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(12) United States Patent

Nagaraj

(54) METHOD AND APPARATUS FOR PROVIDING USER SPECIFIC DOWNLINK BEAMFORMING IN A FIXED BEAM NETWORK

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- (52) **U.S. Cl. 455/562.1**; 455/25; 455/63.4; 455/69; 455/103; 455/121; 455/193.1; 455/575.7; 342/154; 342/367; 342/368; 342/373; 342/417

See application file for complete search history.

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(45) **Date of Patent:** May 30, 2006

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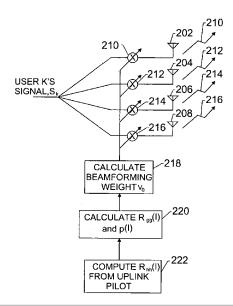
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Primary Examiner—William Trost Assistant Examiner—James D. Ewart

(57) ABSTRACT

The disclosed embodiments relate to a system and method for providing user specific beams in a fixed beam network, the fixed beam network comprising a plurality of fixed beams, each of the plurality of fixed beams being defined by a plurality of fixed beam correlation coefficients. The system may comprise a device that computes reception correlation data for a received signal, and a beamformer that is adapted to determine transmission weighting coefficients to be applied to a return signal based on the difference between the reception correlation data and the fixed beam weighting coefficients associated with at least one of the plurality of fixed beams.

19 Claims, 4 Drawing Sheets



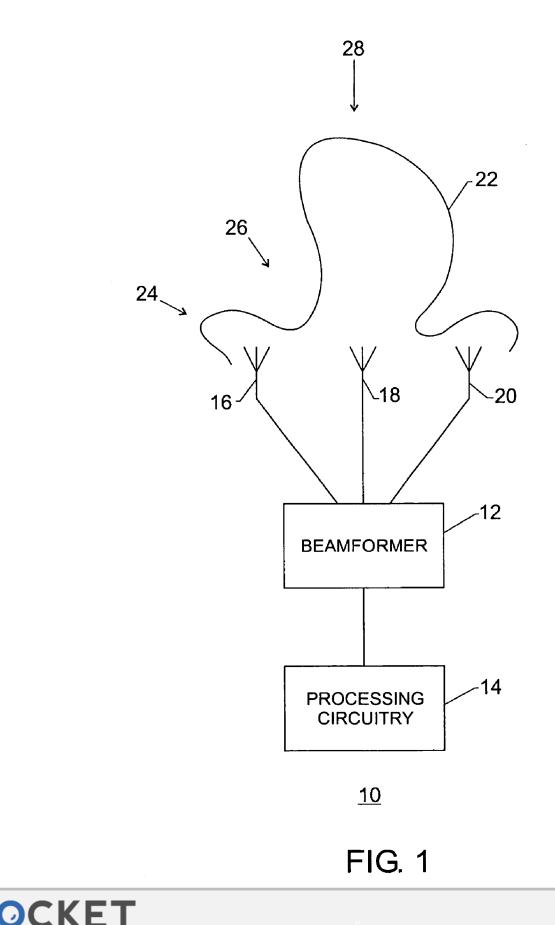
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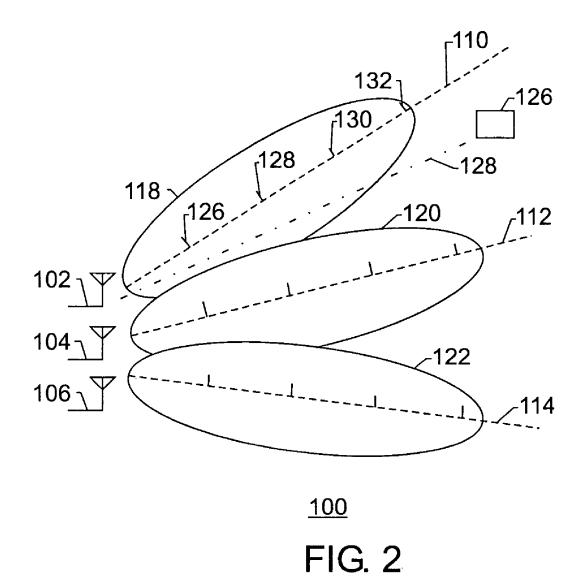


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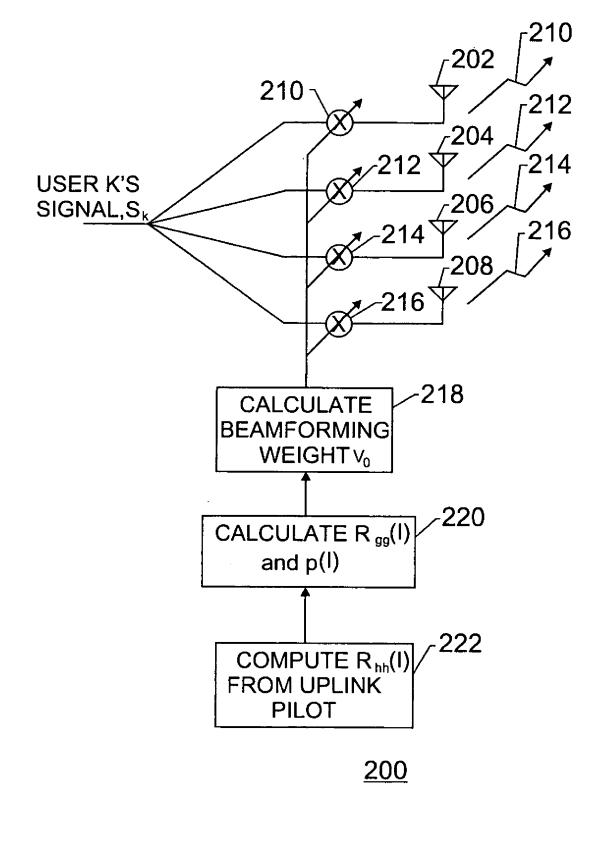


FIG 3

OCKET

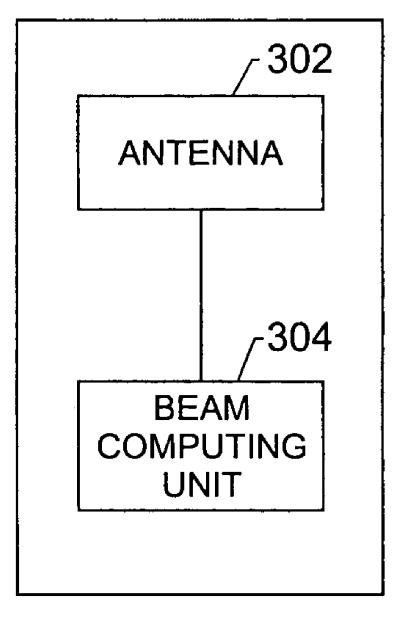
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FIG. 4

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