

Project	IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 >	
Title	Proposed harmonized text for DL MIMO SDD text: Differential Codebook for MU-MIMO	
Date Submitted	2008-07-09	
Source(s)	<p>Yang Tang, Young Hoon Kwon, Jianmin Lu, Yinggang Du Huawei</p> <p>Amir Khojastepour, Meilong Jiang, Yuefeng Zhou NEC</p> <p>Jun Yuan, Mo-Han Fong, Hosein Nikopourdeilami, Sophie Vrzic, Robert Novak, Dongsheng Yu Nortel Networks</p>	<p>E-mail: ytang@huawei.com</p> <p>Email: amir@nec-labs.com, meilong@nec-labs.com, yuefeng.zhou@eu.nec.com</p> <p>Email: junyu@nortel.com, mhfong@nortel.com</p>
Re:	IEEE 802.16m-08/024 - Call for Comments on DL MIMO SDD text	
Abstract	This contribution proposes harmonized SDD text for differential codebook for MU-MIMO.	
Purpose	To be discussed and adopted by TGM for use in the IEEE 802.16m SDD	
Notice	<i>This document does not represent the agreed views of the IEEE 802.16 Working Group or any of its subgroups. It represents only the views of the participants listed in the "Source(s)" field above. It is offered as a basis for discussion. It is not binding on the contributor(s), who reserve(s) the right to add, amend or withdraw material contained herein.</i>	
Release	The contributor grants a free, irrevocable license to the IEEE to incorporate material contained in this contribution, and any modifications thereof, in the creation of an IEEE Standards publication; to copyright in the IEEE's name any IEEE Standards publication even though it may include portions of this contribution; and at the IEEE's sole discretion to permit others to reproduce in whole or in part the resulting IEEE Standards publication. The contributor also acknowledges and accepts that this contribution may be made public by IEEE 802.16.	
Patent Policy	<p>The contributor is familiar with the IEEE-SA Patent Policy and Procedures: http://standards.ieee.org/guides/bylaws/sect6-7.html#6 and http://standards.ieee.org/guides/opman/sect6.html#6.3.</p> <p>Further information is located at http://standards.ieee.org/board/pat/pat-material.html and http://standards.ieee.org/board/pat.</p>	

Proposed harmonized text for DL MIMO SDD text: Differential Codebook for MU-MIMO

*Yang Tang, Young Hoon Kwon, Jianmin Lu, Yinggang Du
Huawei*

*Amir Khojastepour, Meilong Jiang, Yuefeng Zhou
NEC Group*

*Jun Yuan, Mo-Han Fong, Hosein Nikopourdeilami, Sophie Vrzcic, Robert Novak, Dongsheng Yu
Nortel Networks*

Proposed Text for SDD DL MIMO

11.x.2.2.3.2. CSI feedback

Channel state information feedback may be employed for MU-MIMO. Codebook based feedback is supported in both FDD and TDD. Sounding based feedback is supported in TDD.

[To add the following text in line 22, on page 10, contribution IEEE 802.16m-08/657r2]

For codebook based precoding, two different feedback modes for the PMI shall be supported:

- The standard mode: the feedback from a mobile station shall be based on the same codebook as used by base station for transmission, and it shall be sufficient for the base station to determine the new precoder.
- The differential mode: the feedback from a mobile station provides a differential knowledge which represents information that shall be used along with the other feedback information known at the base station for determining the new precoder.