IEEE P802.11
Wireless LANs

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| LB239 BRP Protocol |
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Abstract

This document proposes resolution to some BRP protocol CIDs

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| 4116 | 211.12 | 10.6.7.5 | This rule is severly limitting for PPDUs carrying feedback. The channel measurement feedback may very long, in some cases not even fitting within th maximum 1023 bytes of an MCS 0 PPDU. Consider limitting the rule to PPDUs carrying a TRN field | replace "If an EDMG BRP packet" with "If and EMDG BRP Packet with the TRN\_LEN parameter set to a non-zero value" |

Proposed Resolution: **Reject**

**Discussion:**

While the statement limiting to the use of MCS0 is limiting, it is a “should” statement. The experienced implementer will know when higher MCSs may be used.

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| 4168 | 274.26 | 10.43.6.4.2 | This new text is awkward and confusing: "All PPDUs in a BRP transaction are transmitted with the same bandwidth and with the same channel aggregation setting...." Are we implying that a transaction can consist of multiple requests and responses? How do we know when one transaction ends and another begins? | Replace this text with a simple sentence that the states that the CHANNEL\_BANDWITH and CHANNEL\_AGGREGATION parameters in the TXVECTOR of all transmitted reponses shall match the CHANNEL\_BANDWIDTH and CHANNEL\_AGGREGATION parameters of the seen by the responder in its RXVECTOR of the corresponding request. |

Proposed Resolution: **Reject**

**Discussion:**

The BRP transaction is well defined in the baseline at 10.43.6.4.2 (as a set of requests and responses). The TXVECTOR parameters are defined in the text following the quoted text. Limitting the continuity of bandwidth setting to requests and response will be actually confusing in a subclause dedicated to BRP transaction.

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| 4175 | 320.00 | 10.43.10.6 | Does "first path beamforming training" make use of EDMG BRP-TX, EDMG BRP-RX, or EDMG BRP-RX/TX packets? | Please define |

Proposed Resolution: **Revise**

**Discussion:**

(All the discussion here is short lived since TGaz proposes to replace the whole first path subclause with a one based on BRP-TXSS).

First Path beamforming is defined to operate on a BRP transaction as defind in 10.43.4.6.2. A transaction is a set of requests and responses in which every response is also a request. As such, any type of PPDU that is used in a BRP transaction may be used. There are some changes that need to be make to the text to improve it.

***TGay Editor: Change the text in P320L29 (10.43.10.60 as follows:***

In a BRP transaction that is part of a first path beamforming training, all transmitted BRP frames shall have the First Path Training subfield set to 1. EDMG BRP-TX, BRP-RX and BRP-RX/TX PPDUs may be used in first path beamforming transcation. In such a transaction, all the PPDUs that have the EDMG\_TRN\_LEN>0 in the TXVECTOR, shall have the FIRST\_PATH\_TRAINING parameter in the TXVECTOR set to 1. In such a transaction, all TX and RX beamforming training are used to find the AWV of the first path and not the best path. The first path is defined to be the propagation path between TX and RX which is estimated to have shortest time of flight. In line of sight (LOS) conditions, the first path corresponds to the LOS path. If several AWVs have the same estimated shortest time of flight, the beamforming training shall select the first path as the one with best quality. The method a STA uses to determine the first path and the first path with best quality is implementation dependent and beyond the scope of this standard. At the end of a first path beamforming transaction, both the initiator and responder shall return to the AWV of the prior established best path (not necessarily the first path).

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| 4333 | 278.23 | 10.43.10.1 | "If an EDMG STA transmits a BRP frame with the Channel Measurement Requested subfield in the DMG 23 Beam Refinement element set to 1, the TXVECTOR parameter EDMG\_TRN\_P shall not be set to 0." Why is it that when the channel measurement is requested, we have to have a P ? | Please clarify the case where thie is true in conceptual terms e.g. only when BRP-RX is used? Or used for a BRP poll frame ? |

Proposed Resolution: **Revised.**

**Discussion:**

The text should be improved to limit the setting of P>0 to PPDUs which have are either BRP-TX or BPR-RX TX and are used for TX training.

***TGay Editor: Change the text in P278.23 (10.43.10.1) as follows:***

If an EDMG STA transmits a BRPframe with the TXVECTOR parameter EDMG\_TRN\_LEN>0 and the EDMG\_PACKET\_TYPE is equal to either EDMG-TRN-T-PACKET or EDMG-TRN-R/T-PACKET and the Channel Measurement Requested subfield in the FBCK-REQ field of the DMG Beam Refinement element set to 1 and the TX-TRN-REQ in the BRP-Request field set to 1, the TXVECTOR parameter EDMG\_TRN\_P shall not be set to 0.

**References:**

**[1] Draft\_P802.11ay\_3.0**

**[2] Draft\_P802.11REVmd\_2.1**