IEEE P802.11
Wireless LANs

|  |
| --- |
| LB234-PHY-Service-Comment-Resolution |
| Date: 2018-09-06 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Assaf Kasher | Qualcomm |  |  | akasher@qti.qualcomm.com |
|  |  |  |  |  |

Abstract

This document proposes comment resolution to CIDs related to the PHY service interface and the PLME

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3195 | 341.00 | 1 | 29.2.2 | RX\_START\_OF\_FRAME\_OFFSET - resolution of 10ns is accurate enough for applications of ranging that can eachieve in 60GHz accuracey of 1ns | replace 10ns with 0.1ns |

 Proposed Resolution: **Accept**

**Discussion:**

The bandwidth of the DMG signals allows for very high accuracy in time delay estimation. Therefore a higher resolution should be used.

***TGay Editor: in page 341 in the row associated with RX\_START\_OF\_FRAME\_OFFSET, modify the text as follows:***

An estimate of the offset (in 0.1 nanosecond units)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3370 | 345.00 | 29.2.2 | The parameter "EDMG\_TRN\_LEN" does not depend on the parameter "EDMG\_PACKET\_TYPE". | For the parameter "EDMG\_TRN\_LEN", under the column "Condition"delete " EDMG\_PACKET\_TYPE is TRN-T-PACKET, TRN-R-PACKET or TRN-R/T-PACKET" |

Proposed Resolution: **Accept**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3371 | 345.00 | 29.2.2 | The parameter RX\_TRN\_PER\_TX\_TRN is based on the parameter EDMG\_PACKET\_TYPE which is valid only if the parameter EDMG\_TRN\_LEN is larger than 0. So it is not necessary to mention the parameter RX\_TRN\_PER\_TX\_TRN is valid only when EDMG\_TRN\_LEN is greater than 0. | For the parameter RX\_TRN\_PER\_TX\_TRN, under the column Value,delete "The parameter is valid only when EDMG\_TRN\_LEN is greater than 0." |

Proposed Resolution: **Reject**

**Discussion:**

The group thinks that the condition in the value column provides an explanation that is useful to readers of the amendment.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3372 | 346.00 | 29.2.2 | The parameter EDMG\_TRN\_M is based on the parameter EDMG\_PACKET\_TYPE which is valid only if the parameter EDMG\_TRN\_LEN is larger than 0. So it is not necessary to mention the parameter EDMG\_TRN\_M is reserved if TRN\_LEN is 0.In addition, the condition for the parameter EDMG\_TRN\_M is EDMG\_PACET\_TYPE is TRN-T-PACKET or TRN-R/T-PACKET. So it is also not necessary to mention that this parameter is reserved if EDMG\_PACKET\_TYPE is TRN-R-PACKET. | for parameter EDMG\_TRN\_M, under column Valuedelete "The parameter is reserved if TRN-LEN is 0. The parameter is reserved if EDMG\_PACKET\_TYPE is TRN-R-PACKET." |

Proposed Resolution: **Reject**

**Discussion:**

The group thinks that the condition in the value column provides an explanation that is useful to readers of the amendment.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3373 | 347.00 | 29.2.2 | The parameter "EDMG\_BRP\_MIN\_SC\_BLOCKS" is conditioned on EDMG\_TRN\_LEN>0. | for EDMG\_BRP\_MIN\_SC\_BLOCKS, under column "Condition",add "EDMG\_TRN\_LEN>0"for EDMG\_BRP\_MIN\_SC\_BLOCKS, under column "Value",delete "if EDMG\_TRN\_LEN is greater than 0" and "This parameter is reserved if EDMG\_TRN\_LEN is 0" |

Proposed Resolution: **Accept**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3700 | 349.00 | 1 | 29.2.2 | TXVECTOR parameter NUM\_TX\_CHAINS is of type MU | as in comment |

Proposed Resolution: **Reject**

**Discussion:**

This parameter is used in SU-MIMO to inidicate the number of TX chains used in the BF training (which may be higher than the number of streams used to transmit the packet. It is therefore not limited to MU MIMO or any type of MIMO.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 3199 | 350.00 | 1 | 29.2.2 | Replace RSSI with RCPI. RCPI is needed as it is used by some measurement reports in the MAC. It is also more accurate. RSSI can be determined from RCPI and not vice versa | replace the RSSI line with RCPI or add RCPI to the RX vector (as in clause 20). Add a subclause to describe how it is measured |

Proposed Resolution: **Revised**

**Discussion:**

Although RCPI provices information that can be used for RSSI, all PHY clauses retain it together with RSSI. We also need to specify how it is measured.

***TGay Editor: Insert the following line in table 43 (TXVECTOR and RXVECTOR parameters) after the RSSI line.***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| RCPI | FORMAT is EDMG | Is a measure of the received RF power measured over the preamble of a received frame. Refer to 29.3.10 (Received channel power indicator (RCPI) measurement) for the definition of RCPI. | N | Y |

***TGay Editor: Insert the following subclause after 29.3.9:***

**29.3.10 Received channel power indicator (RCPI) measurement**

The RCPI is a measure of the received RF power in the selected channel as measured at the DMG Antennas used in the reception of the PPDU. This parameter shall be measured by the PHY of the received RF power in the channel measured over the preamble of the received PPDU. If EDMG-STF and EDMG-CEF are present in the received PPDU, the received RF power shall be measured of these fields.

The received power shall be the average of the power in all active receive chains. RCPI measurement shall be provided for each active RX chain

The RCPI encoding is defined in 15.4.6.6 (Received Channel Power Indicator easurement).

RCPI shall equal the received RF power with an accuracy of ± 5 dB with 95% confidence interval within the specified dynamic range of the receiver. The received RF power shall be determined assuming a receiver noise equivalent bandwidth equal to the channel width multiplied by 1.1. The relative error between RF power measurements made within a 1 second interval should be less than ± 1 dB.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 3374 | 350.00 | 29.2.2 | DMG\_TRN is conditioned on NUM\_TX\_CHAINS = 1. | for DMG\_TRN, under column Condition,add "NUM\_TX\_CHAINS = 1"for DMG\_TRN, under column Value,delete "The parameter is valid only when the NUM\_TX\_CHAINS parameter is equal to 1." |

Proposed resolution: **Revised**

**Discussion:**

Its is enough to add the condition on one column. DMG\_TRN is also limited to the case of single channel bonding.

***TGay Editor: Modify the condition column of the DMG\_TRN line of table 43 (TXVECTOR and RXVECTOR parameters) as follows:***

|  |
| --- |
| FORMAT is EDMG,NUM\_TX\_CHAINS=1,  |