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Chae et al.

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(54) **APPARATUS AND METHOD FOR RECEIVING SIGNAL IN MOBILE COMMUNICATION SYSTEM USING ADAPTIVE ANTENNA ARRAY SCHEME**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 756 days.

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(57) **ABSTRACT**

(30) **Foreign Application Priority Data**

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A method for receiving a signal from a radio unit in a base station having at least one reception antenna is disclosed. The method includes receiving a reception signal via the reception antenna, and generating an output signal using the reception signal and a reception beam weight for a previous time; calculating a cost function using a desired reception signal transmitted from the radio unit among the reception signal and the generated output signal; calculating a trace vector using the calculated cost function and the reception signal; updating the reception beam weight using the trace vector for a next time; and generating a reception beam by applying the updated reception beam weight.

(51) **Int. Cl.**
H04L 25/08 (2006.01)

(52) **U.S. Cl.** **375/346**

(58) **Field of Classification Search** 375/267,
375/285, 340, 342, 346-350; 370/334, 350;
455/63.4, 65, 561, 562.1

See application file for complete search history.

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24 Claims, 5 Drawing Sheets

