IEEE P802.11  
Wireless LANs

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| Clause 22.3.20 Comment Resolution for D2.0 | | | | |
| Date: 08 March 2012 | | | | |
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Abstract

This document provides resolutions for CIDs: 5203, 4106, 5204, 5206, 5207, 5208, 5210, 4771, 5212, 5214, 5213, 4117, 5211, 5216, 5215, 4108, 4767, 5218, 5219

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| 5203 | 259.41 | 22.3.20 | Section 22.3.20 should make some mention of MU transmission | This section talks about SU transmission only. While we don't need to fully reproduce the text for MU, some mention should be made of MU and how it relates to SU. | V | Revise. See resolution in 12/0251 |

**TGac editor: modify P259L46-49 as follows:**

The first path, for which typical transmit procedures are shown in Figure 22-25, is selected if the

FORMAT parameter of PHY-TXSTART.request(TXVECTOR) is VHT. These transmit procedures

do not describe the operation of optional features, such as LDPC, STBC, or MU. Note – in general for MU the A-MPDU would be per user in the MAC, the VHT Training Symbols, VHT-SIG-B, and C-PSDU would be per user in the PHY PLCP, and the VHT Training Symbols, VHT-SIG-B, and Data would be per user in the PHY PMD in Figure 22-25.

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| 4106 | 259.62 | 22.3.20 | "In both paths, in order to transmit data, PHY-TXSTART.request shall be enabled"  This is meaningless. The primitives are not enabled/disabled. They are sent and received across a SAP boundary. | Change first sentence to read: "In both paths, in order to transmit data, the MAC generates a PHY-TXSTART.request primitive, which causes the PHY entity to enter the transmit state." | A | Agree. However, the commenter should note that similar subclauses in Clause 18 and 20 have the same style language. It is surprising that this language was not “fixed” in the original spec development and in twelve drafts in TGmb if it is truly incorrect. |
| 5204 | 260.19 | 22.3.20 | PLCP configures the PMD | Replace "configure the PHY" with "configure the PMD" | A | Agree. However, the commenter should note that similar subclauses in Clause 18 and 20 have the same style language. It is surprising that this language was not “fixed” in the original spec development and in twelve drafts in TGmb if it is truly incorrect. |
| 5206 | 260.40 | 22.3.20 | Sentence out of place | The sentence "The PHY proceeds with PSDU transmission through a series of data octet transfers from the MAC." looks out of place. The preceding paragraph already talks about MAC-PHY interaction. Delete this sentence. | R | Reject. This is an introductory sentence to the paragraph. |
| 5207 | 260.41 | 22.3.20 | Description of exchange with PMD needs corrections | The text states that "At the PMD layer, the data octets are sent in 0-7 order and presented to the PHY through PMD\_DATA.request primitives." There seem to be a couple of things wrong with this sentence: - replace "presented to the PHY" with "presented to the PMD" - The sentence suggests byte-based exchange with the PMD layer. In fact PMD\_DATA.request exchanges bits per OFDM symbol (see 22.6.5.2). After encoding and scrambling, there is no notion of bytes anymore. | V | Revise.  1) Agree. However, the commenter should note that similar subclauses in Clause 18 and 20 have the same style language. It is surprising that this language was not “fixed” in the original spec development and in twelve drafts in TGmb if it is truly incorrect.  TGac editor: replace "presented to the PHY" with "presented to the PMD" on P260L43.  2) there can be groups of 8 bits before or after encoding and scrambling, so no change is necessary to the text. |
| 5208 | 260.54 | 22.3.20 | Completion of PPDU tranmission is unclear | Replace sentence "The PPDU transmission is completed and the PHY entity enters the receive state" with "When the PPDU transmission is completed, the PHY entity enters the receive state" | A | Agree |
| 5210 | 260.59 | 22.3.20 | short GI is for data symbols only | Replace "every OFDM symbol" with "every data OFDM symbol" | A | Agree |

**Figure 22-25 PLCP transmit procedure**

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| 4771 | 261.00 | 22.3.20 | PMD\_TXSTART.req is missing | Add before PMD\_DATA.req | A | Agree. See 12/0251. |
| 5212 | 261.10 | 22.3.20 | PHY-DATA.request and PHY-DATA.confirm are in the wrong place in Figure 22-25 | The figure shows PHY\_-DATA.request and PHY\_-DATA.confirm as beginning before A-MPDU. It's possible that these primitives are used right after PHY-TXSTART, but the current location is inconsistent with the location of A-MPDU shown in the Figure. | R | Reject. Timing between layers in the figure follows the convention in Figure 18-17 and Figure 20-22. |
| 5214 | 261.11 | 22.3.20 | A-MPDU in Figure 22-25 is ambiguous | The MAC provides all bytes of the PSDU. It should be made clear that A-MPDU means "A-MPDU after EOF padding". Actually, it's probably correct to use PSDU instead of A-MPDU here. | V | Revise. Change “A-MPDU” to “A-MPDU including EOF padding”. See 12/0251. |
| 5213 | 261.16 | 22.3.20 | Service field is not shown in Figure 22-25 | Service field should be inserted between "VHT-SIG-B" and "PSDU" blocks. | R | Reject. Service is part of the PSDU, C-PSDU, and Data. |
| 4117 | 261.22 | 22.3.20 | Figure 22-25 shows a PMD\_TXEND.request that results in a PMD\_TXEND.indication.  That's the wrong pairing of primitives. | Change PMD\_TXEND.indication to PMD\_TXEND.confirm in Figure 22-25. | A | Agree. See 12/0251. |
| 5211 | 261.25 | 22.3.20 | PMD\_TXSTART.request not shown in Figure 22-25 | The arrow currently labeled "PMD\_DATA.request" should be labeled "PMD\_TXSTART.request" | V | Revise. See CID 4771 |
| 5216 | 261.33 | 22.3.20 | There is no VHT-SIG field | Replace "VHT-SIG" with "VHT-SIG-A" | R | Reject. All the VHT-SIG field on P261L33 have A or B designation. |
| 5215 | 261.40 | 22.3.20 | Change caption of Figure 22-25 to explicitly indicate that this is SU transmission | Change caption to "PLCP transmit procedure for SU transmission" | A | Agree. |

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**Figure 22-26 PLCP transmit state machine**

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| 4108 | 262.03 | 22.3.20 | The transmit flow in Figure 2-26 doesn't really work. We have a Tx PSDU Octet and and Tx Symbol box that, as shown, must be executed the same number of times. Unless we have one octet per symbol this is not so.  If we have an integer number of octets per symbol, we can repeat the Tx PSDU Octet. But we don't. Instead, there must be some notion of buffering with two processes, one that fills the buffer, and one that empties it. | Rework diagram. Add notion of a buffer that holds at least a symbols worth of data. Firstly fill the buffer in one loop of Tx PSDU Octets. Then empty it in Tx Symbol.  The fill buffer process can also handle the PHY padding, which is needed to provide exactly a symbol's worth of data. | V | Revise. Modify TX PSDU OCTET box to “Get octet from MAC  and scramble,  encode, and buffer”. See 12/0251. |
| 4767 | 262.13 | 22.3.20 | What's PMD\_EXPANSIONS\_MAT.request? | Need to define in 22.6.4 | V | Revise. Its left over from 802.11n figure. Delete PMD\_EXPANSIONS\_  MAT.request from figure. See 12/0251. |
| 5218 | 262.46 | 22.3.20 | Inconsistency in PLCP state machine | The box labeled "TX PLCP Data" states: "16 bit service field prepended, padding and tail bits appended to PSDU". This implies that all data is available at this stage. Immediately following, the diagram describes a byte-by-byte exchange between MAC and PHY to get the PSDU octets. This is inconsistent. | R | Reject. The cited sentence does not imply that all the data is available at this stage, it merely reminds the reader of the service field, padding and tail. |
| 5219 | 262.64 | 22.3.20 | Change caption of Figure 22-26 to explicitly indicate that this is SU transmission | Change caption to "PLCP transmit state machine for SU transmission" | A | Agree. |

  
