IEEE P802.11
Wireless LANs

|  |
| --- |
| CR for Examples of WUR MC-OOK Symbol Design and CSD Design in Annex AB |
| Date: 2018-11-12 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Dennis Sundman | Ericsson |  |  | dennis.sundman@ericsson.com |
|  |  |  |  |  |

Abstract

This contribution proposes comment resolutions for Annex AB of the TGba Draft D1.0. The CIDs resolved are: 160, 215, 278, 1062, 1063, 1064, 1155

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 160 |  | Annex AB | The sequence examples are not normalized and can cause power differences | Add a normalization factor for each example | Accepted.Added 1/sqrt(2) to Example 3 of Table AB-2. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 215 | 98.21 | Annex AB | Example 3 in Table AB-2 is not normalized to unit length constellation symbols. All other examples in both Table AB-1 and Table AB-2 are unit length. | Modify Example 3 from "(1+j){1,-1,1,-1,-1,1,0,-1,-1,1,1,1,1}" to "(1+j)/sqrt(2) {1,-1,1,-1,-1,1,0,-1,-1,1,1,1,1}" | Accepted. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 278 | 98.22 | Annex AB | In Table AB-2, the coefficients of Example 3 should be devided by sqrt(2) for power normalization. | See the comment. | Accepted. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1062 | 97.37 | Annex AB | The scaling factor for the sequence in Example 2 is not consistent with the other example sequences and also it is not consistent with Eq. (32-2). The norm of the sequence has to be equal to number of non-zero coefficients, which is equal to 6.Replace the denominator in Example 2 with sqrt(159.333) | As shown in the comment. | Rejected.The current denominator of sqrt(170) is the standard denominator for 256-QAM constellations. Thus, the proposed sequence is a valid 256-QAM symbol. I believe it makes sense to keep it as it is for clarity. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1063 | 98.18 | Annex AB | The scaling factor for the sequence in Example 2 is not consistent with the other example sequences and also it is not consistent with Eq. (32-2). The norm of the sequence has to be equal to number of non-zero coefficients, which is equal to 12.Replace the denominator in Example 2 with sqrt(155.333) | As shown in the comment. | Rejected.The current denominator of sqrt(170) is the standard denominator for 256-QAM constellations. Thus, the proposed sequence is a valid 256-QAM symbol. I believe it makes sense to keep it as it is for clarity of that. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1064 | 98.22 | Annex AB | The scaling factor for the sequence in Example 3 is not consistent with the other example sequences and also it is not consistent with Eq. (32-2). The norm of the sequence has to be equal to number of non-zero coefficients, which is equal to 12.Add a scaling facor of (1/sqrt(2)) in Example 3 | As shown in the comment. | Accepted. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **CID** | **Page** | **Clause** | **Comment** | **Proposed Change** | **Resolution** |
| 1155 | 97.20 | AB | "This annex provides example sequences for the construction of these symbols."Is this an implementation dependent issue? Depending on the implementation, any sequence and CSD can be used. | Please remove Annex AB.Nevertheless you want to refer such examples in the spec, just mention the submission number as done in Annex O. | Rejected.The group have agreed to provide 3 examples for each data rate. |

To TGba editor, change Table AB-2 to the following (changes highlighted):

|  |
| --- |
| * Example Values for the Sequence *S-6,6* used for the Construction of the 4 µs MC-OOK On symbol
 |
|  Index | Sequence *S-6,6* |
| Example 1 |  |
| Example 2 |  |
| Example 3 | $$\frac{1+j}{\sqrt{2}}\{1,-1,1,-1,-1,1,0,-1,-1,1,1,1,1\}$$ |