IEEE P802.11
Wireless LANs

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| BRP packet Fixes |
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Abstract

This document proposes replacements for the occurances of the word “packet” in DMG related text.

All page/line references are to P802.11REVmc\_D2.1-353

All changes are editorial

Abstract

This document proposes replacement of the term “packet”,which is not well defined in text related to DMG, especially beam forming related text.

TGmc Editor: add the following text after P28L44:

**Beam refinement protocol receive frame: (BRP-RX frame):** An MPDU containing Beam Refinement Element (**8.4.2.129 DMG Beam Refinement element)** that is carried inside a PPDU with the TX vector parameter PACKET\_TYPE set to TRN-R-PACKET and TRN-LEN parameter greater than 0.

TGmc Editor: in P914L33 replace “BRP packet” with PPDU

TGmc Editor: modify P916L54 as follows:

BRP frame with the SNR Requested subfield of the FBCK-REQ field of the DMG Beam Refinement IE, set to 1. The Sector ID Order subfield indicates the TX

TGmc Editor: in P1111L50 replace “packet” with PPDU

TGmc Editor: in P1114L17 replace “BRP-TX and BRP-RX packets” with “BRP frames”

TGmc Editor: in P1154L54 repalce “BRP packet” with “BRP frame”

TGmc Editor: in P1156L33-50 (all of 9.7.7.5 including header and excluding last paragraph), replace “BRP packet” with “BRP frame” and “BRP packets” with “BRP frames”

TGmc Editor: Modify P1156L52 as follows:

PPDUs transmitted during beam tracking with the TXVECTOR parameter TRN-LEN greater than 0, may use any MCS.

TGmc Editor: in P1284L28 repalce “BRP packet” with “BRP frame”

TGmc Editor: in P1323L3 and P1323L5 replace “BRP-RX packets” with “BRP-RX frames”

TGmc Editor: Modify P1323L13-25 as follows:

A transmit beam refinement request (TX-TRN-REQ field within the BRP Request field set to 1) indicates the need for transmit antenna array training by the transmitting STA. The BRP frame that has the TX-TRN-REQ set to 1 (or the next BRP frame from this STA) shall have the TXVECTOR parameter TRN-LEN greater than zero and PACKET-TYPE set to TRN-T-PACKET. The STA responding to the BRP frame shall include feedback based on measurements it performed during the reception of the BRP frame. The feedback type is dictated by the FBCK-TYPE field within the DMG Beam Refinement element contained in the BRP frame.

A receive beam refinement request (L-RX field within the BRP Request field greater than zero) indicates the need of a receive antenna array training for the transmitting STA. The responding STA shall respond with a BRP PPDU the TXVECTOR parameter TRN-LEN greater than zero and PACKET-TYPE set to TRN-R-PACKET.

TGmc Editor: modify P1324L14-20 as follows:

In Figure 9-57 (An example of a beam refinement transaction), the first frame (from the initiator) has TX-TRN-REQ=1, the L-RX field has a value greater than zero and TRN-T subfields are appended to the frame. The second frame (from the responder) has a value greater than zero in the L-RX field, the TX-train-response field set to 1, the RX-train-response field set to 1, and TRN-R subfields are appended to the frame. The last frame (from the initiator) has RX-train-response set to 1 and TRN-R subfields are appended to the frame.

TGmc Editor: in 9.36.3.2 (starting on P1324L22), replace all occurances of “packet” with “frame”

TGmc Editor: in 9.36.6.3.2 and 9.36.6.3.3, (starting on P1335L43), replaces all occrances of “packet” with “frame” and “packets” with “frames”

TGmc Editor: modify P1342L24-29 as follows:

Beam refinement is a request/response based process. A STA requests receive beam refinement training by sending a BRP frame with a nonzero value in the L-RX field. The STA that receives the(Ed) BRP frame shall respond with a BRP frame (21.10.2.2 (Beam refinement )) with the TXVECTOR PACKET-TYPE parameter set to TRN-R-PACKET, and the TRN-LEN parameter set to the value of the L-RX field within the received BRP frame and with the RX-train-response field in the DMG Beam Refinement element set to 1.

TGmc Editor: in P1342L35 replace “packet” with “PPDU”

TGmc Editor: modify P1342L49-55 as follows:

If a STA requests transmit beam refinement training, but does not send TRN-T fields, the responding STA shall reply with a BRP frame containing a DMG Beam Refinement element with the TX-TRN-OK field set to 1. In this case (i.e., when the TX-train-response field is equal to 0), the responding STA shall set L-RX field to 0. The requesting STA shall then transmit a PPDU with the TXVECTOR parameter PACKET-TYPE set to TRN-T-PACKET and the TRN-LEN parameter greater than zero and BRP information element. The responding STA shall then respond with a BRP frame with the TX-train-response field set to 1 and the BS-FBCK and Channel Measurement Feedback element as above.

TGmc Editor: in P1342L61 and P1343L2, replace “packet” with “frame”

TGmc Editor: in 9.36.6.4.2 and 9.36.6.4.3, (starting on P1343L43), replaces all occrances of “packet” with “frame” and “packets” with “frames”

TGmc Editor: in 9.36.7 replace all occurances of “packets” with “PPDU” except two occurances of “Packet Type” to be replaced with “PACKET-TYPE”

TGmc Editor: in clause 21, replaces all occrances of “packet” with “PPDU” and all occurances of “packets” with “PPDUs”

TGmc Editor: modify P2192L18-20 as follows:

Antenna setting shall remain constant for the transmission of the entire PPDU except for the case of transmission of BRP PPDUs with TRN-LEN greater than 0 and PACKET-TYPE of TRN-T-PACKET (see 21.10.2.2 (Beam refinement

)). During the transmission of such PPDUs, it shall remain constant for the transmission of the STF, CE field, and Data field.

TGmc Editor: modify P2977L23-28 as follows:

These numbers illustrate that the payload is not simply packed 168 bits at a time into the LDPC encoding,

with the last few bits (modulo 168) in the last code word getting disproportionate coding gain. The specified

calculation spreads the excess coding gain evenly(#2489) across all the code words, so the number of payload bits in each code word varies between approximately 120 and the maximum 168.

TGmc Editor: in figure L-3, replace “packets” with “code words” and “packet” with “code word”