

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	The uplink subchannelization preamble with lower PAPR	
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Re:	Contribution supporting Sponsor ballot	
Abstract	This contribution proposes an uplink subchannelization preamble having lower value of PAPR.	
Purpose	Adoption of the proposed uplink subchannelization preamble into P802.16-REVd/D4-2004	
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The uplink subchannelization preamble with lower PAPR

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Background

Subchannelized transmission in the uplink is an option. When the subchannelization is employed, the subchannelization preamble is used. The subchannelization preamble consists of 256 sample sequence preceded by a cyclic prefix. For the uplink transmission, the principal design objective of a preamble is to attain the lowest possible PAPR. We propose a preamble sequence having lower value of PAPR than the

$1+j, 1+j, -1-j, 1+j, -1+j, 1+j, 1+j, 1+j, -1-j, -1-j, 1-j, -1-j, -1-j,$
 $1+j, 1-j, 1+j, 1+j, -1-j, -1-j, 1+j, 1-j, 1+j, -1-j, 1+j, 1+j,$
 $-1-j, -1-j, 1+j, 1+j, 1+j, -1-j, -1-j, -1-j, 1+j, -1-j, -1-j, 1+j, -1+j,$
 $-1+j, -1+j, 1-j, 1-j, 1-j, -1+j, -1+j, -1+j, 1-j, -1+j, -1+j, 1-j,$
 $1+j, 1+j, -1-j, 1+j, -1+j, 1+j, 1+j, 1+j, -1-j, -1-j, 1-j, -1-j, 1-j,$
 $-1-j, -1+j, -1-j, -1-j, 1+j, 1+j, -1-j, -1+j, -1-j, 1+j, -1-j, -1-j,$
 $0,$
 $1-j, -1+j, -1+j, 1-j, -1+j, -1+j, 1-j, -1+j, -1+j, -1+j, 1-j, 1-j, 1-j,$
 $1+j, -1-j, -1-j, 1+j, -1-j, -1-j, 1+j, -1-j, -1-j, -1-j, 1+j, 1+j,$
 $-1-j, -1-j, 1+j, -1-j, 1-j, -1-j, -1-j, -1-j, 1+j, 1+j, -1+j, 1+j, 1-j,$
 $-1-j, -1+j, -1-j, -1-j, 1+j, 1+j, -1-j, -1+j, -1-j, 1+j, -1-j, -1-j,$
 $1+j, -1+j, 1+j, 1+j, -1+j, 1+j, 1+j, -1+j, 1+j, -1-j, 1-j, -1-j, 1+j,$
 $1-j, 1+j, 1-j, 1-j, 1+j, 1-j, 1-j, 1+j, 1-j, -1+j, -1-j, -1+j,$
 $1+j, 1+j, -1-j, 1+j, -1+j, 1+j, 1+j, 1+j, -1-j, -1-j, 1-j, -1-j, -1-j,$
 $-1-j, -1+j, -1-j, -1-j, 1+j, 1+j, -1-j, -1+j, -1-j, 1+j, -1-j, -1-j$