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Title	Corrections for AAS preamble PHY Modifier in OFDMA PHY				
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Re:	IEEE P802.16-REVd/D5	-			
Abstract	This contribution introduces corrections for AAS preamble PHY Modifier in OFDMA PHY				
Purpose	Adopt into P802.16d/D5 corrigenda				
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# Corrections for AAS Preamble PHY Modifier in OFDMA PHY

### 1 Problems with the current AAS Preamble definition

The definition of AAS Preambles contains ambiguities and contradictions that need to be resolved:

- 1. The preamble definition of equation (100) omits the time shift.
- 2. There are several errors in table PHY\_MOD\_DL\_IE (Table 284).
- 3. There are several errors in table PHY\_MOD\_UL\_IE (Table 300).

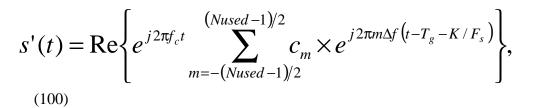
### 2 Proposed Text Change: Equation (100)

Section 8.4.5.3.11:

#### [Modify the text beginning at line 16 on page 532 with the following:]

In the case when the preamble is cyclically delayed in time by  $\frac{kK}{k}$  samples, the preamble will contribute a component s'(t) to the transmitted waveform as defined below:

[Replace equation (100) with the following:]



[Append this text to the end of the paragraph containing equation (100)]

[Editorial improvements to equation (101)]

- 1) Replace 'N<sub>Used-subcarriers'</sub> with 'N<sub>used</sub>"
- 2) Replace the period at the end of equation (101) with a comma
- 2) Lowercase the 'Where' in line 40 on page 532.

## **3** Proposed Text Change: PHY\_MOD\_DL\_IE

[Replace Table 284 with the following:]

#### Table 284—OFDMA DL-MAP Physical Modifier IE format

PHY_MOD_DL_IE() {		
Extended DIUC	4 bits	PHYMOD = 0x08
Length	4 bits	Length = $0x03$
Preamble Modifier Type	1 bit	0 – frequency shifted preamble 1 – time shifted Preamble
if (Preamble Modifier Type == 0) {		
Preamble Frequency Shift Index	4 bits	Indicates the value of K in equation (101)
} else {		
Preamble Time Shift Index	4 bits	<ul> <li>Specifies the cyclic time shift in equation (100): For PUSC,</li> <li>0 – 0 sample cyclic shift</li> <li>1 – Nfft/14 sample cyclic shift</li> <li></li> <li>13 – Nfft/14*13 sample cyclic shift</li> <li>14-15 – reserved</li> <li>For AMC permutation,</li> <li>0 – 0 sample cyclic shift</li> <li>1 – Nfft/9 sample cyclic shift</li> <li></li> <li>8 – Nfft/9*8 sample cyclic shift</li> <li>9-15 – reserved</li> </ul>
Reserved	3 bits	
}		

## 4 Proposed Text Change: PHY\_MOD\_UL\_IE

### Section 8.4.5.4.14:

[Replace Table 300 with the following:]

#### Table 300—OFDMA UL-MAP Physical Modifier IE format

PHY_MOD_UL_IE() {		
Extended UIUC	4 bits	PHYMOD = 0x05
Length	4 bits	Length = $0x03$
Preamble Modifier Type	1 bit	0 – frequency shifted preamble

		1 – time shifted Preamble
if (Preamble Modifier Type == 0) {		
Preamble Frequency Shift Index	4 bits	Indicates the value of <i>K</i> in equation (101)
} else {		
Preamble Time Shift Index	4 bits	Specifies the cyclic time shift in equation (100):         For PUSC,         0 – 0 sample cyclic shift         1 – Nfft/4 sample cyclic shift            3 – Nfft/4*3 sample cyclic shift         4-15 – reserved         For optional PUSC,         0 – 0 sample cyclic shift         1 – Nfft/3 sample cyclic shift         2 – Nfft/3*2 sample cyclic shift         3-15 – reserved         For AMC permutation,         0 – 0 sample cyclic shift         1 – Nfft/9 sample cyclic shift         3-15 – reserved
)		
Reserved	3 bits	