### IEEE P802.11Wireless LANs

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| Comment resolution on WUR receive procedure (32.2.14) |
| Date: 2018-11-11 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Vinod Kristem | Intel Corporation | 2200 Mission College Blvd, Santa Clara, CA 950542200  |  | vinod.kristem@intel.com |
| Minyoung Park | Intel Corporation |  |  |  |
| Thomas Kenney | Intel Corporation |  |  |  |
| Po-Kai Huang | Intel Corporation |  |  |  |
| Shahrnaz Azizi | Intel Corporation |  |  |  |

Abstract

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

22, 25, 40, 41, 42, 43, 208, 231, 502, 1221, 1253

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| --- | --- | --- | --- | --- | --- |
| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 22 | 91.14 | 32.2.14 | the term "final" in the sentence "Any final bits that cannot be assembled...." is ambiguous. |  | Revised. TGba Editor makes changes as shown in 802.11-18/1965r4 |
| 25 | 90.00 | 32.2.14 | Missing arrow head for "End of PPDU Rx" in Figure 32-15 |  | Revised. TGba Editor makes changes as shown in 802.11-18/1965r4 |
| 40 | 91.06 | 32.2.14 | The text reads - RSSI measurement is done on the WUR Sync. Needs more clarification |  | Revised. TGba Editor makes changes as shown in 802.11-18/1965r4 |
| 41 | 91.05 | 32.2.14 | Missing term |  | Reject. The comment is not clear. It does not specify what term is missing. |
| 42 | 91.02 | 32.2.14 | Missing term |  | Reject. The comment is not clear. It does not specify what term is missing. |
| 43 | 91.08 | 32.2.14 | RCPI (Receive Channel Power Indicator) measurement is reference in Figure 32-14 as measured during the reception of the WUR data portion On/Off symbols. However there is no supporting text referenced to clause 19 in 802.11-2016. |  | Revised.TGba Editor makes changes as shown in 802.11-18/1965r4 |
| 208 | 91.05 | 32.2.14 | "If the Sync sequence detection fails, a PHY-RXSTART.indication primitive is not issued, and instead the PHY shall issue the error condition PHY-RXEND.indication primitive." If Sync sequence is not detected, PHY shouldn't issue the error condition, in fact, it shouldn't issue any signal to MAC at all. | as in the comment | Revised.TGba Editor makes changes as shown in 802.11-18/1965r4 |
| 231 | 90.22 | 32.2.14 | BPSK Mark is constructed with MCS0 ( BPSK and Rate 1/2). Specify the applied modulation and rate for BPSK-Mark on figure 32-14. | see the comment. | Revised. TGba Editor makes changes as shown in 802.11-18/1965r4 |
| 502 | 91.12 | 32.2.14 | "PHYRXEND.indication" must be "PHY-RXEND.indication". | Please correct as commented. | Accept.  |
| 1221 | 90.23 | 32.2.14 | In Fig 32-14, Coded OFDM -> Coded OFDM, BPSK, Rate 1/2 | as in comment | Accept.  |
| 1253 | 90.10 | 32.2.14 | In Figure 32-14, the legacy preamble should not be visible to the WURx. So, maybe there is no need to show the legacy preamble + BPSK Mark portion. Or, at least they can be shown as shaded blocks to distinguish with the WUR portion. | In Figure 32-14, change the legacy preamble and BPSK Mark portion to shaded blocks. | Accept.  |

***TGba editor: Change the 32.2.14 WUR receive procedure as follows: (Track change on)***

**32.2.14 WUR receive procedure**

A typical PHY receive procedure is shown for WUR format in Figure 32-14 (PHY receiver procedure for WUR PPDU). A typical state machine implementation of the receive PHY is given in Figure 32-15 (PHY receive state machine). The PHY is set to operate at the appropriate frequency through station management via the PLME, as specified in 32.3 (WUR PLME). The receive parameters, such as RSSI, may be accessed via the PHY-SAP.

The PHY measures a receive signal strength and searches for a valid WUR Sync sequence, in order to acquire WUR PPDU, to determine the WUR data rate and the start of the WUR Data field. If a valid Sync sequence is detected, WUR PHY issues PHY-RXSTART.indication primitive along with the WUR\_DATARATE.indication. If the Sync sequence detection fails, a PHY- RXSTART.indication primitive is not issued, and WUR PHY goes back to RX IDLE state. (#208) RSSI measurement is made during the reception of the WUR Sync. (#40) Based on the WUR data rate, the PHY sets the *NSPDB* parameter as given in Table 32-4 (Frequently used parameters).

The PHY entity shall begin receiving the WUR Data symbols. If signal loss occurs during reception, prior to completion of the PPDU reception, the error condition PHY-RXEND.indication (CarrierLost) shall be reported to the MAC.(#502) The received PPDU bits are decoded, assembled into octets and presented to the MAC using a series of PHY-DATA.indication (DATA) primitive exchanges. Any remaining bits, which could not be assembled into a complete octet are discarded.(#22) The WUR PHY shall maintain decoding the data as long as the receive signal strength is maintained the same. RCPI measurement is made during the reception of the data field as described in 19.3.19.6. (#43) If either the receive signal strength falls or PHY-CCARESET.request is received, the WUR PHY terminates and enter to the RX IDLE state. If it terminates due to reduction of the receive signal strength, a PHY-RXEND.indication (NoError) primitive shall be issued. If it terminates due to PHY-CCARESET.request, a PHY-RXEND.indication (MAC Reset) primitive shall be issued.

***TGba editor: Replace the Figure 32-14 PHY receiver procedure for WUR PPDU with the figure below (#231, #1221, #1253)***



**Figure 32-14—PHY receiver procedure for WUR PPDU**

***TGba editor: Replace the Figure 32-15 PHY receive state machine with the figure below***(#25,#208)



**Figure 32-15—PHY receive state machine**