IEEE P802.11
Wireless LANs

|  |
| --- |
| Proposed spec text for D0.3 on WUR FDMA Transmissions for PHY  |
| Date: 2018-05-01 |
| Author(s): |
| Name | Affiliation | Address | Phone | email |
| Jianhan Liu | Mdiatek Inc. |  |  | jianhan.liu@mediatek.com |
| Yongho Seok |  |  | Yongho.Seok@mediatek.com |

Abstract

This submission proposes draft for WUR FDMA transmissions for the following portions of the SFD:

1. [Assigned D0.3] The concept of FDMA transmission scheme is shown below.





* Each 20MHz only contains one 4MHz sub-channel for wake-up signal transmission.
* Similar to 11ax’s 20MHz only operation, one wake-up receiver can stay in one of the sub-channel in wide bandwidth.

[Motion, March 2018, see [8] [28]]

Revisions:

* Rev 0: Initial version of the document.
* Rev 1: Based on comments, 160MHz and 80+80 will not be supported. Padding will be just pad the primary channel only.
* Rev 2: Change the figure according to possible different lengths. Change the padding to be TBD. Add the

***Editing instructions formatted like this are intended to be copied into the TGba 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.***

**TGba Editor: *Please add the following text into 11ba draft 0.3 for section 32.3.1 Introduction:***

The WUR PHY provides optional support of FDMA WUR transmissions for 40 MHz and 80 MHz contiguous channel widths.

**TGba Editor: *Please add the following text into 11ba draft 0.3 for section 32.3.2 WUR PPDU format:***

WUR FDMA PPDU is used to wake up multiple WUR stations or multiple groups of WUR stations.

The FDMA WUR PPDU for 40MHz and 80 channel bandwidth is defined in Figure 32-2 and Figure 32-3 respectively.



Figure 32-2. WUR FDMA PPDU for 40MHz channel widths.



Figure 32-3. WUR FDMA PPDU for 80MHz channel widths.

The 40MHz preamble or 80MHz preamble is the Non-HT duplication of the 20MHz preamble, which is composed of L-STF, L-LTF, L-SIG and BPSK-mark fields. In each 20MHz sub-channel, at most one 4MHz WUR signal is transmitted following the 20MHz preamble.

Padding is needed for WUR FDMA transmission to avoid collisions caused by possible transmissions in the primary 20MHz channel. The length field in the L-SIG indicates the length of the longest WUR signal among all sub-channels.

The detailed padding scheme is TBD.

**TGba Editor: *Please add the following text into 11ba draft 0.3 for section 32.4.2:***

The value of the TXTIME and PSDU length shall be calculated according to the longest FDMA WUR signals among all sub-channels.