### IEEE P802.11 Wireless LANs

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| Comment resolution on BPSK-Mark | | | | |
| Date: 2019-01-07 | | | | |
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Abstract

This submission proposes resolutions for comments of TGba Draft D1.0 with the following CIDs:

920, 269, 270, 271, 272, 222, 245, 246, 247, 248, 249, 252, 273, 275, 256

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 920 | 74.57 | 32.2.4.5 | As BPSK-Mark is decided to be repeated LSIG, it may be clear to change the name "BPSK-Mark" to "RLSIG". | Suggetion as in the comment. Need to change throughout the draft. | Reject.  Refer to the discussion below. |
| 269 | 87.46 | 32.2.13 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-11. | Reject.  Refer to the discussion below. |
| 270 | 88.11 | 32.2.13 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-12. | Reject.  Refer to the discussion below. |
| 271 | 89.26 | 32.2.13 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-13. | Reject.  Refer to the discussion below. |
| 272 | 90.20 | 32.2.14 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-14. | Reject.  Refer to the discussion below. |
| 222 | 68.13 | 32.2.2 | BPSK-Mark defined in Draft 1.0 is same as L-SIG. and one OFDM symbol such as BPSK-Mark was defined with RL-SIG in 11ax spec. so, for the clarification and consistency of this symbol, BPSK-Mark should be changed as RL-SIG. | change the BPSK-Mark with RL-SIG in entire 11ba D1.0 | Reject.  Refer to the discussion below. |
| 245 | 68.14 | 32.2.2 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-1. | Reject.  Refer to the discussion below. |
| 246 | 68.35 | 32.2.2 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Table 32-2. | Reject.  Refer to the discussion below. |
| 247 | 68.35 | 32.2.2 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change the descriotion for BPSK-Mark as "Repeated Non-HT SIGNAL field". | Reject.  Refer to the discussion below. |
| 248 | 68.59 | 32.2.2 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-2. | Reject.  Refer to the discussion below. |
| 249 | 69.04 | 32.2.2 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change "BPSK-Mark" to "RL-SIG" in Figure 32-3. | Reject.  Refer to the discussion below. |
| 252 | 69.23 | 32.2.2 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change the sentence as follows:  "... which is composed of L-STF, L-LTF, L-SIG and RL-SIG fields." | Reject.  Refer to the discussion below. |
| 273 | 91.33 | 32.2.3.1 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change BPSK-Mark to RL-SIG in Equation 32-7 | Reject.  Refer to the discussion below. |
| 275 | 92.16 | 32.2.3.1 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change BPSK-Mark to RL-SIG in Equation 32-11 | Reject.  Refer to the discussion below. |
| 256 | 74.56 | 32.2.4.5 | BPSK-Mark was defined as repeated L-SIG. As in 11ax, use "RL-SIG" instead of "BPSK-Mark". | Change the title of 32.2.4.5 to Construction of the RL-SIG and change "BPSK-Mark" to "RL-SIG" in section 32.2.4.5. | Reject.  Refer to the discussion below. |

**Discussion**: While the content is the same for both BPSK-Mark and RL-SIG, the physical waveform is different for RL-SIG and BPSK-Mark. This is because RL-SIG uses 4 additional tones (56 tones) when compared to BPSK-Mark which uses 52 tones. Although BPSK-Mark is same as L-SIG, renaming it to RL-SIG will create ambiguity with RL-SIG used in HE PHY (802.11ax). To avoid any ambiguity, we suggest to keep the name BPSK-Mark.