### IEEE P802.11Wireless LANs

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| PHY Comment resolution for Clause 30 |
| Date: 2019-07-08 |
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Abstract

This submission proposes resolutions for comments of TGba Draft D3.0 with the following CIDs: 3021, 3022, 3125, 3024, 3088, 3132, 3239, 3321, and 3322.

Note: All the cross-reference is with respect to TGba Draft 3.0

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| **CID** | **P.L** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 3021 | 148.14 | 30.3.8 | T\_WUR-Sync is already defined in Table 30-3 in Clause 30.3.7, so it might be better to make a referens to this table rather than repeating the definition? | As in comment | Revised. Agree in principle. Replaced the definition with a reference to Table 30-3.TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3021. |
| 3022 | 146.13 | 30.3.7 | Is the T\_GI,WUR constant declared in row 3 of this table actually used anywhere? (can't find it, but there is a T\_GI,2 that is defined separately as "the GI duration for L-LTF defined in Table 21-5") | Remove this constant declaration from the table? | Revised. Agree in principle. T\_GI, WUR is used in Clause 30.3.8 (Mathematical description of signals) but with a different name T\_GI, Field. To be consistent, changed the variable T\_GI, Field to T\_GI, WUR in Clause 30.3.8.Also, changed the variable T\_GI, L-LTF to T\_GI, 2 to be consistent with the Revmd spec.TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3022. |
| 3125 | 152.23 | 30.3.9.2.2 | T\_(GI,L-LTF) was used in timing-related constants, whilst here T\_(GI,2) is used instead. | Use the same one | Revised. Agree in principle. Changed the variable T\_GI, L-LTF to T\_GI, 2, in Table 30-3, to be consistent with the Revmd spec.TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3125. |
| 3024 | 156.59 | 30.3.11 | If T\_L-STF, T\_L-LTF, T\_L-SIG, T\_BPSK-Mark1 and T\_BPSK-Mark2 are the same in Eqs. 31-11 and 31-12, perhaps the expression can be simplified? Why add a constant and immediately remove it? | A matter of taste really. | Revised. Agree in principle. Equation (31-11) has been updated based on the TXTIME definition in Equation (31-16). TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3024. |
| 3088 | 142.5 | 30.3.4.4 | "The symbol randomizer is used for both the WUR-Sync field and the WUR-Data field." Is this a mandatory requirement, it is not testable. | Change to symbol randomizer as an example to remove the Tx spectral lines | Reject. In Clause 30.3.4, it is explicitly stated that the description in Clause 30.3.4.4 (Symbol Randomizer and Per-transmit chain Cyclic Shift) is an example and the actual waveform generation of the Sync and Data fields is implementation dependent. No need to make any further changes to the spec to clarify this.  |
| 3132 | 161.58 | 30.3.14 | Typo: MCC-OOK | Correct it | Revised. Agree in principle. “MCC-OOK” is replaced with “MC-OOK” in Figure 30-14.TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3132. |
| 3239 | 165.65 | 30.3.15 | In certain conditions, the WUR MAC may also indicate the end of WUR PPDU to PHY by issuing PHY-CCARESET.request primitive and the received data is valid. In response, WUR PHY should not issue a MAC Reset to WUR MAC because it may imply that the WUR PHY requests WUR MAC to reset its state machine and discard existing data in the buffer. | In the last sentence of this paragraph, Change "MAC Reset" to "MAC Request" | Accept.TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3239. |
| 3321 | 139.41 | 30.3.4.1 | The description and usage of "sequence generation" block is not correct. Here, the "sequence" refers to "subcarrier coefficients and "sequence mapping" refers to mapping the subcarrier coefficients to the subcarrier indices. Please change the wording in Figure 30-6, to better capture this. | Delete the following first paragraph in 30.3.4.1. "For the WUR-Data field, the sequence generation block generates the WUR encoded bits. For the WUR-Sync field, the sequence generation block outputs the WUR-Sync sequence."In Figure 30-6, Replace the "Sequence Generation" block with the text "Subcarrier coefficients" and replace the text "Sequence Mapping" with "Subcarrier index mapping". | Revised. TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3321. |
| 3322 | 140.5 | 30.3.4.2 | Usage of terms "sequence generation' and "sequence mapping" are not accurate. Here, the "sequence" refers to "subcarrier coefficients and "sequence mapping" refers to mapping the subcarrier coefficients to the subcarrier indices. Please change the wording in Figure 30-7, to better capture this. | In Figure 30-7, Replace the "Sequence Generation" block with the text "Subcarrier coefficients" and replace the text "Sequence Mapping" with "Subcarrier index mapping". | Revised. TGba Editor to make changes as shown in 802.11-19/1065r2 with CID #3322. |

***TGba editor: Change the following paragraphs in 30.3.8 Mathematical description of signals: (Track change on) (#3021)***

…………………………………….(several lines of text)…………………………………………..

where *T*Field is the duration of the field, *T*WUR-Sync is the duration of WUR-Sync field, as defined in Table 30-3 (Timing-related constants).

…………………………………….(several lines of text)…………………………………………..

***TGba editor: Replace the variable*** $T\_{GI, Field}$ ***with*** $T\_{GI, WUR}$ ***throughout 30.3.8 Mathematical description of signals (#3022)***

***TGba editor: Replace the variable*** $T\_{GI, L-LTF}$ ***with*** $T\_{GI, 2}$ ***in Table 30-3 (#3022, 3125)***

***TGba editor: Replace the Equation (31-11) with the equation below (#3024)***

$$N\_{Pad, i\_{BW}} =\frac{\max\_{j\_{BW }\in Ω\_{20MHz}}\left\{T\_{WUR-Sync,  j\_{BW}}+T\_{Sym,  j\_{BW}}×N\_{Sym,  j\_{BW}} \right\}-(T\_{WUR-Sync,  i\_{BW}}+T\_{Sym,  i\_{BW}}×N\_{Sym,  i\_{BW}})}{4}$$

***TGba editor: Replace the term “MCC-OOK” with “MC-OOK” In Figure 30-14 (*PHY transmit procedure for a WUR Basic PPDU*) (#3132)***

***TGba editor: Change the following paragraphs in 30.3.15 WUR receive procedure: (Track change on) (#3239)***

…………………………………….(several lines of text)…………………………………………..

The PHY entity shall begin receiving the MC-OOK symbols in the WUR-Data field. 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. 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. RCPI measurement is made during the reception of the data field as described in 19.3.19.6 (Received channel power indicator (RCPI) measurement). Since the WUR PHY is not aware of the end of the WUR PPDU, the PHY shall keep decoding until receive signal strength drops significantly. Alternatively, the WUR MAC may also indicate the end of WUR PPDU to PHY by means of PHY-CCARESET.request primitive. On termination, the WUR PHY enters the RX IDLE state. If the WUR PHY 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 Request) primitive shall be issued.

…………………………………….(several lines of text)…………………………………………..

***TGba editor: Delete the following first paragraph in 30.3.4.1. "For the WUR-Data field, the sequence generation block generates the WUR encoded bits. For the WUR-Sync field, the sequence generation block outputs the WUR-Sync sequence." (#3321)***

***TGba editor: Replace the Figure 30-6 with the figure below (#3321)***



***TGba editor: Replace the Figure 30-7 with the figure below (#3322)***

