### **IEEE P802.11Wireless LANs**

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| Spec Text on Recommended MC-OOK Symbols |
| Date: 2018-07-DD |
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**Abstract**

This document contains text on “Recommended MC-OOK Symbols” to be adopted into Draft 0.4.

**Discussion**

Draft 0.3 includes subclause 32.2.4.6 on “MC-OOK On and Off Waveform Generators” which provides methods that can be used to construct the 2 and 4 µs MC-OOK On Symbols. There is interest in the IEEE in providing examples of the actual sequences for the 2 and 4 µs MC-OOK On Symbols in an Annex.

This document provides spec text for the example MC-OOK On Symbols. This includes the necessary text for the Annex as well as some text in Clause 32 referring to that Annex.

**Straw Poll**

Do you support the Spec Text in this document IEEE 802.11-18/1195r1?

Yes 10

No 0

Abstain 4

**Motion**

Move to adopt the text in IEEE 802.11-18/1195r2 into Draft 0.4.

Moved: Steve Shellhammer

Second:

Yes

No

Abstain

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***Instructions to 802.11ba Editor***

***Editor Instructions: At the end of subclause 32.2.4.6 add the text shown in Red.***

Examples of subcarriers for the construction of the 2 and 4 µs MC-OOK On symbols are provided in Annex TBD.

***Editor Instructions: Add a new Annex with the text shown in Red.***

**Annex TBD: Examples of WUR MC-OOK Symbol Design and CSD Design**

Subclause 32.2.4.6 provides a description of how the MC-OOK 2 and 4 µs On and Off symbols can be constructed but does not provide the actual frequency domain sequences for those symbols. This annex provides example sequences for the construction of these symbols.

Table TBD1 provides example sequences for the construction of the 2 µs MC-OOK On symbol.

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| $$S\_{-6,6}=\{1, 0, 1, 0, 1, 0, 0, 0, -1, 0, 1, 0, -1\}$$ |
| $$S\_{-6,6} =\left\{3+7j, 0, 1+15j,0, -5+13j,0, 0, 0, 13-5j,0, -15-1j,0, 7+3j\right\}/\sqrt{170}$$ |
| $S\_{-6,6}=\{1, 0, 1, 0, -1,0, 0, 0, -1,0, -1, 0, 1$}  |

*Table TBD1: Example Values for the Sequence* $S\_{-6,6}$ *used for the Construction of the 2 µs MC-OOK On symbol*

Table TBD2 provides example sequences for the construction of the 4 µs MC-OOK On symbol.

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| $$S\_{-6,6}=\{1, 1, 1, -1, -1, -1, 0, -1, 1, -1, -1, 1, -1\}$$ |
| $$S\_{-6,6}= \{ -9-5j, -7+9j, -1+1j, 9+15j, 15-9j, -9+1j,0, 1-9j, 9-15j, 15+9j, -1+1j, 9-7j, 5+9j \}/\sqrt{170} $$ |
| $$S\_{-6,6}=\left(1+j\right)\{ 1, -1, 1, -1, -1, 1,0, -1, -1, 1, 1, 1, 1 \}$$ |

*Table TBD2: Example Values for the Sequence* $S\_{-6,6}$ *used for the Construction of the 4 µs MC-OOK On symbol*