IEEE P802.11
Wireless LANs

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| Proposed TGme Resolution for Use of WUR OOK Modulation and MC-OOK Text in D3.0 |
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Abstract

This document provides proposed changes to 802.11REVme D3.0 to address the ongoing discussions related to the use of the term MC-OOK in the specification.

r1 – Update based on email inputs, from the reflector and private email – in line with changes proposed in the 802.11 WG reflector posting (<https://grouper.ieee.org/groups/802/11/email/stds-802-11/msg07255.html>) on this topic.

There have been significant discussions in TGme regarding how to clarify the WUR clauses so that the following are true:

1. WUR PPDUs consist of a “standard” 802.11 PPDU header, followed by an OOK modulated WUR-Sync and WUR-Data fields.
2. The WUR OOK modulated fields can be generated using the MC-OOK modulation technique.
3. There is no requirement that MC-OOK must be used to generate the WUR OOK signal, any technique may be used as long as the generated signal meets the requirements specified in clause 30 Wake-Up Radio (WUR) PHY specification.
4. MC-OOK is a preferred method for generating WUR OOK signals, as it is easily implemented using OFDM transmitter hardware.
5. The MC-OOK parameters provided in Clause 30 and Appendix AC provide insight as to how MC-OOK may generate the WUR OOK signals.

Attached to this contribution are red-lined versions of Clause 29, Clause 30, and Appendix AC that contain changes to address these issues.

The proposed changes:

1. Refer to the modulation used in the WUR-Sync and WUR-Data fields as WUR OOK modulation. Previously this was referred to an MC-OOK modulation.
2. Specified requirements for WUR OOK modulation are shall requirements.
3. The specification states that the WUR OOK modulation may be generated by using the MC-OOK modulation technique.
4. The specification states that when using the MC-OOK modulation technique the parameters and configuration provided in the specification for MC-OOK should be used.

Summary of changes:

1. No changes were necessary in clause 4.3.17
2. In clause 29, changes are only made to the 3rd paragraph in clause 29.6.1, renaming MC-OOK to be WUR OOK.
3. In clause 30 changes are made in clauses: 30.1, 30.3.4.1, 30.3.4.2, 30.3.4.3, 30.3.5.7, 30.3.5.9, 30.3.6, 30.3.7, 30.3.8, 30.3.9.3.2, 30.3.9.3.3, 30.3.9.3.4, 30.3.10.1, 30.3.10.2, 30.3.11, 30.3.12.5, 30.3.15, 30.4.1, and 30.4.2.
4. There are changes made in In Annex AC.
5. No changes were made to any of the Figures.

**r1 – updates:**

There have been requests that a definition should be added to clause 3.2 to define WUR OOK, below please find a possible definition:

wake up receiver (WUR) on off keying (OOK): [WUR OOK] A Clause 30 (Wake-Up Radio (WUR) PHY specification) modulation used to transmit the WUR-Sync field and the WUR-Data field of a WUR PPDU.

Changes were made to the redlined version of Clause 30 and AC (attached):

No changes were made to Clause 30.3.4.1 or 30.2.4.2

WRU corrected to WUR

Clauses 30.3.9.3.2 and 30.3.10.1 have been updated.

The table titles in clause AC have been updated (AC-2, AC-3, AC-4).

Please see the attached, red-lined clauses and appendix for the detailed changes.

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**References:**