Resolution text:**

*Replace the text in the Definition field with the following;*

The bit is used to indicates whether or not the AP supports VHT TXOP Power Save Mode or whether or not the STA is in VHT TXOP Power Save mode.

*Revise the text in the encoding field as suggested below.*

When transmitted by a VHT AP in VHT capabilities element included in Beacon, Probe Response, Association Response or Reassociation Response frames:

Set to 0 if the VHT AP does not support VHT TXOP Power Save in the BSS.

Set to 1 if the VHT AP supports TXOP Power Save in the BSS.

When transmitted by a VHT non-AP STA in VHT capabilities element included in Association/Reassociation Requests or Probe Request frames:

Set to 0 if the VHT STA is not in TXOP Power Save Mode.

Set to 1 if the VHT STA is in TXOP Power Save Mode.

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3198 | 8.4.2.100.2 | 52 | 24-53 | T | It would be better to have a 2-bit beamforer/beamformee capability flag to indicate three three allowed options: no BF, SU-only, SU and MU. | as per comment |

**Discussion:**

There are four bits in the VHT capabilities info field describing whether a beamformer or a beamformee is SU or MU capable. The combination of the two bits does exactly what the commentor proposed.

**Proposed Response:**

**REJECT**

**Proposed Resolution text:**

N/A

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| 3046 | 8.4.2.100.3 | 53 | 36 | T | Table 8-ac13 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-ac13: “Reserved | Set to 0 on transmission. Ignored on reception.” |

**Discussion:**

According to REVmb spec, **8.2.2 Conventions, “**Reserved fields and subfields are set to 0 upon transmission and are ignored upon reception”.

The reserved field is already in the element and there is no need to define it in the table.

**Proposed Response:**

**DISAGREE**

**Proposed Resolution text:**

N/A

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3253 | 8.4.2.100.3 | 54 | 37 | T | For Rx Supported Data Rate, it says "If the maximum data rate expressed in Mb/s is not an integer, then the value is rounded up to the next integer." This could potentially lead to a STA advertising support for a data rate that is higher than it can actually support. I think this should read "rounded down to the next integer". (I believe that for the Tx Highest Supported Data Rate that it it is safe to leave it as "rounded up", as this won't cause any problems. | Change "rounded up" to "rounded down". |

**Discussion:**

Disagreed with the commentor

Rounding up does not cause any real problem and it is up to the STA how it wants to advertise its capability.

**Proposed Response:**

**DISGREE**

**Proposed Resolution text:**

**Rounding up or rounding down is not the issue. The definition is the maximum data rate a STA can receive. Which ever rounding direction is chosen, the maximum rate is selected by the device to meet its capability. Therefore it is not necessary to change the rounding method.**