### IEEE P802.11Wireless LANs

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| PDT on Phase Rotation for 320 MHz Pre-EHT transmission and Non-HT duplicate transmission  |
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Abstract

We propose draft text based on 802.11be Draft 0.4

Revisions:

* Rev 0: Initial version of the document.

Interpretation of a Motion to Adopt

A motion to approve this submission means that the editing instructions and any changed or added material are actioned in the subsequent TGbe Draft. This introduction is not part of the adopted material.

***Editing instructions formatted like this are intended to be copied into the TGbe Draft (i.e. they are instructions to the 802.11 editor on how to merge the text with the baseline documents).***

***TGbe Editor: Editing instructions preceded by “TGbe Editor” are instructions to the TGbe editor to modify existing material in the TGbe draft. As a result of adopting the changes, the TGbe editor will execute the instructions rather than copy them to the TGbe Draft.***

**Discussion:**

**Straw poll #389**

Do you support [1 -1 -1 -1, 1 -1 -1 -1, 1 -1 -1 -1, -1 1 1 1] as an additional phase rotation option for a 320MHz Non-HT Duplicate transmission and a pre-EHT modulated field of 320 MHz EHT transmission?

* The transmitter can determine which one to use itself
* The per 80MHz phase rotation is fixed as [1 -1 -1 -1]. The Tx can multiply additional phase rotation, +1 or -1, for each 80MHz. The two examples are given by the existing one and the one in this SP.

***[#SP389]***

[21/0129r4 (Phase Rotation for 320 MHz Non-HT Duplicate Transmission and Pre-EHT modulated Fields, Chenchen Liu, Huawei), SP#1, Y/N/A: 31/8/9]

**Propose:**

**36.3.11 Mathematical description of signals**

***TGbe editor: Please modify the subclause 36.3.10.4 Transmitted signal as follows:***

### 36.3.11.4 Transmitted signal

…

$γ\_{k,BW}$ is used to represent a phase rotation applied to the *k*-th subcarrier for a given bandwidth $BW$, which is determined by the TXVECTOR parameter CH\_BANDWIDTH as defined in Table 36-18 (CH\_BANDWIDTH and $γ\_{k,BW}$ for pre-EHT modulated fields). For EHT modulated fields, $γ\_{k,BW}=1$ for all subcarriers. For pre-EHT modulated fields, $γ\_{k,BW}$ is defined as in 21.3.7.5 (Definition of tone rotation) for 20 MHz, 40 MHz, 80 MHz, and 160 MHz PPDU transmissions, and in Equation (36-12) for a 320 MHz PPDU transmission.

 For a 320 MHz PPDU transmission,

 $γ\_{k,320}=\left\{\begin{matrix}\begin{matrix}\begin{matrix}1,\\-1,\end{matrix}\\\begin{matrix}1,\\-1,\end{matrix}\end{matrix}&\begin{matrix}k<-448\\\begin{matrix}-448\leq k<-256\\\begin{matrix}-256\leq k<-192\\-192\leq k<64\end{matrix}\end{matrix}\end{matrix}\\\begin{matrix}1,\\\begin{matrix}-1,\\1,\end{matrix}\end{matrix}&\begin{matrix}64\leq k<256\\\begin{matrix}256\leq k<320\\k\geq 320\end{matrix}\end{matrix}\end{matrix}\right. or \left\{\begin{matrix}\begin{matrix}\begin{matrix}1,\\-1,\end{matrix}\\\begin{matrix}1,\\-1,\end{matrix}\end{matrix}&\begin{matrix}k<-448\\\begin{matrix}-448\leq k<-256\\\begin{matrix}-256\leq k<-192\\-192\leq k<0\end{matrix}\end{matrix}\end{matrix}\\\begin{matrix}1,\\\begin{matrix}-1,\\1,\end{matrix}\end{matrix}&\begin{matrix}0\leq k<64\\\begin{matrix}64\leq k<320\\k\geq 320\end{matrix}\end{matrix}\end{matrix}\right.$ (36-12)

The transmitter can determine which phase rotation to use. The implementation is not restricted to the phase rotations shown in Equations (36-12) since the transmitter can multiply any 80 MHz frequency subblock by -1.