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Chae et al.

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(54) **SYSTEM AND METHOD FOR TRANSMITTING/RECEIVING A SIGNAL IN A MOBILE COMMUNICATION SYSTEM USING A MULTIPLE INPUT MULTIPLE OUTPUT ADAPTIVE ANTENNA ARRAY SCHEME**

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See application file for complete search history.

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(57) **ABSTRACT**

Disclosed are a method and a system for transmitting/receiving signals in a mobile communication system using a multiple input multiple output adaptive antenna array scheme. A first receiver calculates a reception weight value by using a de-spread signal of a reception signal for creating a reception beam of the first receiver and calculates a transmission weight value by using the calculated reception weight value for creating a transmission beam of the second transmitter, thereby creating feedback information including the transmission weight value. A first transmitter transmits the feedback information to a second receiver. The second receiver receives the feedback information and the second transmitter detects the transmission weight value from the feedback information received in the second receiver, and creates the transmission beam corresponding to the detected transmission weight value in order to transmit a signal by applying the transmission beam to the signal.

17 Claims, 12 Drawing Sheets

