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Title	Corrections for AAS Preambles in OFDMA PHY		
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Source(s)	Ran Yaniv, Tal Kaitz	Alvarion, LTD	Ran.yaniv@alvarion.com,tal.kaitz@alvarion.com
	Dave Pechner, Doug Dahlby, Adam Kerr, Todd Chauvin	ArrayComm Inc.	dpechner@arraycomm.com, dahlby@arraycomm.com, adam@arraycomm.com, chauvin@arraycomm.com
Re:	IEEE P802.16-REVd/D5		
Abstract	This contribution introduces corrections to the definitions of the AAS preambles in the OFDMA PHY		
Purpose	Adopt into P802.16d/D5 corrigenda		
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Corrections for AAS Preambles in OFDMA PHY

Todd Chauvin, Dave Pechner, Doug Dahlby

1 Problems with the current AAS definition

The construction of the AAS preambles is not well defined.

2 Outline of proposed solution

The construction of AAS preambles based on the currently defined downlink preambles is clarified. Specific text changes are presented in the next section.

3 Proposed Text Changes

~~**8.4.4.6.3 AAS Downlink Preamble**~~

~~The AAS-DLFP is preceded by an AAS downlink preamble. In addition, the "Preamble Presence" field of the AAS_DLFP indicates the presence of an AAS downlink preamble on any downlink allocation made by the DLFP. An AAS downlink preamble is formed by appropriately combining different preamble sequences defined in section 8.4.6.1.1. An AAS allocation could be in the FUSC/PUSC/AMC allocation and therefore, depending on the type of allocation, a preamble may span more than one original preamble sequence defined in section 8.4.6.1.1. In AMC allocation, the AAS downlink preamble occupies 9 subcarriers in each bin of the subchannels in AAS operation. The AAS down link preamble number, *K*, is derived from the AAS beam index carried by the AAS_DLFP(), and is limited to maximum 16 beams per segment (mainly in switching beams approach). When using the cyclic frequency shift preamble defined in 8.4.5.3.11, beams which use the same subchannels at the same time instance shall use a different AAS down link preamble number (*K*).~~

~~**8.4.4.6.4 AAS Uplink Preamble**~~
~~The "Preamble Presence" field of the AAS_DLFP indicates the presence of a preamble on any uplink bandwidth allocation made by the DLFP. The "Uplink_Preamble_Config" field indicates the size of the AAS uplink preamble. In the PUSC region, the AAS uplink preambles occupy 4 subcarriers and 1/2/3 symbols. The basic AAS preamble (4 subcarrier x 1 symbol for PUSC or 9 subcarrier x 1 symbol for AMC or 3 subcarrier x 1 symbol for optional PUSC) is derived from the preambles defined in section 8.4.6.1.1 similar to the downlink. In AMC allocation, the AAS uplink preamble occupies 9 subcarriers in each bin of the subchannels and 1, 2 or 3 symbols as specified in the AAS-DLFP.~~

[Replace Sections 8.4.4.6.3 and 8.4.4.6.4 with the following section:]

The AAS-DLFP is preceded by an AAS downlink preamble of one symbol duration. All other bursts within the AAS DL and UL zones have preambles whose duration are specified by the "Uplink_preamble_config" field of the AAS_UL_IE and "Downlink_preamble_config" fields of the AAS_DL_IE.. These fields will be consistent with the same fields of the AAS_DLFP if present. In the case the AAS DL Zone is using the

PUSC permuation, the “Downlink_preamble_config” shall always be set to an integer number of slot durations (i.e. 0 or 2 symbols). The structure of the preambles are as specified in sections 8.4.4.6.3.1 and 8.4.4.6.3.2 for the downlink and uplink, respectively. The AAS preamble number, *K*, is equal to the AAS beam index carried by the AAS_DLFP() or the Preamble Shift Index defined in the AAS_DL_IE and AAS_UL_IE. The BS must ensure these values are consistent. When using the cyclic time / frequency shifted preamble defined in 8.4.5.3.11 and 8.4.5.4.14, beams which use the same subchannels at the same time instance shall be configured to use a different AAS preamble number (*K*).

8.4.4.6.3.1 AAS Downlink Preamble

TBD

8.4.4.6.3.2 AAS Uplink Preamble

TBD