IEEE P802.11
Wireless LANs

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| D1.0 Comment Resolution  |
| Date: July 17, 2011 |
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Abstract

This document provides resolution for the following CIDs:

2608, 2623, 3698, 2673, 3183, 3254, 2674, 3184, 2297, 2726, 3257, 2774, 2775, 3258

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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** |
| 2608 | 8.4.2.102 | 56 |  | T | The number of VHT capable STAs provides the information on how many receivers are capable to transmit and receive VHT transmissions. This information provides better understanding of the BSS load.. | Add information element to provide the number of VHT STAs in the BSS |
| 2623 | 8.4.2.102 | 56 |  | T | The "amount of VHT capable STAs", provides information about how many receivers are capable to transmit and receive VHT transmissions. This information provides better understanding of the BSS load. | Add information element to provide the amount of VHT STAs in the BSS. |
| 3698 | 8.4.2.102 | 56 |  | T | The amount of VHT capable STAs provides information how many receivers are capable to transmit and receive VHT transmissions. This information provides better understanding of the BSS load. | Add information element to provide the amount of VHT STAs in the BSS. |

**Discussion:**

The BSS load element IE provides the loading information of a BSS for the time period prior the transmission of the information element. It may be updated regularly.

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**Proposed Response:**

**DISAGREE.**

The information about the number of VHT STAs in the BSS may be useful but not necessarily a good indicator about the loading of the BSS at any moment. A VHT STA may be idle and not contribute meaningfully to the load of a BSS.

A new information element just for carrying the number of VHT STA is inefficient to provide BSS load information.

**Proposed Resolution Text:**

N/A

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 2673 | 8.4.2.102 | 56 | 6 | T | What is the meaning of '(5)' under 'Length' in Figure 8-ac16? |  |
| 3183 | 8.4.2.102 | 56 | 6 | T | what is the (5) for in Length field? | please clarify |

**Discussion:**

It is an editorial error. It should be removed.

**Proposed Response:**

Deleting the “(5)” from table 8-ac 16.

**Proposed Resolution Text:**

As above.

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3254 | 8.4.2.102 | 56 | 23 | T | I think the term "max\_supported\_ss" is actually supposed to be "max\_supported\_Nss". | Change the term "max\_supported\_ss" to "max\_supported\_Nss". |
| 2674 | 8.4.2.102 | 56 | 24 | T | Number of left parenthesis do not match the number of righ parenthesis in the equation for Spatial Stream Under-Utilization |  |
| 3184 | 8.4.2.102 | 56 | 23 | T | change max\_supported\_ss to max\_supported\_Nss | As in comment |

**Discussion:**

3254, 3184 - It is an editorial error.

2674 - It is an editorial error.

**Proposed Response:**

**Agree.**

**Proposed Resolution Text:**

Replacing

Spatial Stream Under-Utilization = floor((max\_supported\_ss\* channel\_busy\_time - utilized\_ss\_time)/(channel\_busy\_time\* max\_supported\_Nss)) \* 255),

with

Spatial Stream Under-Utilization = floor((max\_supported\_~~ss~~Nss\* channel\_busy\_time - utilized\_ss\_time)/ (channel\_busy\_time\* max\_supported\_Nss)~~)~~ \*255),

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| 2297 | 8.4.2.102 | 56 | 21 | T | Described Spatial Stream is not a "percentage"- part with multiplier 255. | decide for one solution |
| 2726 | 8.4.2.102 | 56 | 21 | T | The percentage is value 1/100 while in Spatial Stream under utilisation field the value is 1/255. | Replace percentage with value, or make it to be percentage. |

**Discussion:**

The description in line 18-25 is unclear and misleading. The description should instead make it clear that the parameter is defined as percentage of time and linearly scaled with 255 to represent 100% as described below.

The Spatial Stream Under-Utilization is defined as the **percentage** of time but linearly scaled with 255 **representing 100%.**

**Proposed Response:**

COUNTER with the proposed text below.

**Proposed Resolution Text:**

The Spatial Stream Under-Utilization field is defined as the ~~fraction~~ percentage of time, linearly scaled with 255 representing 100%, that the AP has under utilized spatial domain resources for given busy time of the medium. When more than one channel is in use for the BSS, the spatial stream under-utility value is calculated only for the primary channel. This percentage is computed using the formula,

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 3257 | 8.4.2.102 | 56 | 45, 51, 56 | T | The Forty MHz Utilization field, Eighty MHz Utilization field and Hundred Sixty MHz Utilization field are all "defined as the fraction of time". They are not percentages, as described in the following sentence of each paragraph. | Change "percentage" to "fraction" for each of the utilization fields mentioned. |

**Discussion:**

The descriptions found on line 45, 51, and 56 are unclear and misleading. The description should make it clear that the parameter is defined as percentage of time and linearly scaled with 255 to represent 100%.

**Proposed Response:**

COUNTER with the proposed text change below.

**Proposed Resolution Text:**

The Forty MHz Utilization field is defined as the percentage~~fraction~~ of time, linearly scaled with 255 representing 100%,

The Eighty MHz Utilization field is defined as the percentage~~fraction~~ of time, linearly scaled with 255 representing 100%,

The Hundred Sixty MHz Utilization field is defined as the percentage~~fraction~~ of time, linearly scaled with 255 representing 100%,

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| **CommentID** | **Subclause** | **Page** | **Line** | **CommentType** | **Comment** | **SuggestedRemedy** |
| 2774 | 8.4.2.102 | 57 | 20 | T | "If the AP indicates a channel width of 20 MHz, or 40 MHz in the Channel Width field in the VHT Operation element, then the Eighty MHz Utilization field shall be reserved and set to 0." How about Hundred Sixty MHz Utilization field? Is it also set to 0?  | Clarify it |
| 2775 | 8.4.2.102 | 57 | 20 | T | "If the AP indicates a channel width of 20 MHz in the Channel Width field in the VHT Operation element, then the Forty MHz Utilization field shall be reserved and set to 0" How about Eighty MHz Utilization and Hundred Sixty MHz Utilization field? Are they also set to 0? |  |
| 3258 | 8.4.2.102 | 57 | 20, 24 | T | Does the standard define a default value for all reserved fields? Why does this clause explicitly specify this reserved field should be set to zeros? | Change "reserved and set to 0" to "reserved" for both instances in this paragraph. |

**Discussion:**

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

**Proposed Response:**

**COUNTER** with the proposed changes

**Proposed Resolution text:**

If the AP indicates a channel width of 20 MHz, 40 MHz or 80 MHz in the Channel Width field in the VHT Operation element, then the Hundred Sixty MHz Utilization field is ~~shall be~~ reserved ~~and set to 0~~. If the AP indicates a channel width of 20 MHz, or 40 MHz in the Channel Width field in the VHT Operation element, then the Eighty MHz Utilization field is ~~shall be~~ reserved ~~and set to 0~~. If the AP indicates a channel width of 20 MHz in the Channel Width field in the VHT Operation element, then the Forty MHz Utilization field is ~~shall be~~ reserved ~~and set to 0~~. Reserved fields and subfields are set to 0 upon transmission and are ignored upon reception.