IEEE P802.11  
Wireless LANs

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| PHY comment resolution 2 | | | | |
| Date: 2010-11-10 | | | | |
| Author(s): | | | | |
| Name | Company | Address | Phone | email |
| Assaf Kasher | Intel Corporation |  |  | assaf.kasher@intel.com |
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Abstract

This document proposes resoltions to a few commens on Draft 2.0 of TGad.

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| 2088 | 178.00 | 9.2.3.1 | SIFS + 10% of aSlotTime tolerance seems to be quite tough in terms of implemenation. | SIFS +20% of aSlotTime seems to be good. If it's changed, there will be no harm from the protocol point of view. |

Proposed resolution: **Reject**

*Discussion: accuracy of 0.3usec should be tough for a device that samples at a rate higher than 3Gsps.*

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| 2083 | 406.00 | 21.3.6.2 | For the SC receiver, estimation of channel impulse response (CIR) is achieve through complementary sum of Ga128/Gb128 auto-correlations pair. To perform a clear auto-correlation procedure, appropriate delayed additions and delayed subtractions of the received signal are needed. Present SC channel estimation sequence in the Version D2.0 allows 2 pairs of Ga128 and 2 pairs of Gb128 auto-correlations. In terms of hardware efficiency, symbol synchronization (use of short training field) prohibits practically available auto-correlation results to 1 Ga128 sequence and 1 Gb128 sequence because CIR can be estimation after symbol synchronization is finished. | Change the sequence Gu512 to [Gb128 Ga128 -Gb128 -Ga128]. Related presentation will be provided. |

*Proposed Resolution:* **Reject**

Discussion: I don’t see the advantage of using the proposed method on treating Gu and Gv as complementary sequences, and summing the correlation with both of them to get the channel estimate.

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| 2084 | 414.00 | 21.4.3.3.2 | Since the 6 byte MAC header data in the first LDPC codeword do not serve any time-critical information to MAC, add robustness to Control PHY header by spreading L\_HDR to 2 times while L\_DPFCW is changed to 80. | Replace L\_FDCW with another L\_HDR. Thus, L\_DPFCW = (2\*L\_HDR)x8 = 80. Subsequent calculation procedures on N\_CW, L\_DPCW, L\_DPLCW shall have new formulas (i.e. "(Length-6)" should be modified to "(Length)") |

Proposed Resolution: **Reject**

Discussion: I have not seen any issue with header robostness in Simulations. The header is more robust, due to the lower code rate of the first code. Getting the control field of a MAC packet can be useful to provide early information to the MAC.

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| 2080 | 433.00 | 21.6.3.2.2.2 | Is it C\_LWD, not C\_LW? If it is C\_LWD, it seems that the code word bits stream only includes the data part of the LDPC code word without any parity part. | C\_LWD needs to be changed to C\_LW. |

Proposed Resolution: **accept**

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| 2081 | 433.00 | 21.6.3.2.2.2 | Does the coded bit stream concatenated with N\_BLK\_PAD zeros need to be scrambled again? These data bits are already scrambed before LDPC encoding and it sounds like they need to be scrambled again. | More detailed explanation is required. |

Proposed Resolution: **Reject**

The test is clear. The bits are appended at the end of the encoding sequence, so they were not scrambled (only the uncoded stream is scrambled), and scrambling is necessary.

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| 2085 | 453.00 | 21.12.4 | aRxPLCPDelay is set to < 1us. Why is this value necessary? As long as the aSIFSTime and aSloTtime are met, a specifice value for aRxPLCPDelay should be set to implementation dependent value | Implementation dependent as long as the requirement of aSIFSTime and aSloTtime are met. |

Proposed Resolution: **Accept**

***TGad Editor: in the 4th non-header line of table 102, Replace* “<1us” with “**Implementation dependent as long as the requirements of aSIFSTime and aSlotTime are met.

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| 2231 | 455.00 | 21.13.4.3 | The list of primitives in Table 104 does not match the headings that follow - e.g., no PMD\_RCPI. | Align list with subclauses that follow. |

Proposed resolution: **counter**

The missing clause is actual PMD\_DBAND\_RSSI.

***TGad Editor: remove the line of PMD\_DBAND\_RSSI from the table 104 D2.0.***

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| 2082 | 434.00 | 21.6.3.2.3.3 | Coordinates on the 16-QAM constellation in Figure 151 are not consistent with the equation above. | All numbers need to be divided by sqrt(10). |

Proposed Resolution: Reject

This is consistend with the OFDM (21.5), QPSK (21.6.3.2.3.2) and clause 17 of 802.11

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| 2089 | 452.00 | 21.12.4 | aPHY-RX-START-Delay is used to calculate the time. But, the value of aPHY-RX-START-Delay is not defined | Define the value of aPHY-RX-START-Delay for each PHY Control PHY : aControlPHYPreambleLength + aRxPLCPDelay SC PHY : aDataPreambleLength + aRxPLCPDelay OFDMPHY : aDataPreambleLength + aRxPLCPDelay |

Proposed Resolution: counter

***TGad Editor: add the following line to table 102***

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| aPHY-RX-START-Delay | Control PHY – 10usec, SC and SC-LP PHY – 3.6usec, OFDM PHY – 3.3usec |