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**Chae et al.**

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(54) **APPARATUS AND METHOD FOR TRANSMITTING DATA BY SELECTED EIGENVECTOR IN CLOSED LOOP MIMO MOBILE COMMUNICATION SYSTEM**

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See application file for complete search history.

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(57) **ABSTRACT**

Disclosed is a method for transmitting/receiving data by use of feedback information in a closed loop multi input multi output (MIMO) mobile communication system. The method includes the steps of feeding back transmission eigenvector selection information determined through a singular value decomposition (SVD) of a channel matrix and transmitting the transmission eigenvector selection information to a transmitter; and receiving the feedback transmission eigenvector selection information, selecting transmission data according to the received transmission eigenvector selection information, mapping the selected transmission data to at least one transmission antenna, and transmitting the transmission data to a receiver.

**44 Claims, 5 Drawing Sheets**

