IEEE P802.11  
Wireless LANs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Comment resolution on unsolicited RSS | | | | |
| Date: 2018-03-05 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Dejian Li | Huawei |  |  | dejian.li@huawei.com |
|  |  |  |  |  |

Abstract

This submission proposes resolutions to 6 CIDs 1118, 1132, 1746, 1786, 1787, and 1953 for the 11ay draft text.

The resolution is in reference to Draft IEEE P802.11ay D1.1.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 1118 | 9.4.2.134 | 51.01 | There is no clear definition how the BW field represent the "Channel Width". | Need to add reference or definition of the channel width |

**Discussion:** For the “channel width”, it is already defined by “If the IsChannelNumber field is set to 0, the BW field indicates a channel width using the bitmap format of the BW field defined in Table 41.” However, the definition of “channel number” in this paragraph is not clear. The definition of channel number should be pointed to the text as indicated in 9.4.2.250.5 (Supported Channels field) rather than Annex E. To make the definition clear, the format of BW field to indicate the channel number is defined by “using the bitmap format of the BW field defined in Table 41”.

**Proposed resolution**: Revised

***Change the last paragraph in 9.4.2.134 as follows:***

The BW field indicates the requested channel width or channel number of the allocation. If the IsChannelNumber field is set to 1, the BW field using the bitmap format of the BW field defined in Table 41 and the Channel Aggregation subfield are collectively used to derive a requested channel number for the allocation per the channel numbers defined in9.4.2.250.5. If the IsChannelNumber field is set to 0, the BW field indicates a channel width using the bitmap format of the BW field defined in Table 41. In this case, the channel width can be allocated on any channel number. When transmitted in an ADDTS Response frame, the BW field indicates the allocated channel for the allocation using the bitmap format of the BW field defined in Table 41.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 1132 | 10.38.6.2 | 156.21 | Please consider to indicate the length of BI as expiration time in which unsolicited RSS may be initiated after receiving DMG Beacon or SLS with "Unsolicited RSS Enabled" subfield set to 1. |  |

**Discussion:** It is reasonable that the unsolicited RSS shall be completed within the same BI in which the DMG Beacon or SSW frame was received.

**Proposed resolution**: Revised

***Insert the following paragraph after the third paragraph in* 10.39.6.2*:***

**10.39.6.2 SLS phase execution**

If an EDMG STA receives a DMG Beacon or SSW frame from an EDMG STA with the Unsolicited RSS Enabled subfield equal to 1, the STA may process the received DMG Beacon or SSW frames as a responder even if the A-BFT is not present for the case of a received DMG Beacon frame, or even if the STA’s MAC address does not match the RA field for the case of a received SSW frame. The STA may then perform an RSS with the initiator in response to the received SSW frames in a subsequent TXOP or SP. This is known as an unsolicited RSS.

If an EDMG STA received a DMG Beacon or SSW frame with the Unsolicited RSS Enabled subfield equal to 1 and, if an unsolicited RSS is performed, the EDMG STA shall complete the unsolicited RSS within the same beacon interval in which the DMG Beacon or SSW frame was received.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 1746 | 9.4.2.134 | 50.25 | "The Aggregation subfield" should read "The Channel Aggregation subfield". | Replace "The Aggregation subfield" with "The Channel Aggregation subfield". |

**Discussion:** "The Aggregation subfield" is a typo, do as the suggested remedy. And, modify the setting rule related to the Channel Aggregation subfield in 11.4.13.2 (Isochronous allocation) and 11.4.13.3 (Asynchronous allocation).

**Proposed resolution**: Revised

***Change the last paragraph in page 73 in 11ay D1.1 as follows:***

The Channel Aggregation subfield is defined in Table 41.

**11.4.13.2 Isochronous allocation**

***Change the first paragraph in 11.4.13.2 as follows:***

An EDMG STA may request an SP allocation by using the BW, Channel Aggregation and IsChannelNumber subfields in the DMG TSPEC element. To request a specific channel, the STA shall set the IsChannelNumber subfield to 1 and set the BW subfield to the value of the requested channel; otherwise, the STA shall set the IsChannelNumber subfield to 0 and set the BW subfield to the value of requested channel width. Upon reception of a DMG ADDTS Request frame that is admitted, an EDMG AP or EDMG PCP sets the Channel Aggregation subfield in the DMG ADDTS Response frame to the value of the Channel Aggregation subfield in the received DMG TSPEC element for the allocated channel, and sets the value of the BW subfield in the DMG TSPEC element of the DMG ADDTS Response frame sent in response to the ADDTS Request frame such that it meets the following requirements:

**11.4.13.3 Asynchronous allocation**

***Change the first paragraph in 11.4.13.3 as follows:***

An EDMG STA may request an SP allocation by transmitting an SPR frame with the CONTROL\_TRAILER parameter in the TXVECTOR set to Present, CT\_TYPE parameter in the TXVECTOR set to SPR, and then using the BW, Channel Aggregation and IsChannelNumber subfields in the control trailer. To request a specific channel, the STA shall set the IsChannelNumber subfield to 1 and set the BW subfield to the value of the requested channel; otherwise, the STA shall set the IsChannelNumber subfield to 0 and set the BW subfield to the value of requested channel width. Upon reception of the SPR frame, an EDMG AP or EDMG PCP responds with a Grant frame that has the CONTROL\_TRAILER parameter in the TXVECTOR set to Present and CT\_TYPE parameter in the TXVECTOR set to GRANT\_RTS\_CTS2self. The EDMG AP or EDMG PCP sets the Channel Aggregation subfield in the Grant frame to the value of the Channel Aggregation subfield in the received SPR frame for the allocated channel, and sets the value of the BW subfieldin the control trailer of the Grant frame such that the following requirements are met:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 1786 | 10.38.6.2 | 156.39 | The sentence "..., the STA identified in (a) receives an SSW frame that is not a response to an immediately preceding ISS and for which the Direction field is set to 1 and the RA field of the SSW frame is equal to the STA's MAC address." looks to be broken. | Please correct the sentence. (I could not figure out how to fix it.) |

**Discussion:** The mentioned sentence is reworded.

**Proposed resolution**: Revised

***Change bullet b) as follows:***

b) Following the transmission of a DMG Beacon or SSW frame with the Unsolicited RSS Enabled subfield set to 1, the STA identified in (a) receives an SSW frame that is not a response to an immediately preceding ISS, with the Direction field in the received SSW frame equal to 1 and with the RA field in the received SSW frame equal to the STA’s MAC address

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 1787 | 10.38.6.2 | 157.09 | The sentence reads: "Figure 97 shows an example of an unsolicited RSS. STA A that performs an ISS or RSS with STA C sets the Unsolicited RSS Enabled subfield to 1..." Hoever, there is no STA C found in figure 97. Also, Figure 97 is very difficult to understand what is happening, i.e., TXSS from STA B to STA A is not shown, etc. | Please correct the paragraph starting from 157.9 and Figure 97 to be more reader friendly. |

**Discussion:** First, there exists STA C in Figure 97. STA C is the target receiver of the TXSS in the TXOP1 or SP1 in Figure 97, see “**In case of TXOP1/SP1**: TXSS (STA A -> ***STA C***) (Unsolicited RSS Enabled = 1; Direction = 0 or 1)”. Further, since the unsolicited RSS is performed by STA A and STA B in this example, so only the unsolicited RSS flow bewteen STA A and STA B is shown explicitly.

Second, the TXSS of STA B -> STA A is shown by adding “SSW(s)” to TXOP2/SP2 in Figure 97.

**Proposed resolution**: Revised

***Change Figure 109 in 11ay D1.1 as follows:***



Figure 109 —Example of an unsolicited RSS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page** | **Comment** | **Proposed change** |
| 1953 | 9.4.2.134 | 50.24 | There is no rule that prevents the AP/PCP STA responding with any type of channel allocation (channel or BW) to the non AP/PCP STA request. Hence the IsChannelNumber indication shall be provided in the TSPEC when responded in the ADDTS response frame. Suggest to keep the IsChannelNumber in the response. | Remove "When transmitted in an ADDTS Response frame, the IsChannelNumber is reserved." |

**Proposed resolution**: Accepted

***Change the second paragraph in 9.4.2.134 as follows:***

The IsChannelNumber indicates whether the value in the BW field represents a channel width or channel number.

Straw Poll:

**Do you agree to accept resolutions to CIDs 1118, 1132, 1746, 1786, 1787, and 1953 in doc 11-18/0506 r0?**

**References:**

IEEE 802.11ay D1.1

IEEE 802.11-2016