IEEE P802.11
Wireless LANs

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| LB236 resolution to CID 2291 |
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Abstract

This document proposes resolution to LB236 CID 2291

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| --- | --- | --- | --- | --- | --- |
| 2291 | 3096.00 | 50 | 20.9.2.2 | BRP packet structure has some problems in details.The bullet list items in 20.9.2.2.1 both say, "BRP-[TR]X PPDUs are packets that have TRN training subfields appended to them." First, this isn't necessarily true, as the BRP PPDU could be a request for training TRNs, and not carry any itself. Also, these two sentences look like the define/describe BRP PPDUs, but they define the RX and TX variants identically, which isn't useful. The following sentences are the useful part.The definition of "training field(s)" is not clear, so the meaning of "Traning Length" in Table 20-11 (etc) is not clear. In fact, this field is not a length at all, but a number \_N\_ that can be used to derive the number (and therefore length of) the AGC and TRN subfields.Also, the AGC/TRN subfields are sometimes called "training fields" and sometimes "a training field". Since both of these fields actually have internal structure (they are not just a list of AGC sequences, nor TRN subfields, it is probably best to call these a distinguishable and singular name.Why does subclause 20.9.2.2.2 start with (or detail at all) the rules about setting [TR]XVECTOR parameters?20.4.2 and 20.5.2 claim to be definitions of the PPDU formats, but there is no (obvious) definition of the AGC and TRN subfields in those clauses. A reference would be helpful."A value of N in the Training Length field indicates 4├ùN AGC subfields" - does this mean the AGC (sub)field(s) has that many "AGC fields" (each of which is 4N repetitions of the Golay sequence), or there are just a total of 4N repetitions of the Golay sequence?"and that the TRN-R/T field has N TRN-Units" - There is no TRN-R/T field. | A submission will be provided. |

Proposed Resolution: **Revise**

**Discussion:**

The text in 20.9.2.2.1 was intended to be an introduction, not a definition. It is possible to improve it, with the danger of repeating text in the following paragraphs. The beginning of 20.9.2.2.2 can be removed as it repeats in TXVECTOR terms things that are defined in 20.9.2.2.2

*Change the text in the 3rd and 4th pargraphs of 20.9.2.2.1 (P3117L50) as follows:*

— BRP-RX PPDUs are ~~packets~~ PPDUs that have an AGC field and a TRN ~~training subfields~~ field ~~appended to them~~ following the data part. These packets enable receiver antenna weight vector training. A BRP-RX PPDU has the header field Training Length greater than zero, the PPDU Type equal to zero and Beam Tracking Request (if present) equal to 0 .

— BRP-TX PPDU are ~~packets~~ PPDUs that have an AGC field and a TRN ~~training subfields~~ field ~~appended to them~~ following the data part. The transmitting STA may change antenna configuration at the beginning of each subfield. The receiving STA performs measurements on these subfields and sends feedback to the STA that transmits the BRP-TX PPDU. A BRP-TX PPDU has the header field Training Length greater than 0 and the PPDU Type equal to 1.

*Remove the first paragraph of 20.9.2.2.2 (P3117L61):*

~~The TRN-LEN parameter in the TVXVECTOR or RXVECTOR of a BRP PPDU shall be greater~~

~~than zero. If the PPDU-TYPE parameter in the RXVECTOR or TXVECTOR is equal to TRN-RPACKET, then the BEAM\_TRACKING\_REQUEST parameter in the corresponding RXVECTOR or~~

~~TXVECTOR shall be set to Beam Tracking Not Requested.~~

*Change the first lines of the 20.9.2.2.5 (P3119L59) as follows:*

The beam refinement AGC field~~s~~ ~~are~~ is composed of 4*N* AGC subfields. Each AGC subfield consists ~~repetitions~~ of the sequence [Ga64 Ga64 Ga64 Ga64 Ga64] when the packet is transmitted using the SC mode and [Gb64 Gb64 Gb64 Gb64 Gb64] when the packet is transmitted using the control mode. The sequences Ga64 and Gb64 are defined in 20.10 (Golay

*Change the line 59-60 of P3118 (last lines of 20.9.2.2.2)*

Each BRP PPDU(#1379) is composed of an STF, a CE field, and a data field followed by ~~a training field containing~~ an AGC ~~training~~ field and a TRN field. This is shown in Figure 19-46 (BRP PPDU

*Change the two paragraphs in P3471L45-55 (24.9.2.2.1)*

* BRP-RX PPDUs(#1379) are ~~packets~~ PPDUs that have e-TRN-R/TRN-R training sequences ~~appended to them~~ following the data part. These packets with TRN-R sequences enable receiver antenna weight vector training, and these packets with e-TRN-R sequences enable receiver antenna weight vector training and measuring one alternative link.
* BRP-TX PPDUs(#1379) are ~~packets~~ PPDUs that have e-TRN-T/TRN-T training sequences ~~appended to them~~ following the data part. The transmitting STA may change antenna configuration at the beginning of each sequence. The receiving STA performs measurements on these sequences and sends feedback to the STA that transmits the BRP-TX PPDU(#1379), including the measurement results of alternative link.

*Change the two paragraphs in P3536L15-21*

* BRP-RX PPDUs(#1379) are ~~packets~~ PPDUs that have TRN-R training sequences ~~appended to them~~ following the data part. These packets enable receiver antenna weight vector training.
* BRP-TX PPDUs(#1379) are ~~packets~~ PPDUs that have TRN-T training sequences ~~appended to them~~ following the data part. The transmitting STA may change antenna configuration at the beginning of each sequence. The receiving STA performs measurements on these sequences and sends feedback to the STA that transmits the BRP-TX PPDU(#1379).

**References:**

**[1] DraftP802.11REVmd\_D2.3**