IEEE P802.11  
Wireless LANs

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| DMG CPHY and BRP Fixes | | | | |
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Abstract

This Document proposes resolution to some issues in BRP. All references are to REVmd D0.4

Issue1:

Bug fix in Draft 4.0 intoduces an error:

In P2921L29:



The formula is missing the s – should be “s(k)=2c(k)-1”

***Editor: in P2922L29 replace (k)=2c(k)-1 with s(k)=2c(k)-1***

Issue 2:

The note mentions that the differential encoding bit is not part of the modulation and coding. This is not correct since it is part of the header and as such it must be decoded correctly. Even if the receiver (lower part of the PHY) does not supply a value for this field, it is recovered using the LDCP decoder. We propose to modify the note:

***Editor: modify the text in P2922L34-35 as follows:***

NOTE—The scrambling process does not affect the Differential Encoder Initialization field of the DMG control mode header

Issue 3:

It is not clear when does a STA change its AWV after tranwsmitting a BRP-TX packet and receiving feedback.

***Editor: add the following text at the end of 10.40.6.4.4***

A STA that sent a BRP-TX packet and received feedback, may use the new antenna configuration based on the feedback on the next packet it sends to the same responder.

Issue 4: use of field instead of subfield



A DMG packet may have a TRN field appended to it. A TRN field is composed of several TRN units. Each TRN unit is composed of a channel estimate subfield, 4 TRN subfields and 4 AGC subfields. The text refers to TRN fields in many cases in which it should refer to TRN subfields.

***Editor: in P1225L45-47 change TRN-T field to TRN-T subfield as follows:***

The BS-FBCK field indicates the index of the TRN-T subfield that was received with the best quality in the last received BRP-TX PPDU, where the first TRN-T subfield in the PPDU is defined as having an index equal to 1.

***Editor: in P1235L22 change TRN-T field to TRN field as follows:***

the STA has measured on the TRN field of the BRP packet that contained the Channel Measurement

***Editor: in P1235 table 9-256 change TRN-T field to TRN-T subfield in all occurences.***

***Editor: in P1382L12 change TRN-R fields to TRN-R subfields as follows:***

corresponding to 0 to 64 TRN-R subfields. Other values are reserved. If the subfield is set to 0, the transmitting

***Editor: in P1878L19 change TRN-R fields to TRN-R subfields as follows:***

set to indicate the number of TRN-R subfields the initiator requests for use in the BRP transaction.

***Editor: in P1891L21-23 change TRN-R fields to TRN-R subfields as follows:***

with a BRP frame with the MID-REQ field set to 0 and the L-RX field set to indicate the number of TRN-R subfields the responder requests for use in the BRP transaction

***Editor: in P1891L26 change TRN-R fields to TRN-R subfields as follows:***

sector antenna pattern. The receiver may use the TRN-R subfields for receive training.

***Editor: in P1891L40 change TRN-R fields to TRN-R subfields as follows:***

If I-MID was granted in addition to R-MID, the initiator shall send a BRP frame with TRN-R subfields

***Editor: in P1895L42 change TRN-R fields to TRN-R subfields as follows:***

respond with a BRP packet (20.10.2.2 (Beam refinement)) including as many TRN-R subfields as indicated in

***Editor: in P1895L50 change TRN-T fields to TRN-T subfields as follows:***

header, the Packet Type and the Training Length fields are set to indicate the number of AGC and TRN-T

subfields appended to the packet

***Editor: in P1895L56 modify the text as follows:***

the BS-FBCK field set to indicate the index of the TRN-T subfield on which the responding STA received the best signal

***Editor: in P1896L1 change TRN-T fields to TRN-T subfields as follows:***

If a STA requests transmit beam refinement training, but does not send TRN-T subfields, the responding STA

***Editor: in P1896L5 change TRN-T fields to TRN-T subfields as follows:***

field to 0. The requesting STA shall then transmit a BRP packet with TRN-T subfields. The responding STA

***Editor: in P1898L17 change TRN-R fields to TRN-R subfields as follows:***

A STA that has requested beam refinement receive training shall, except when receiving TRN-R subfields, set

***Editor: in P1898L36 change TRN-R fields to TRN-R subfields as follows:***

In a BRP-RX packet, all TRN-R subfields shall be transmitted using the same TX AWV configuration as the

***Editor: in P1898L59 change TRN fields to TRN unit as follows:***

BEAM\_TRACKING\_REQUEST to Beam Tracking Requested, TRN-LEN to the number of requested TRN units as described in 20.10.2.2.3 (BRP packet header fields) and packet type to TRN-R-PACKET.

***Editor: in P1899L42-44 change fields to subfields as follows:***

sequence when the beam tracking initiator requests TRN-R subfields, while Figure 10-91 (Example of beam tracking procedure with initiator requesting TRN-T) illustrates a beam tracking frame exchange sequence when the beam tracking initiator requests TRN-T subfields

***Editor: in Figures 10-90 and 10-91 replace fields with subfields.***

***Editor: in P2956L9-10 change TRN fields to TRN subfields as follows:***

header, the PHY shall not generate a PHY-CCA.indication(IDLE) primitive until the expected end of the packet, including AGC and TRN subfields

***Editor: in P2960L37 change TRN-T fields to TRN-T subfields as follows:***

taps in each of the TRN-T subfield repetition (except for those using the CE AWV configuration). The beam

**References: P802.11REVmd\_D0.4.pdf**