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(54) **METHOD AND APPARATUS FOR BEAM SELECTION IN A SMART ANTENNA SYSTEM**

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(52) **U.S. Cl.** ..... **455/462.1; 342/368; 370/320; 370/325**

(58) **Field of Classification Search** ..... **455/562.1; 342/368; 343/781 P; 370/320, 325**  
See application file for complete search history.

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(57) **ABSTRACT**

A method of beam selection in a smart antenna system is provided. The method includes receiving a plurality of uplink beams by a plurality of receivers, each corresponding with one of the plurality of uplink beams. Each uplink beam includes signals transmitted by a mobile station. The method further includes analyzing each of the plurality of uplink beams and selecting an uplink beam from the plurality of uplink beams based at least in part on the analysis of the uplink beams. The method further includes switching to the selected beam in real time to allow the signals communicated in the selected beam to be communicated to a base station transceiver.

**23 Claims, 18 Drawing Sheets**

