IEEE P802.11
Wireless LANs

|  |
| --- |
| LB1000 Misc PHY CIDs |
| Date: 2015-11-19 |
| Author(s): |
| Name | Affiliation | Address | Phone | Email |
| Vinko Erceg | Broadcom | San Diego |  | verceg@broadcom.com |
| Matthew Fischer | Broadcom | Sunnyvale |  |  |

Abstract

This document proposes a resolution for the following CIDs: 6225, 6241, 6281, 6404, 6409, and 6423. The proposed resolution is based on D4.0.

**REVISION NOTES:**

R0: initial

R1:

R2: corrected the document reference found in the resolution for CID 6304 (from 11-15-1424 to 11-15-1420)

R3: change resolution and change proposed text changes for CID 6304 from modifying the reference to timers to deleting all references to PHY-CCARESET.request and PHY-CCARESET.confirm. The IPI-STATE parameter is also deleted.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the TGmc Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGmc Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGmc Editor: Editing instructions preceded by “Instruction to Editor” are instructions to the TGmc editor to modify existing material in the TGmc draft. As a result of adopting the changes, the TGmc editor will execute the instructions rather than copy them to the TGmc Draft.***

**CID LIST:**

 CID Sec. Pg. Ln Comment Proposed Change Resolution

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6225 | 21.4.3.3.3 | 2413 | 18 | The exposition is unclear and the example is poor (makes the middle and last codeword the same size) | Change the exposition to:1) LCWD=128 is the maximal number of data bits in each LDPC codeword. LHDR=5 is the length of the header (including HCS) in octets. LFDCW=6 is the length of the additional data in the first LDPC codeword in octets.2) The total (header and additional data) number of bits in the first LDPC codeword is LDPFCW=(LHDR+LFDCW)x8=88.3) The number of LDPC codewords is NCW=<blah>.4) The number of bits in the second and any subsequent LDPC codeword (if present), except the last, is LDPCW=<blah>.5) The number of bits in the last LDPC codeword is LDPLCW=<blah>.Change the example to:NOTE---For example, if Length = 128, then NCW=<blah>=7, LDPCW=163 and LDPLCW=161. In the first LDPC block the 88 bits of LDPFCW consist of 40 header+HCS bits along with 48 bits of data. | Revise. Accept the proposed resolution wit the following change: “1) LCWD=~~128~~ 168 is the maximal number of data bits in each LDPC ….. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6241 | 18.3.5.7 | 2247 | 52 | In Equation (18-16) for j in the second permutation for data interleaving, the closing parenthesis should be moved from immediately after the "mod s" to immediately before, matching Equation (22-78) | As it says in the comment | Accept |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6281 | 18.3.12 | 2269 | 55 | It says "Once the SIGNAL is detected, without any errors detected by a single parity (even), FEC decode shall be initiated and the PHY SERVICE fields and data shall be received, decoded (a Viterbi decoder is recommended), and checked by ITU-T CRC-32. If the FCS by the ITU-T CRC-32 check fails, the PHY receiver shall return to the RX IDLE state, as depicted in Figure 18-19 (Receive PHY)." but ITU CRC-32 is not defined or referenced. Is any of this blurb necessary anyway (it's not in any other PHY)? | Delete the cited text | Accept. Delete the text.  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6304 | 7.3.5.10.4 | 551 | 36 | "reset the PHY CS/CCA timers" -- what PHY CS/CCA timers | Refer explicitly to the timers being reset | Revise. TGmc editor shall make the text edits shown under the heading “Proposed text changes for CID 6304” as found in document 11-15-1400r3.See 11-15-1420 for discussion. |

**Proposed text changes for CID 6304:**

**7.3.4.2 PHY-SAP inter-(sub)layer service primitives**

***TGmc editor, within 7.3.4.2 PHY-SAP inter-(sub)layer service primitives in D4.3, delete the row of Table 7-2 PHY-SAP inter-(sub)layer service primitives that contains PHY-CCARESET.***

**7.3.4.3 PHY-SAP service primitives parameters**

***TGmc editor, within 7.3.4.3 PHY-SAP service primitives parameters in D4.3, delete the row for IPI-STATE within Table 7-3 PHY-SAP service primitives parameters and remove all references to PHY-CCARESET.confirm in other rows in the table.***

***TGmc editor, within 7.3.5.12.2 Semantics of the sevice primitive in D4.3, modify the text of the paragraph shown:***

**7.3.5.12.2 Semantics of the service primitive**

The IPI-REPORT parameter is present if dot11RadioMeasurementActivated is true. The IPI-REPORT parameter provides a set of IPI values for a time interval. The set of IPI values may be used by the MAC sublayer for radio measurement purposes. The set of IPI values are recent values observed by the PHY entity since the generation of the most recent PHY-TXEND.confirm, PHY-RXEND.indication or PHY-CCA.indication primitive, whichever occurred latest.

***TGmc editor, delete subclause 7.3.5.10 PHY-CCARESET.request and all of its subclauses.***

***TGmc editor, delete subclause 7.3.5.11 PHY-CCARESET.confirm and all of its subclauses.***

***TGmc editor, delete the last paragraph of subclause 9.3.2.1 CS mechanism in D4.3 as shown:***

**9.3.2.1 CS mechanism**

***TGmc editor, modify the first paragraph of subclause 9.3.2.4 Setting and resetting the NAV in D4.3 as shown:***

**9.3.2.4 Setting and resetting the NAV**

A STA that receives at least one valid frame in a PSDU can update its NAV with the information from any valid Duration field in the PSDU. When the received frame's RA is equal to the STA's own MAC address, the STA shall not update its NAV. But for all other received frames the STA shall update its NAV when the received Duration is greater than the STA's current NAV value. Upon receipt of a PS-Poll frame, a STA shall update its NAV settings as appropriate under the data rate selection rules using a duration value equal to the time, in microseconds, required to transmit one Ack frame plus one SIFS, but only when the new NAV value is greater than the current NAV value. If the calculated duration includes a fractional microsecond, that value is rounded up to the next higher integer. Various additional conditions may set or reset the NAV, as described in 9.4.3.3 (NAV operation during the CFP). This NAV update operation is performed when the PHY-RXEND.indication primitive is received.

***TGmc editor, within subclause 22.2.4.1 General of D4.3 inside of “*Figure 22-3 – PHY-CONFIG and CCA interaction with Clause 18 (Orthogonal frequency division multiplexing (OFDM) PHY specificication), Clause 20 (High throughput (HT) PHY specification), and Clause 22 (Very High Throughput (VHT) PHY specification) PHYs*”, delete the PHY-CCARESET.request and PHY-CCARESET.confirm primitives from the diagram and modify some of the text inside of the diagram as shown:***

**22.2.4.1 General**

CCA requirements are defined in Clause 22.3.18.5.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6409 |  |  |  | The various PHYs have various energy detect thresholds, even for the same PPDU formats | Align the thresholds for various PHYs (or at least make it clear which threshold is to be used when a PHY includes the waveforms of an earlier PHY, at least for things like preamble detect) | Reject. Reason for rejection: In each PHY ED levels are clearly specified. Those ED levels should be used for corresponding PPDUs.  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 6423 | 16.4.5.5 | 2191 | 27 | What is "B90/2pi"? Any is it formatted correctly? | Clarify, and change the pi to a symbol; should the 90 be superscript or something? | ReviseChange:“Channel 14 is unique. The Japanese standard ARIB RCR-STD 33 (5.0) [B7] states that B90/2pi normalizedto the ‘transmission speed of modulation signal’ shall be > 10.” To: “Channel 14 is unique. The Japanese standard ARIB RCR-STD 33 (5.0) [B7] states that B90/2pi normalizedto the ‘transmission speed of modulation signal’ shall be > 10, where B90 is the 90% occupied channel bandwidth.Editor – please change “pi” to symbol (2 locations in the paragraph) |