

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	MU-MIMO using non-orthogonal superposition in DL	
Date Submitted	2008-09-05	
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Re:	Call for comments IEEE 802.16m-08/033 SDD Session 56 Cleanup	
Abstract	Text proposal for MU-MIMO using non-orthogonal superposition in DL	
Purpose	Consider for inclusion into the SDD	
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MU-MIMO using non-orthogonal superposition in DL

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Motivation

DL rate region

MU-MIMO using Non-Orthogonal Superposition

- Signals for different users are not orthogonal; neither in time or frequency nor in the space or code domain
- Transmit signal is a weighted sum of the signals for different users
- Signals can be separated by multi-user detection, especially successive interference cancellation
- Superimposed signals can be coded/modulated using conventional modulation coding schemes
- Typically the signals for different users have significantly different power
- No instantaneous CSI required at transmitter
- Can be used with single or multiple antennas

Proposed SDD text for section 11.8.2.2.1

Add at the end of line 11 on page 73:

“Non-orthogonal superposition, which is a special kind of non-unitary precoding, may be supported.”