### **IEEE P802.11 Wireless LANs**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Comment Resolutions on BPSK-Mark2 | | | | |
| Date: 2019-07-15 | | | | |
| Author(s): | | | | |
| Name | Affiliation | Address | Phone | Email |
| Steve Shellhammer | Qualcomm |  |  | shellhammer@ieee.org |
|  |  |  |  |  |

**Abstract**

The document provides comment resolutions for CIDs: 3089, 3127, 3128, 3235, 3289, 3290, 3306, 3328, 3348 and 3349.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page/Line** | **Comment** | **Proposed Change** | **Resolution** |
| 3089 | 30.3.9.2.5 | 154/19 | "The BPSK-Mark2 field is a repeat of the L-SIG field and is used to spoof HT devices from false packet type detection" This is incorrect. It is unclear what BPSK-Mark2 is used for. | BPSK-Mark2 won't cause any existing device to false detect to anything, either describe its actual use, or remove this field. | **Revised**  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |
| 3127 | 30.3.9.2.5 | 154/19 | The usage of BPSK-Mark 2 is not the same as BPSK-Mark 1. | Correct it. | **Revised**  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |
| 3289 | 30.3.9.2.5 | 154/19 | "The BPSK-Mark2 field is a repeat of the L-SIG field and is used to spoof HT devices from false packet type detection." | BPSK-Mark2 is not used to spoof HT devices. Need to specify the purpose of BPSK-Mark2. | **Revised**  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |
| 3235 | 31.2.9.2.5 | 156/29 | The BPSK-Mark2 field is a repeat of the L-SIG field and is used to spoof HT devices from false packet type detection. | what about VHT devices? Clarify | **Revised**  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |
| 3306 | 31.2.9.2.5 | 156/30 | Necessity of the BPSK-Mark2 symbol  It seems to be redundant given that there is already a Mark1 available for spoofing. | "Explain why the Mark2 OFDM symbol is required.  Can it be made optional?" | **Revised**  It cannot be optional.  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |

**Discussion**

This was a copy and paste error from BPSK-Mark1. A description of the need for BPSK-Mark2 is provided in IEEE 802.11-19/423r1.

**Proposed Resolution**

TGba Editor make the following changes to the draft,

The BPSK-Mark2 field is a repeat of the L-SIG field and is used to spoof VHT devices from false packet type detection. (#3089, 3127, 3289, 3235, and 3306)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page/Line** | **Comment** | **Proposed Change** | **Resolution** |
| 3128 | 30.3.9.2.5 | 154/33 | p2 should be used here instead of p1, although p2 and p1 are both equal to 1 | Correct it. Same for line 39. | **Revised**  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |
| 3290 | 31.2.9.2.5 | 156/53 | "p1 is the second pilot value in the sequence defined in 17.3.5.10 (OFDM modulation)." | BPSK-Mark1 uses p1, the next pilot value sequence following LSIG. Following the same design, suggest BPSK-Mark2 to use p2. Need to change Equation (31-8) accordingly. | **Revised**  TGba Editor makes changes as shown in IEEE 802.11-19/1170r0 |
| 3328 | 30.3.9.2.5 | 154/33 | Equation (31-8) is not accurate. The third pilot value p\_2 should be used, instead of p\_1 | Replace the term "p\_1" with "p\_2" in Equation (31-8) and change the description just below the equation from "p\_1 is the second pilot" to "p\_2 is the third pilot" | **Accepted** |

**Proposed Resolution**

TGba Editor make the following changes to the draft,

In Equation (31-8) change to .

On Page 154 Line 39 change to .

(#3128, #3290, #3328)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **Page/Line** | **Comment** | **Proposed Change** | **Resolution** |
| 3348 | 30.4.2 | 167/19 | BPSK-Mark2 field is not accounted for aPPDUMaxTime calculation in Table 30-13 | Change the aPPDUMaxTime value in Table 30-13 to 2972 µs. | **Accepted** |
| 3349 | 30.4.2 | 167/23 | BPSK-Mark2 field is not accounted for aRxPHYStartDelay calculation in Table 30-13 | Change the aRxPHYStartDelay value in Table 30-13 to 92 µs. | **Accepted** |