

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Corrections in OFDMA Subcarrier Allocations	
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Re:	IEEE P802.16e/D5-2004	
Abstract	Editorial Corrections in OFDMA Subcarrier Allocations are proposed	
Purpose	Adopting of proposed method into P802.16e	
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Corrections in OFDMA Subcarrier Allocations

1. Introduction

Some of the comments and the contributions accepted in the previous IEEE meeting are not reflected correctly in P802.16e/D5a standard.

In this contribution, the non-reflected parts are proposed again for the purpose of clarification. Also some minor editorial corrections are proposed.

2. Suggested Text Changes

[Change 1: Modify the text in section 8.4.6.2.5.2, page 315, line 58 as followings]

The exact partitioning into subchannels is according to Equation (2) (111a), called UL permutation formula.

[Change 2: Modify the text in section 8.4.6.2.5.2, page 316, line 32 as followings]

In Equation (6) (111a), the operation in [] is over GF(2ⁿ). In GF(2ⁿ), addition is binary XOR operation. For example, 13 + 4 in GF(2ⁿ) is [(1101)₂ XOR (0100)₂] = (1001)₂ = 9, where (x)₂ represents binary expansion of x.

[Change 3: Delete the whole text and tables from line 37 in page 316 to line 65 in page 319]

[Change 4: Replace the whole text and tables from line 29 in page 327 to line 34 in page 330 with the followings]

8.4.6.3 Optional permutations for AAS and AMC subchannels

[Add the following Tables and text to "Section 8.4.6.3 Optional permutations for AAS and AMC subchannels"]

Table 314a—1024-FFT OFDMA AMC subcarrier allocations

Parameter	Value	Notes
Number of DC Subcarriers	1	
Number of Guard Subcarriers, Left	80	
Number of Guard Subcarriers, Right	79	
Number of Used Subcarriers (N _{used}) (including all possible allocated pilots and the DC subcarrier)	865	
Number of Pilot Subcarriers	96	
Pilot Subcarrier Index	9k+3m+1 for k=0,1...95 and m=[symbol index] mod 3	Symbol of index 0 in pilot subcarrier index should be the first symbol of the frame.
Number of Data Subcarriers	768	
Number of Bands	24	
Number of Bins per Band	4	
Number of Data Subcarriers per Subchannel	48	

Table 314b—512-FFT OFDMA AMC subcarrier allocations

Parameter	Value	Notes
Number of DC Subcarriers	1	
Number of Guard Subcarriers, Left	40	
Number of Guard Subcarriers, Right	39	

<u>Number of Used Subcarriers (N_{used}) (including all possible allocated pilots and the DC subcarrier)</u>	<u>433</u>	
<u>Number of Pilot Subcarriers</u>	<u>48</u>	
<u>Pilot Subcarrier Index</u>	<u>$9k+3m+1$ for $k=0,1\dots 47$ and $m=[\text{symbol index}]$ mod 3</u>	<u>Symbol of index 0 in pilot subcarrier index should be the first symbol of the frame.</u>
<u>Number of Data Subcarriers</u>	<u>384</u>	
<u>Number of Bands</u>	<u>12</u>	
<u>Number of Bins per Band</u>	<u>4</u>	
<u>Number of Data Subcarriers per Subchannel</u>	<u>48</u>	

Table 314c—128-FFT OFDMA AMC subcarrier allocations

<u>Parameter</u>	<u>Value</u>	<u>Notes</u>
<u>Number of DC Subcarriers</u>	<u>1</u>	
<u>Number of Guard Subcarriers, Left</u>	<u>10</u>	
<u>Number of Guard Subcarriers, Right</u>	<u>9</u>	
<u>Number of Used Subcarriers (N_{used}) (including all possible allocated pilots and the DC subcarrier)</u>	<u>109</u>	
<u>Number of Pilot Subcarriers</u>	<u>12</u>	
<u>Pilot Subcarrier Index</u>	<u>$9k+3m+1$ for $k=0,1\dots 11$ and $m=[\text{symbol index}]$ mod 3</u>	<u>Symbol of index 0 in pilot subcarrier index should be the first symbol of the frame.</u>
<u>Number of Data Subcarriers</u>	<u>96</u>	
<u>Number of Bands</u>	<u>3</u>	
<u>Number of Bins per Band</u>	<u>4</u>	
<u>Number of Data Subcarriers per Subchannel</u>	<u>48</u>	