IEEE P802.11
Wireless LANs

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| Comment Resolution on Measurement Elements |
| Date: 2017-05-07 |
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Abstract

This submission proposes resolutions of comments received from TGay comment collection (TGay Draft 0.3).

* 13 CIDs: 151, 476, 477, 340, 342, 452, 453, 454, 224, 225, 226, 227, 341

Revisions:

* Rev 0: Initial version of the document.
1. **Introduction**

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGay Draft. The introduction and the explanation of the proposed changes are not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGay Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGay Editor: Editing instructions preceded by “TGay Editor” are instructions to the TGay editor to modify existing material in the TGay draft. As a result of adopting the changes, the TGay editor will execute the instructions rather than copy them to the TGay Draft.***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| CID | Page Number | Line Number | Comment | Proposed Change | Resolution |
| 151 | 16 | 8 | This text is ambiguous, "The Measurement Channel Bitmap subfield indicates one or multiple 2.16 GHz channels for which the measurement request applies. Starting with the MSB, the ith bit of the Measurement Channel Bitmapsubfield is set to 1 to indicate the 2.16 GHz channel with channel number i for which the measurement request applies." | Suggest replacing the formatting here with the format used for the BSS Operating Channels field in the EDMG Operating Element 9.4.2.251. | Revised-Agree in principle with the comment. The Measurement Channel Bitmap subfield should follow the format of the BSS Operating Channels field. TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 151. |
| 476 | 16 | 8 | "the ith bit of the Measurement Channel Bitmap subfield is set to 1 to indicate the 2.16 GHz channel with channel number i for which the measurementrequest applies." Up to 8 2.16GHz Can be indicated and only 6 2.16GHz are available. This needs to be stated in this paragrapgh | as suggested | Same as the resolution to #151Revised-Agree in principle with the comment. The Measurement Channel Bitmap subfield should follow the format of the BSS Operating Channels field.TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 476. |
| 477 | 17 | 15 | "The Measurement Channel Bitmap subfield indicates one or multiple 2.16 GHz channels for which the measurement report applies. Starting with the MSB, the ith bit of the Measurement Channel Bitmap subfield is set to 1 to indicate the 2.16 GHz channel with channel number i for which the measurement report applies' upt o 8 2.16GHz Can be indicated and only 6 2.16GHz are available. This needs to be stated in this paragrapgh | as suggested | Same as the resolution to #151Revised-Agree in principle with the comment. The Measurement Channel Bitmap subfield should follow the format of the BSS Operating Channels field.TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 477. |
| 340 | 16 | 17 | If Extended Measurement Configuration subelement is present, the measurement timings over all the requested 2.16 GHz channels may be different. In this case, it does not make sense to set the Channel Measurement Report Method subfield to 1. | 1. add the following sentence at the end of the second paragraph below Figure 8:"The Channel Measurement Report Method subfield shall be set to 0 when the Extended Measurement Configuration subelement is present."2. add the following sentence at the end of the second paragraph below Figure 10 in page 17:"The Channel Measurement Report Method subfield shall be set to 0 when the Extended Measurement Configuration subelement is present." | Revised-Agree in principle with the comment. In D0.3, the Channel Measurement Report Method subfield sets to 1 to indicate reporting the averaged results of ***concurrent***measurements over all the requested 2.16 GHz channels. Therefore, it does not make sense to set the Channel Measurement Report Method subfield to 1 when the Extended Measurement Configuration subelement is present.TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 340. |
| 342 | 16 | 31 | clarification on the Extended Measurement Configuration subelement is required. | 1. Add the following sentences after "If the Extended Measurement Configuration subelement is not present, the measurement timing information indicated in the measurement request field applies to all indicated channels." in the last paragraph of Page 16."If the Extended Measurement Configuration subelement is present, the measurement timing information indicated in the measurement request field applies to the first requested channel (i.e., the requested channel with the smallest channel number) and measurement timing information indicated in the Extended Measurement Configuration subelement applies to the remaining requested channels in ascending order in terms of channel number."2. Add the following sentences after "If the Extended Measurement Configuration subelement is not present, the measurement timing information indicated in the measurement request field applies to all indicated channels." in the paragraph above Figure 11 of page 18."If the Extended Measurement Configuration subelement is present, the measurement timing information indicated in the measurement request field applies to the first requested channel (i.e., the requested channel with the smallest channel number) and measurement timing information indicated in the Extended Measurement Configuration subelement applies to the remaining requested channels in ascending order in terms of channel number." | Revised-Agree in principle with the comment. The case that the Extended Measurement Configuration subelement is present needs to be clarified.TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 342. |
| 224 | 16 | 31 | Field name should be capitalized | Capitalize Measurement Request field name | Accepted-TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 224. |
| 225 | 17 |  | Field names in the text do not match the figure well | Insert "for ith Requested Channel" after "Measurement Start Time", "Measurement Duration" and "Number of Time Blocks" and add ", where I is the index of requested channel" at the end of the sentenceAlso for 9.4.2.22.15 (P18L15-17) | Revised-Agree in principle with the comment. TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 225. |
| 226 | 18 | 17 | Field name should be capitalized | Capitalize Measurement Report field name | Accepted-TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 226. |
| 227 | 18 | 31 | Number of Rx Antennas for ith Requested Channel should be explicitly defined | Add definition for Number of Rx Antennas for ith Requested Channel subfield | Revised-Agree in principle with the comment. TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 227. |
| 341 | 16 | 14 | In L14P16 and L21P16, "Requested STA" should be "requested STA" | as per comment | AcceptedTGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 341. |
| 452 | 16 | 5 | Wrong reference: "The subelement is formatted as shown in Figure 8." | Replace by: The Measurement Configuration data field is formatted as shown in Figure 8. | AcceptedTGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 452. |
| 453 | 16 | 31 | The subelement is formatted as shown in Figure 9. | Replace by: The Extended Measurement Configuration data field is formatted as shown in Figure 9. | AcceptedTGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 453. |
| 454 |  |  | Same comments as previous | Replace with relevant data field name | Revised-Agree in principle with the comment. TGay editor to make the changes shown in 11-17/0709r0 under all headings that include CID 454. |

**Discussion:** None

**Propose:**

Revised for 13 CIDs 151, 224, 225, 226, 227, 340, 341, 342, 452, 453, 454, 476, 477 as per discussion and editing instructions in 11-17/0709r0.

**9.4.2.21.16 Directional Channel Quality request**

***TGay editor: Change the paragragh preceding Figure 8 (D0.3) as follows******(CID #452):***

The Measurement Configuration subelement indicates measurement configuration information for which the measurement request applies and is only used between a pair of EDMG STAs. The Measurement Configuration data field is formatted as shown in Figure 8.

***TGay editor: Change the two paragraghs following Figure 8 (D0.3) as follows******(CID #151, #340, #341, #476):***

The Measurement Channel Bitmap subfield is a bitmap that indicates the 2.16 GHz channel(s) to which the measurement request applies and is formatted as shown in Figure x. In Figure x, Ch1 subfield corresponds to channel 1, Ch2 subfield corresponds to channel 2 and so on (channels are defined in Annex E). If a subfield is set to 1, the measurement request applies to the indicated channel; otherwise if the subfield is set to 0, the measurement request does not apply to the indicated channel.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 | B4 | B5 | B6 B7 |
|  | Ch1 | Ch2 | Ch3 | Ch4 | Ch5 | Ch6 | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 2 |

Figure x—Measurement Channel Bitmap subfield format

The Channel Measurement Report Method subfield indicates the method that is to be used by the requested STA to report the results of measurements over multiple 2.16 GHz channels in the measurement report. The Channel Measurement Report Method subfield sets to 0 to indicate the results of measurements over all the requested 2.16 GHz channels during each measurement time block are reported per 2.16 GHz channel. The Channel Measurement Report Method subfield sets to 1 to indicate the averaged results of concurrent measurements over all the requested 2.16 GHz channels during each measurement time block are reported. The Channel Measurement Report Method subfield shall be set to 0 when the Extended Measurement Configuration subelement is present.

***TGay editor: Change the last paragragh in page 16 (D0.3) as follows******(CID #224, #342, #453):***

The Extended Measurement Configuration subelement is present only if the Measurement Configuration subelement is present. The Extended Measurement Configuration subelement contains measurement timing information for the channels indicated in the Measurement Configuration subelement. If the Extended Measurement Configuration subelement is not present, the measurement timing information indicated in the Measurement Request field applies to all requested channels. If the Extended Measurement Configuration subelement is present, the measurement timing information indicated in the Measurement Request field applies to the first requested channel (i.e., the requested channel with the lowest channel number) and measurement timing information indicated in the Extended Measurement Configuration subelement applies to the remaining requested channels in ascending order in terms of channel number.The Extended Measurement Configuration data field is formatted as shown in Figure 9.

***TGay editor: Change the paragragh following Figure 9 (D0.3) as follows******(CID #225):***

The measurement timing information for the *i*-th requested channel is indicated in the Measurement Start Time for *i*-th Requested Channel subfield, the Measurement Duration for *i*-th Requested Channel subfield and Number of Time Blocks for *i*-th Requested Channel subfield, where *i* = 2, 3, … *Nch* and *Nch* is the total number of the requested channels. The definition of these subfields is the same as the corresponding subfields in Measurement Request field (Figure 9-184).

**9.4.2.22.15 Directional Channel Quality report**

***TGay editor: Change the paragraph preceding Figure 10 (D0.3) as follows (CID #454):***

The Measurement Configuration subelement indicates measurement configuration information for which the measurement report applies and is only used between a pair of EDMG STAs. The Measurement Configuration data field is formatted as shown in Figure 10.

***TGay editor: Change the two paragraphs following Figure 10 (D0.3) as follows (CID #151, #476, #340):***

The Measurement Channel Bitmap subfield is a bitmap that indicates the 2.16 GHz channel(s) to which the measurement report applies and is formatted as shown in Figure xx. In Figure xx, Ch1 subfield corresponds to channel 1, Ch2 subfield corresponds to channel 2 and so on (channels are defined in Annex E). If a subfield is set to 1, the measurement report applies to the indicated channel; otherwise if the subfield is set to 0, the measurement report does not apply to the indicated channel.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | B0 | B1 | B2 | B3 | B4 | B5 | B6 B7 |
|  | Ch1 | Ch2 | Ch3 | Ch4 | Ch5 | Ch6 | Reserved |
| Bits: | 1 | 1 | 1 | 1 | 1 | 1 | 2 |

Figure xx—Measurement Channel Bitmap subfield format

The Channel Measurement Report Method subfield indicates the method that is to be used by the reporting STA to report the results of measurements over multiple 2.16 GHz channels in the measurement report. The Channel Measurement Report Method subfield sets to 0 to indicate the results of measurements over all the requested 2.16 GHz channels during each measurement time block are reported per 2.16 GHz channel. The Channel Measurement Report Method subfield sets to 1 to indicate the averaged results of concurrent measurements over all the requested 2.16 GHz channels during each measurement time block are reported. The Channel Measurement Report Method subfield shall be set to 0 when the Extended Measurement Configuration subelement is present.

***TGay editor: Change the second paragragh, Figure 11 and the third paragragh in page 18 (D0.3) as follows******(CID #226, #227, #342, #454):***

The Extended Measurement Configuration subelement is present only if the Measurement Configuration subelement is present. The Extended Measurement Configuration subelement contains measurement timing information for the channels indicated in the Measurement Configuration subelement. If the Extended Measurement Configuration subelement is not present, the measurement timing information indicated in the Measurement Report field applies to all reported channels. If the Extended Measurement Configuration subelement is present, the measurement timing information indicated in the Measurement Report field applies to the first reported channel (i.e., the reported channel with the lowest channel number) and measurement timing information indicated in the Extended Measurement Configuration subelement applies to the remaining reported channels in ascending order in terms of channel number.The Extended Measurement Configuration data field is formatted as shown in Figure 11.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Measurement Start Time for 2nd Reported Channel | Measurement Duration for 2nd Reported Channel | Number of Time Blocks for 2nd Reported Channel | … | Measurement Start Time for Nchth Reported Channel | Measurement Duration for Nchth Reported Channel | Number of Time Blocks for Nchth Reported Channel |
| Octets: | 8 | 2 | 1 | … | 8 | 2 | 1 |

Figure 11—Extended Measurement Configuration data field format

The measurement timing information for the *i*-threported channel is indicated in the Measurement Start Time for *i*-th Reported Channel subfield, the Measurement Duration for *i*-th Reported Channel subfield and Number of Time Blocks for *i*-th Reported Channel subfield, where *i* = 2, 3, … *Nch* and *Nch* is the total number of the reported channels. The definition of these subfields is the same as the corresponding subfields in Measurement Report field (Figure 9-245).