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| Project | IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 > | |
| Title | DL MU-MIMO codebook | |
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| Re: | PHY: MIMO; in response to the TGM Call for Contributions and Comments 802.16m-08/033 for Session 57 | |
| Abstract | In this contribution, we discuss downlink multi-user MIMO codebook | |
| Purpose | Discuss and adopt in TGM | |
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DL MU-MIMO codebook

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1. Codebook reconfiguration

There are two kinds of major MU-MIMO candidates in IEEE 802.16m. First one is based on non-unitary transmission and second one is based on unitary transmission. Depending on MU-MIMO scheme and feedback mechanism, the preferred sizes of codebook are different.

There are two kinds of method which can handle this issue.

First one is codebook subset selection. Predefine multiple (≥ 2) subsets (one for large and one for small) and indicate which one will be used for MU-MIMO.

Second method is codebook reconfiguration so called “codebook subset restriction.”

Basic idea of this concept is indicating which codebook elements are used or restricted.

Second method requires more bits to indicate but more flexible than first method.

But both schemes commonly require which codebook subset will be used.

2. Proposed Remedy

Remedy

line 29, page 73, add the following sentence:

The codebook is a subset (including full set) of SU-MIMO codebook. BS indicates which codebook subset will be used.