IEEE P802.11  
Wireless LANs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Proposed CR for CID 2112, 2633, 2095 | | | | | |
| Date: 2019-05-14 | | | | | |
| Author(s): | | | | | |
| Name | Affiliation | | Address | Phone | email |
| Rui Yang | InterDigital, Inc. |  | | +1 631 622 4141 | rui.yang@interdigital.com |
| Alphan Sahin | InterDigital, Inc. |  | |  |  |
| Xiaofei Wang | InterDigital, Inc. |  | |  |  |
| Leif Wilhelmsson | Ericsson AB |  | | +46-706-216956 | leif.r.wilhelmsson@ericsson.com |

Abstract

This submission proposes resolution and the spec text for CID 2112, 2633, 2095.

R0 – Initial Draft based on D2.0

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **P,L** | **Clause** | **Comment** | **Proposed Change** | **Resolutions** |
| 2112 | 106,65 | 31.2.12 | Transmitter constellation error is not defined anywhere. If this is left unspecified this can lead to interoperability issues, since a receiver may not have an adequate AGC and/or ADC resolution to distinguish ON levels from the OFF levels. | Add a new subcluase (for example 31.2.12.4) in which requirement for dB difference between ON and OFF period signal power is specified. Suggest 15 dB difference integrated over entire 2us or 4 us ON/OFF duration. Note that the max difference is limited by the TX LO specification in implementations where the transmitter stays on on during OFF periods. | Revised.  Agree in principle with the commenter. Methods to ensure quality of the Tx signal are defined using On and Off power ratio for HDR, LDR WUR data field and SYNC filed.  Instructions to editor: Please incorporate changes as shown in 11-19/0903r0. |
| 2095 | 106,21 | 31.2.12 | Alternative methods should be allowed to generate an OOK symbol with same or similar performance other than using the example implementation as in the current standard. With this fact, the specific OOK time-domain waveform criteria should be defined to guarantee that under same conditions the demodulation performance of a specific implementation scheme is acceptable. | As in comment | Revised  Agree in principle with the commenter. Methods to ensure quality of the Tx signal are defined using On and Off power ratio for HDR, LDR WUR data fields and SYNC field.  Instructions to editor: Please incorporate changes as shown in 11-19/0903r0. |
| 2633 | 106,21 | 31.2.12 | The EVM of the transmit signal should be defined. | The commenter will provide a draft of subclause. | Revised.  Agree in principle with the commenter. An alternative method to ensure quality of the Tx signal is defined using On and Off power ratio. Instructions to editor: Please incorporate changes as shown in 11-19/0903r0. |

TGba Editor: Please insert the following text in page 106, after line 65 of D2.0:

**31.2.12.4 Transmit ON and OFF power ratio**

For HDR transmission, for each input bit, the ratio between the power of On symbol and the power of Off symbol of the transmit signal in the WUR data field shall be larger than 20 dB.

For LDR transmission, for each input bit, the ratio between the averaged power over On symbols and the averaged power over Off symbols of the transmit signal in the WUR data field shall be larger than 20 dB.

For SYNC transmission, the ratio between the averaged power over all On symbols and the averaged power over all Off symbols in the SYNC field shall be larger than 20 dB.

(#2633)(#2095)(#2112)