

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Pilot Tone Modulation	
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Re:	Call for contribution IEEE 802.16d-03/02	
Abstract	This contribution identifies a problem in the section on data randomization and proposes a solution.	
Purpose	For inclusion in the 802.16d amendment document	
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Data Randomization

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1. References

[1] IEEE 802.16a

2. Problem statement and Discussion

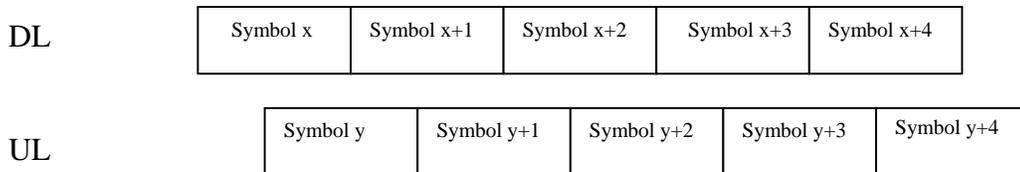
The first sentence of the second paragraph of section 8.4.3.4.2 of [1] states:

"The value of the pilot modulation for OFDM symbol k , relative to the beginning of the frame, shall be derived from w_k"

The meaning of the words "relative to the beginning of the frame" is not exactly clear for UL.

For the DL it is clear that it means the beginning of the DL frame.

For the UL it could mean the beginning of the DL frame or the beginning of the UL sub-frame. If the meaning is the beginning of the DL frame, there can be a problem in FDD because the DL and UL OFDM symbols may have different start times (see figure 1).



In order to eliminate any ambiguity we propose that the "relative" refers to the beginning of the DL or UL subframe. This definition is clear and holds for both FDD and TDD.

The third sentence of this paragraph uses an extensive description to indicate that the index $k=1$ for the first symbol of the frame. We propose to add this as a clarification.

3. Proposal

Change the first sentence of the second paragraph of 8.4.3.4.2 of [1] to:

"The value of the pilot modulation for OFDM symbol k , relative to the beginning of the DL-subframe or UL-subframe, shall be derived from w_k , whereby $k=1$ for the first symbol of the DL/UL-subframe."