IEEE P802.11
Wireless LANs

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Abstract

This submission proposes resolution for a comment related to the Unsolicited RSS Enabled field in the DMG Beacon frame.

- CID: 1949

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| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Line** | **Comment** | **Proposed Change** | **Proposed Resolution** |
| 1949 | 39 | 2 | In the draft text the Figure 9-61 does not cover A-BFT<>0 and the Figure 12 makes no sense to DMG devices due to "Unsolicited RSS Enabled field" that is not backward compatible | Keep the Figure 9-61 as is and provide additional figure that is EDMG specific that may define B14 and Next A-BFT only | RevisedThe unsolicited RSS as defined in 10.39.6.2 is only performed between two EDMG STAs. A non-EDMG STA does not use this subfield.Add text to clarify that non-EDMG STA ignores this subfield.Also, merge the IsResponderTXSS and Unsolicited RSS Enabled subfields as they can coexist in a single beacon interval control field format since its meaning can be determined by the value of the Next A-BFT subfield.  Note 1 – a DMG STA needs to rely on the IsResponderTXSS subfield of the BI to determine the type of the A-BFT within that BI. Note 2 – a non-EMDG/EDMG STA can be determined by the EDMG Supported subfield in the DMG Parameters field. TGay editor to make the changes shown in 11-18/0636r1 under all headings that include CID 1949. |

**Proposed changes to D1.1:**

9.3.4.2 DMG Beacon

***Delete the below editor’s instruction and paragraph as follows (CID #1949)***

*~~Change the sixth paragraph as follows~~* ~~6~~

~~The format of the Beacon Interval Control field when the Next A-BFT subfield is 0 is shown in Figure 9-61. The format of the Beacon Interval Control field when the Next A-BFT subfield is nonzero is shown in Figure 17. The difference between the two formats is in the definition of the field occupying B14.~~

***Change Figure 9-61 as follows (CID #1949)***

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0  | B1  | B2 B5  | B6  | B7 B9  | B10 B13  | B14  | B15 B18  |
|  | CC Present  | Discovery Mode  | Next Beacon  | ATI Present  | A-BFT Length  | FSS  | IsResponderTXSS/Unsolicited RSS Enabled  | Next A-BFT  |
| Bits: | 1  | 1  | 4  | 1  | 3  | 4  | 1  | 4  |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | B19  | B20 B26  | B27 B30  | B31 B36  | B37 B42  | B43  | B44 B45  | B46 B47  | ~~B44 B47~~  |
|  | Fragmented TXSS  | TXSS Span  | N BIs A-BFT  | A-BFT Count  | N A-BFT in Ant  | PCP Association Ready  | A-BFT Multiplier  | A-BFT in Secondary Channel  | ~~Reserved~~  |
| Bits: | 1  | 7  | 4  | 6  | 6  | 1  | 2  | 2  | ~~4~~  |

***Delete the following editor’s instructions and Figure 17 as follows (CID #1949)***

*~~Insert “~~*~~when the Next A-BFT subfield is 0~~*~~” at the end of the caption of Figure 9-61~~*

*~~Insert the following figure after Figure 9-61~~*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ~~B0~~ | ~~B1~~ | ~~B2 B5~~ | ~~B6~~ | ~~B7 B9~~ | ~~B10 B13~~ | ~~B14~~ | ~~B15 B18~~ |
|  | ~~CC Present~~ | ~~Discovery Mode~~ | ~~Next Beacon~~ | ~~ATI Present~~ | ~~A-BFT Length~~ | ~~FSS~~ | ~~Unsolicited RSS Enabled~~ | ~~Next A-BFT~~ |
| ~~Bits:~~ | ~~1~~ | ~~1~~ | ~~4~~ | ~~1~~ | ~~3~~ | ~~4~~ | ~~1~~ | ~~4~~ |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | ~~B19~~ | ~~B20 B26~~ | ~~B27 B30~~ | ~~B31 B36~~ | ~~B37 B42~~ | ~~B43~~ | ~~B44 B45~~ | ~~B46 B47~~ |
|  | ~~Fragmented TXSS~~ | ~~TXSS Span~~ | ~~N BIs A-BFT~~ | ~~A-BFT Count~~ | ~~N A-BFT in Ant~~ | ~~PCP Association Ready~~ | ~~A-BFT Multiplier~~ | ~~A-BFT in Secondary Channel~~ |
| ~~Bits:~~ | ~~1~~ | ~~7~~ | ~~4~~ | ~~6~~ | ~~6~~ | ~~1~~ | ~~2~~ | ~~2~~ |

***Insert the below editor’s instruction and paragraphs before “Insert the following paragraph after the definition of the IsResponderTXSS subfield” (CID #1949)***

*Change the indicated paragraph and insert a new paragraph as follows*

If the Next A-BFT subfield is set to 0, ~~T~~the IsResponderTXSS/Unsolicited RSS Enabled subfield is set to 1 to indicate the A-BFT following the BTI is used for responder transmit sector sweep (TXSS)~~. This field~~ and is set to 0 to indicate responder receive sector sweep (RXSS). When ~~this subfield is~~ set to 0, the FSS subfield specifies the length of a complete receive sector sweep by the STA sending the DMG Beacon frame.

If the Next A-BFT subfield is set to a value greater than 0, the IsResponderTXSS/Unsolicited RSS Enabled subfield is set to 1 to indicate that the EDMG STA is capable of receiving an unsolicited RSS in response to its BTI and is set to 0 otherwise. It is ignored when transmitted by a non-EDMG STA.

***Delete the below editor’s instruction and paragraph as follows (CID #1949)***

*~~Insert the following paragraph after the definition of the IsResponderTXSS subfield~~*

~~The Unsolicited RSS Enabled subfield is present when the Next A-BFT subfield is nonzero and is set to 1 to indicate that the STA is capable of receiving an unsolicited RSS in response to its BTI. This subfield is set to 0 otherwise.~~

10.39.6.2 SLS phase execution

***Change the below paragraphs as follows (CID #1949)***

An EDMG STA shall not perform an unsolicited RSS in response to a DMG Beacon with the Next A-BFT subfield greater than 0 and IsResponderTXSS/Unsolicited RSS Enabled subfield equal to 0, or an SSW frame with the Unsolicited RSS Enabled subfield equal to 0.

An unsolicited RSS takes place when all of the following conditions are met:

a) An EDMG STA transmits a DMG Beacon with the Next A-BFT subfield greater than 0 and IsResponderTXSS/Unsolicited RSS Enabled subfield equal to 1, or an SSW frame with the Unsolicited RSS Enabled subfield set to 1

b) Following the transmission of a DMG Beacon with the Next A-BFT subfield greater than 0 and IsResponderTXSS/Unsolicited RSS Enabled subfield equal to 1, or an 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 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

***Change the below paragraph as follows (CID #1949)***

Figure 109 shows an example of an unsolicited RSS. STA A that performs an ISS or RSS with STA C sets the Next A-BFT subfield greater than 0 and IsResponderTXSS/Unsolicited RSS Enabled to 1 in DMG Beacon frames, or Unsolicited RSS Enabled subfield to 1 in SSW frames to indicate it is operating as an initiator corresponding to a potential unsolicited RSS in a subsequent TXOP or SP. STA B (TXOP holder or source STA of the SP) transmitting SSW frames with the Direction subfield set to 1 at the beginning of a TXOP or SP (e.g., TXOP2 or SP2) is considered as the responder of STA A for the ISS or RSS in the earlier BTI, TXOP or SP (e.g., TXOP1 or SP1). In the TXOP2 or SP2, if a SSW frame with the Direction subfield set to 1 is received, STA A operates as the initiator and responds with a SSW Feedback frame without performing an ISS.

***Replace Figure 109 with the following figure as follows (CID #1949)***

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10.38.2.3.2 Responder TXSS

***Insert the below editor’s instruction and paragraphs (CID#1949)***

*Change the indicated paragraph as follows*

If the DMG Beacon frame immediately preceding an A-BFT contained a value of one in the IsResponderTXSS/Unsolicited RSS Enabled subfield of the Beacon Interval Control field, then the A-BFT is a responder TXSS ABFT.

10.38.2.3.3 Responder RXSS

***Insert the below editor’s instruction and paragraphs (CID#1949)***

*Change the indicated paragraph as follows*

If the DMG Beacon frame immediately preceding an A-BFT contained a value of zero in the IsResponderTXSS/Unsolicited RSS Enabled subfield of the Beacon Interval Control field within the DMG Beacon, then the A-BFT is a responder RXSS A-BFT.

10.38.5.2 Operation during the A-BFT

***Insert the below editor’s instruction and paragraphs (CID#1949)***

*Change the indicated paragraph as follows*

If the IsResponderTXSS/Unsolicited RSS Enabled subfield of the Beacon Interval Control field is equal to 1 when the Next A-BFT subfield of the Beacon Interval Control field is equal to 0, the A-BFT shall be used to perform a responder TXSS. Otherwise, if the IsResponderTXSS/Unsolicited RSS Enabled subfield of the Beacon Interval Control field is equal to 0 when the Next A-BFT subfield of the Beacon Interval Control field is equal to 0, the A-BFT shall be used to perform a responder RXSS. In the case of a responder RXSS, the same slotted structure described above is used and the responder shall transmit the number of SSW frames announced in the FSS field in the DMG Beacon. If the AP or PCP allocates the ABFT as a responder RXSS, it should set the value of the FSS field within the Beacon Interval Control to the number of receive sectors supported by the AP or PCP. The AP or PCP shall allocate the A-BFT as a responder TXSS at least once every dot11ABFTRTXSSSwitch beacon intervals in which an A-BFT is present.

***Insert the below editor’s instruction and paragraphs (CID#1949)***

*Change the indicated paragraph as follows*

The responder shall transmit no more SSW frames within an SSW slot than indicated in the value of the FSS subfield in the DMG Beacon. If the responder has more SSW frames to transmit as part of the RSS, but is not allowed to send any more SSW frames in the current SSW slot, then the responder may resume the RSS at the start of the following SSW slot provided that the A-BFT has not ended. If the responder cannot complete the RSS before the end of the A-BFT, it may use the same backoff procedure described above to resume the RSS at the next A-BFT for which the value of the IsResponderTXSS/Unsolicited RSS Enabled subfield is the same as the current A-BFT.

**SP**: Do you agree to accept the comment resolution as proposed in IEEE 802.11-18/0636r1?