IEEE P802.11
Wireless LANs

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| Comment resolutions for CIDs 2229, 2447, 2448 |
| Date: 2019-08-09 |
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This document proposes resolutions for LB236 CIDs 2229, 2447 and 2448.

R1: Updates per 2019-06-26 teleconference

R2: Additional updates based on input from the commenter

R3: grammatical edits

**CID 2229**

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| **2229** | **1042.00** | **9.4.2.21.7** |  |  | **9.4.2.21.7 (near end) talks about truncating reported elements in a Beacon Report, but it is a bit ambiguous.** | **Change the paragraph, and start of first bullet item to, "If the Reporting Detail field equals 2, all fixed fields and elements are included in the order they appeared in the reported frame. In this case, some of the elements included into the Reported Frame Body subelement might be truncated, and the subelement itself might be truncated or fragmented over multiple Beacon Reports when its size exceeds the maximum element size, as described below: - Reported TIM elements might be truncated ..."** |

**Discussion:**

The cited clause is: **9.4.2.21.7 Beacon report**

**The commenter’s proposed change is shown below:**

(M12) If the Reporting Detail field is set to 2, all (#2401)fields and elements are included in the order they appeared in the reported frame. In this case, some of the elements included inthe Reported Frame Body subelement might be truncated, and the subelement itself might be truncated or fragmented over multiple Beacon Reports when its size exceeds the maximum element size, as described below:(Ed)

— Reported TIM elements might be(M12) truncated such that only the first 4 octets of the element are reported and the element Length field is modified to indicate the truncated length of 4.

—Reported IBSS DFS elements might be(M12) truncated so that only the lowest and highest channel number map are reported and the element Length field is modified to indicate the truncated length of 13.

—Reported RSNEs might be(M12) truncated so that only the first 4 octets of the element are reported and the element Length field is modified to indicate the truncated length of 4.

— If the length of the Reported Frame Body subelement would cause the Measurement Report element to exceed the maximum element size, (M12) when Reported Frame Body subelement fragmentation is not supported, then the Reported Frame Body subelement is truncated so that the last element in the Reported Frame Body subelement is a complete element.

— (M12)If the length of the Reported Frame Body subelement would cause the Measurement Report element to exceed the maximum element size, when Reported Frame Body subelement

fragmentation is supported, then the Reported Frame Body subelement is fragmented over multiple Beacon Reports.

**Proposed Resolution: Revised; Incorporate the changes indicated in <this document> for CID 2229, which implement the resolution in the direction suggested by the commenter.**

**CID 2447**

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| 2447 |  | 9.4.2.21 |  |  | Sometimes we describe the measurement methods, e.g. 9.4.2.21.16 "The Measurement Method field indicates the method used by the STA to carry out the measurement requestand the format of values in the Measurement for Direction fields. If this field is set to 0, it indicates that thevalues in the Measurement for Direction fields are expressed in ANIPI. If this field is set to 1, it indicatesthat the values in the Measurement for Direction fields are expressed in RCPI. If this field is set to 2, itindicates that the values in the Measurement for Direction fields are expressed in Channel Load. Othervalues are reserved. ANIPI is defined in 9.4.2.21.15 (Directional Channel Quality report). RCPI is alogarithmic indication of the received channel power of the corresponding Link Measurement Requestframe, as defined in 9.4.2.37 (RCPI element). (#1011)Channel Load is measured and reported as defined in11.10.9.3 (Channel load report)." | Move " ANIPI is defined in 9.4.2.21.15 (Directional Channel Quality report). RCPI is alogarithmic indication of the received channel power of the corresponding Link Measurement Requestframe, as defined in 9.4.2.37 (RCPI element). (#1011)Channel Load is measured and reported as defined in11.10.9.3 (Channel load report)." from 9.4.2.21.16 to the end of 9.4.2.21.1 |

**Discussion:**

The cited clause is: **9.4.2.21 Measurement Report element**

The cited text is at 1082.27 in 9.4.2.21.16 Directional Measurement Report. (D2.2):

The Measurement Method field indicates the method used by the STA to carry out the measurement request

and the format of values in the Measurement for Direction fields. If this field is set to 0, it indicates that the values in the Measurement for Direction fields are expressed in ANIPI. If this field is set to 1, it indicates that the values in the Measurement for Direction fields are expressed in RCPI. If this field is set to 2, it indicates that the values in the Measurement for Direction fields are expressed in Channel Load. Other values are reserved. ANIPI is defined in 9.4.2.21.15 (Directional Channel Quality report). RCPI is a logarithmic indication of the received channel power of the corresponding Link Measurement Request frame, as defined in 9.4.2.37 (RCPI element). (#1011)Channel Load is measured and reported as defined in 11.10.9.3 (Channel load report).

Looking at the P1081L23 (D2.2) 9.4.2.21.15 text that defines ANIPI:

The Measurement for Time Block fields are set to the ANIPI or average RSNI value measured during each Measurement Duration/Number of Time Blocks) measurement units. The measurement units are set in the report in increasing order of start times. ANIPI is set to the average noise plus interference power value measured during the indicated Measurement Duration using the same units and accuracy as defined for ANPI in 11.10.9.4 (Noise Histogram report). Average RSNI is set according to 9.4.2.40 (RSNI element), where RCPI is defined in 9.4.2.37 (RCPI element).

The commenter seems to be saying that sometimes we describe the measurement methods and sometimes we don’t. The proposed change moves the cited text to earlier in the clause in subsection **9.4.2.21.1 General**.

Seems reasonable. No technical change.

Better organization to have definitions earlier to apply to all subclauses.

Should we also move the 9.4.2.21.15 text (below) to 9.4.21.1 at the end – this is suggested in the next CID 2448?

ANIPI is set to the average noise plus interference power value measured during the indicated Measurement Duration using the same units and accuracy as defined for ANPI in 11.10.9.4 (Noise Histogram report). Average RSNI is set according to 9.4.2.40 (RSNI element), where RCPI is defined in 9.4.2.37 (RCPI element).

2019-06-26 discussion: Ask commenter to review further.

**Proposed Resolution for CIDs 2447/2448: Revised**

**At 1082.27 (D2.2),** delete **“**ANIPI is defined in 9.4.2.21.15 (Directional Channel Quality report). RCPI is a logarithmic indication of the received channel power of the corresponding Link Measurement Request frame, as defined in 9.4.2.37 (RCPI element). (#1011)Channel Load is measured and reported as defined in 11.10.9.3 (Channel load report).”

**At 1081.23 (D2.2),** delete “ANIPI is set to the average noise plus interference power value measured during the indicated Measurement Duration using the same units and accuracy as defined for ANPI in 11.10.9.4 (Noise Histogram report). Average RSNI is set according to 9.4.2.40 (RSNI element), where RCPI is defined in 9.4.2.37 (RCPI element).”

**At 1038.58 (end of 9.4.2.21.1) D2.2,** insert the following text at the end:

ANIPI is set to the average noise plus interference power value measured during the indicated Measurement Duration, using the same units and accuracy as defined for ANPI in 11.10.9.4 (Noise Histogram report).

RCPI is a logarithmic indication of the received channel power of the corresponding Link Measurement Request frame, as defined in 9.4.2.37 (RCPI element). (#1011)

RSNI is the ratio of the received signal power to the noise plus interference power, as defined in 9.4.2.40 (RSNI element).”

Channel Load is measured and reported as defined in 11.10.9.3 (Channel load report).”

**At D2.3 1087.20,** change as follows:

The Measurement for Time Block fields are set to the ANIPI or RSNI value measured during each

(Measurement Duration/Number of Time Blocks) measurement units.

**Proposed Resolution: Revised; Incorporate the changes indicated in <this document> for CID 2447/2448, which implement the resolution in the direction suggested by the commenter.**

**CID 2448**

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| 2448 |  | 9.4.2.21 |  |  | Sometimes we describe the measurement methods, e.g. 9.4.2.21.16 "The Measurement Method field indicates the method used by the STA to carry out the measurement requestand the format of values in the Measurement for Direction fields. If this field is set to 0, it indicates that thevalues in the Measurement for Direction fields are expressed in ANIPI. If this field is set to 1, it indicatesthat the values in the Measurement for Direction fields are expressed in RCPI. If this field is set to 2, itindicates that the values in the Measurement for Direction fields are expressed in Channel Load. Othervalues are reserved. ANIPI is defined in 9.4.2.21.15 (Directional Channel Quality report). RCPI is alogarithmic indication of the received channel power of the corresponding Link Measurement Requestframe, as defined in 9.4.2.37 (RCPI element). (#1011)Channel Load is measured and reported as defined in11.10.9.3 (Channel load report)." | Move " ANIPI is defined in 9.4.2.21.15 (Directional Channel Quality report). RCPI is alogarithmic indication of the received channel power of the corresponding Link Measurement Requestframe, as defined in 9.4.2.37 (RCPI element). (#1011)Channel Load is measured and reported as defined in11.10.9.3 (Channel load report)." from 9.4.2.21.16 to the end of 9.4.2.21.1 and add a sentence to cover RSNI too |

**Discussion:**

The cited clause is: **9.4.2.21 Measurement Report element**

The cited text is at 1081.23 in 9.4.2.21.15 Directional Channel Quality Report. (D2.2).

The change is discussed in this document under CID 2447.

**Resolution: Duplicate the agreed resolution for CID 2447.**

**Proposed Resolution: Revised; Incorporate the changes indicated in <this document> for CID 2447/2448, which implement the resolution in the direction suggested by the commenter.**

**References:**