IEEE P802.11  
Wireless LANs

|  |
| --- |
| **TGba D2.0 Comment Resolutions for WUR Data Field** |
| **Date:** 2019-03-11 |
| **Author(s):** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Affiliation** | **Address** | **Phone** | **Email** |
| Eunsung Park | LG Electronics | 19, Yangjae-daero 11gil, Seocho-gu, Seoul 137-130, Korea |  | esung.park@lge.com |
| Jinsoo Choi |  | js.choi@lge.com |

Abstract

This submission proposes resolutions for comments of TGba D2.0 with the following CIDs:

* 2155, 2424, ~~2491~~, 2564, 2632

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 TGba D1.0 Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGba D1.0 Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

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

#### *CID 2155, 2424, 2491, 2564, 2632*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Clause** | **PP.LL** | **Comment** | **Proposed Change** | **Resolution** |
| 2155 | 31.2.6 | 96.27 | The terms HDR and LDR are used. Change them to Rate 0 and Rate 1 which allows the possibility of extending the rate set in future ammendments. The current specification does not allow for future extensibility | name the LDR "WUR Rate 0" and the HDR "WUR Rate 1". | Rejected-  TGba don’t think the terms “HDR” and “LDR” is the prohibiting factor for adding new WUR data rate(s) in a future extension. However, the design of using the WUR-Sync field to indicate the WUR data rate may become a prohibiting factor for adding new rates in the future in a backward compatible way. During the early-stage of 11ba project, TGba had evaluated and decided that two WUR data rates are sufficient. |
| 2424 | 31.2.10.2 | 105.31 | The text reads "The encoded binary data shall be modulated using MC-OOK". This sentence contains normative text stating that MC-OOK shall be used. However the current version of the draft does not define MC-OOK, it only says that it is a multicarrier signal in Sect 3.2 and gives examples of how it can be constructed in Sect 31.2.8.. Hence, normative text defining MC-OOK ought to be provided. | Change the text in page 98, lines 63 to 65 (Sect 31.2.8) to "For the WUR Sync ON symbols and WUR Data MC-OOK ON symbols (SymLDROn and SymHDROn), the baseband signal shall be as specified in Equation (31-3)" | Accepted- |
| 2491 | 31.2.10.2 | 105.41 | The definition of MC-OOK has been removed without a clear reason. The definition was in D1.0 (P84L24) as follows "the OOK waveform of WUR PPDU is generated by using contiguous 13 subcarriers with a subcarrier spacing of 312.5 kHz and the center subcarrier being null." Based on D1.0 and the doc.:11-17/575r11 "Spec Framework Document", R3.3.B and R3.3.C, the definition of MC-OOK needs to be added back to the spec. | Add back the following definition of MC-OOK from D1.0 to P84L46 of D2.0:"The MC-OOK ON symbol (SymLDROn) is generated by using contiguous 13 subcarriers with a subcarrier spacing of 312.5 kHz and the center subcarrier being null. The other coefficients are selected from BPSK, QPSK, 16-QAM, 64-QAM, or 256-QAM. Indices for contiguous 13 subcarriers are from -6 to 6." or change "can be" to "is" in the Mathematical descripsions in 31.2.8, 31.2.4.1, 31.2.4.2. | Revised-  Agree in principle with the commenter. Change “can be” to “shall be” in 98.63 and add back the definition of MC-OOK in section 31.2.10.2.  TGba editor to make the changes shown in 11-19/0408r2. |
| 2564 | 31.2.10.2 | 105.33 | LDR has OFF gaps of 8 microseconds which is almost a full slot. This can cause energy detect CCA to declare an empty slot and start transmission on top of the 11ba packet. |  | Rejected-  TGba doesn’t see what commenter suggests. Detailed suggestion is needed. |
| 2632 | 31.2.10.2 | 105.36 | 4us and 2us should be 4ms and 2ms, respectively. | See comment | Revised-  Change us to μs.  TGba editor to make the changes shown in 11-19/0408r2. |

*TGba Editor: Please make the following changes (in red) in 98.63 of D2.0:*

For the WUR-Sync ON symbols and WUR-Data MC-OOK ON symbols (SymLDROn and SymHDROn), the baseband signal ~~can~~shall be ~~obtained by taking the Inverse Discrete Fourier Transform (IDFT) as described below~~as specified in Equatin (31-3). (#2424)(#2491)

*TGba Editor: Please make the following changes (in red) in 31.2.10.2 WUR-Data field for low data rate and high data rate of D2.0:*

For WUR LDR, 4~~us~~μs (#2632) MC-OOK OFF and ON symbols are denoted as SymLDROff and SymLDROn, respec­tively. For WUR HDR, 2~~us~~μs (#2632) MC-OOK OFF and ON symbols are denoted as SymHDROff and SymHDROn, respectively.

SymLDROn is generated by using contiguous 13 subcarriers with a subcarrier spacing of 312.5 kHz and the center subcarrier being null. The other coefficients are selected from BPSK, QPSK, 16-QAM, 64-QAM, or 256-QAM. Indices for contiguous 13 subcarriers are from -6 to 6.(#2491)