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Nagaraj

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(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

(58) **Field of Classification Search** 455/25, 455/63.4, 121, 193.1, 276.1, 273, 440, 562.1, 455/575.7, 69, 103, 561; 342/154, 157, 359, 342/367-368, 373, 417

See application file for complete search history.

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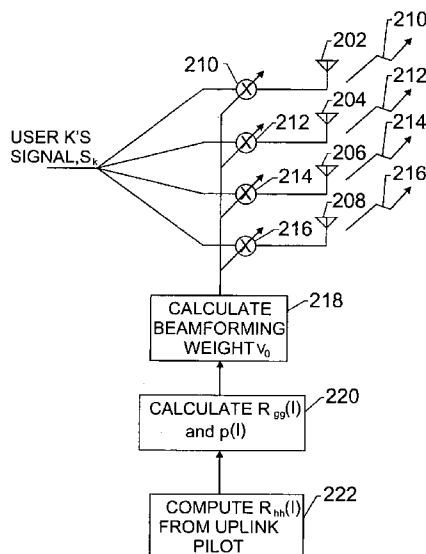
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Assistant Examiner—James D. Ewart

(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



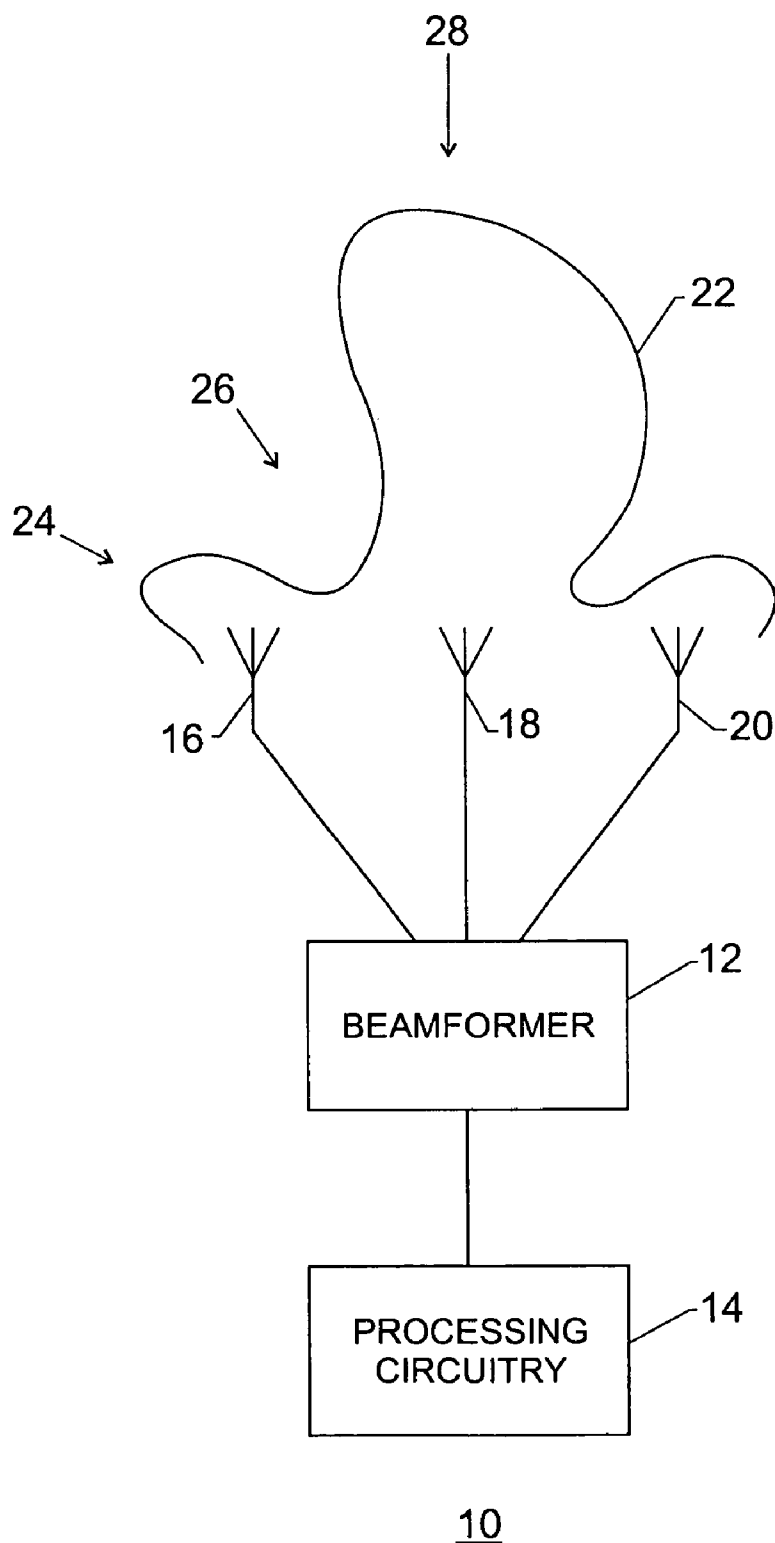


FIG. 1

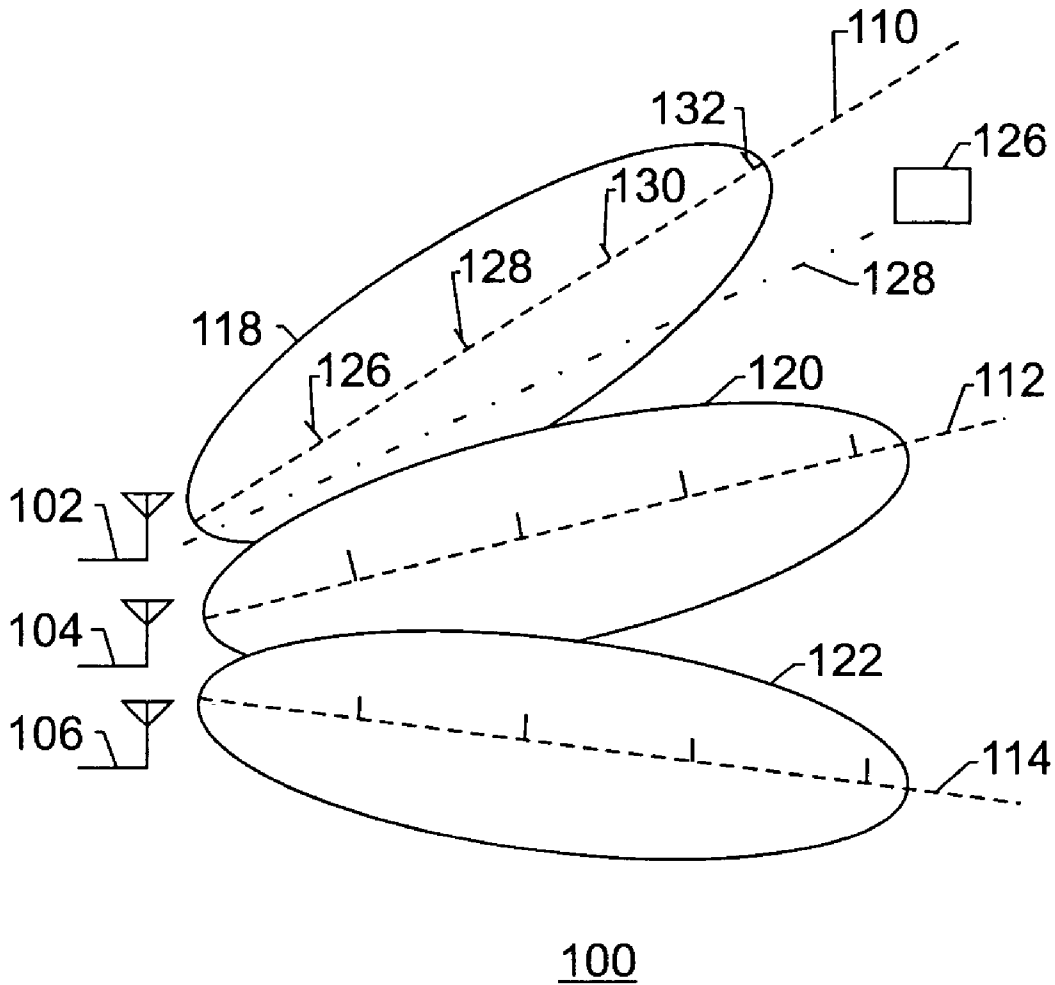


FIG. 2

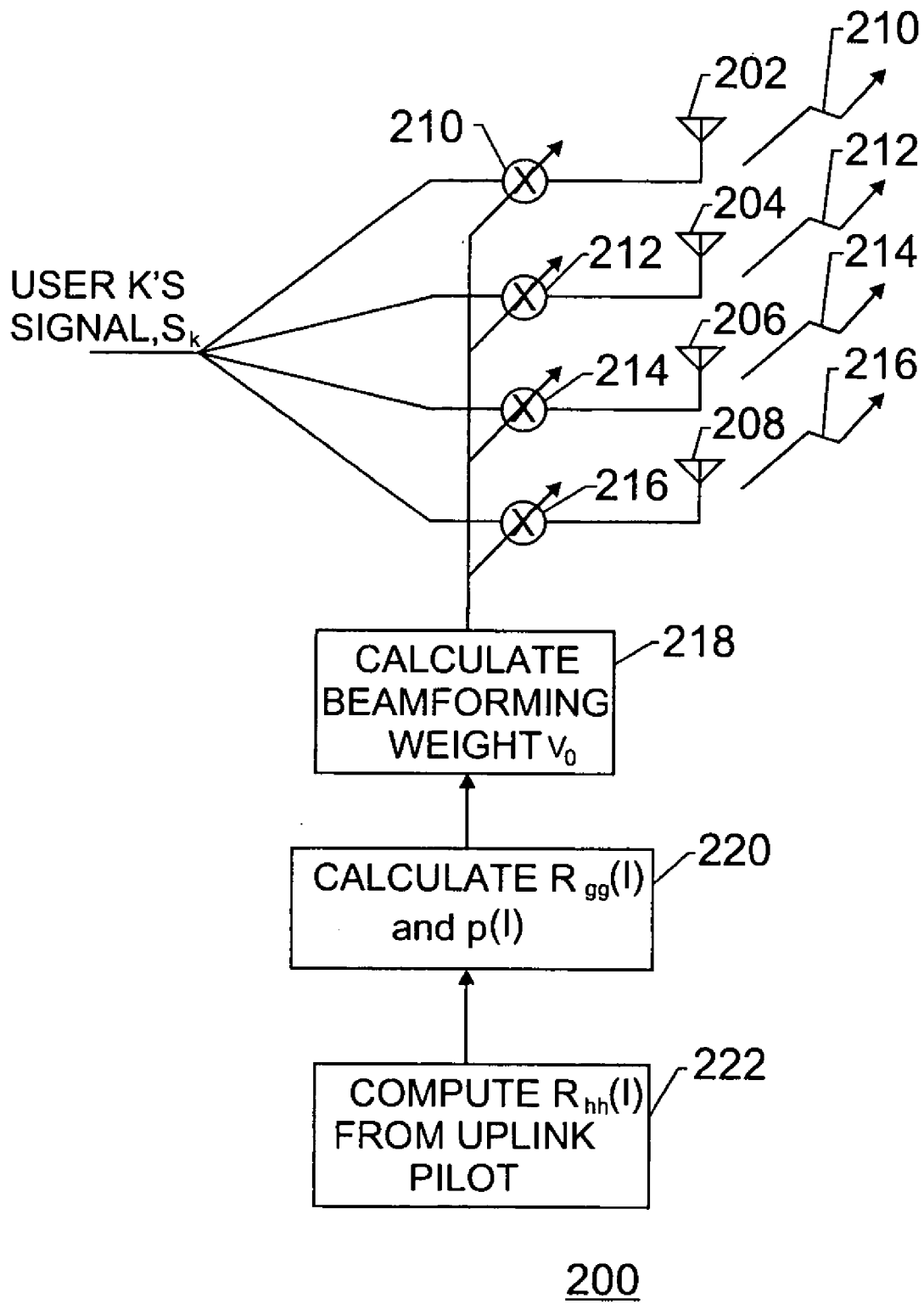
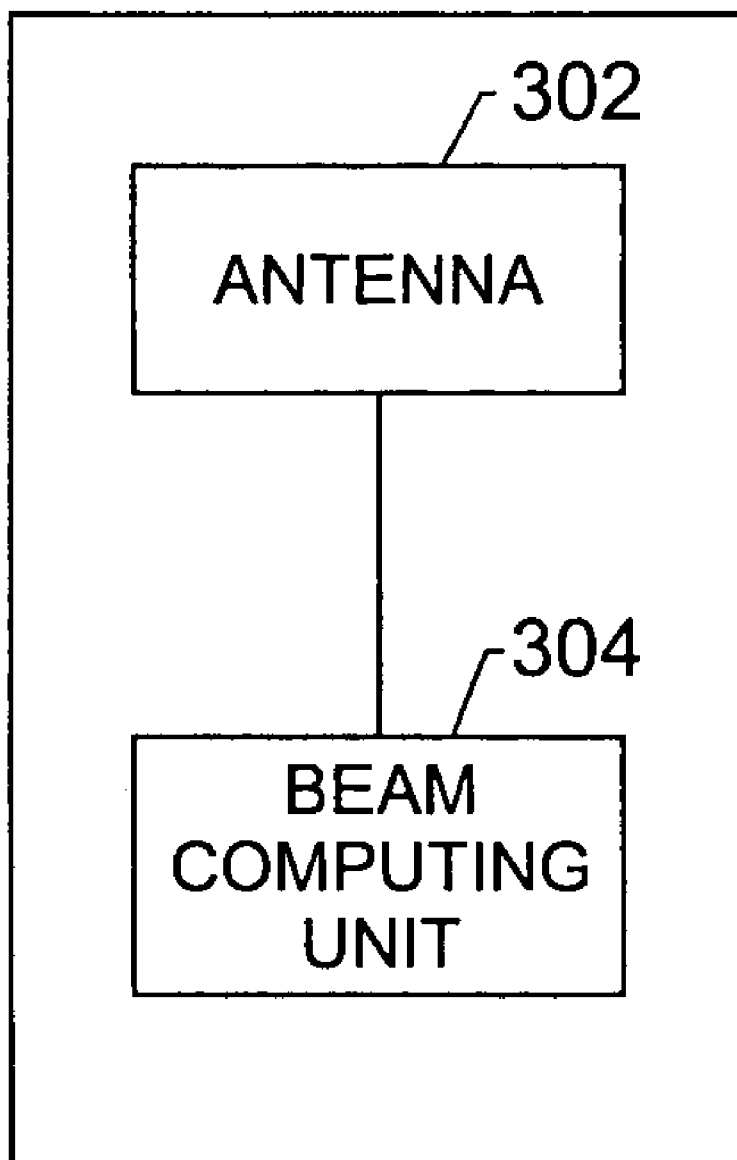


FIG 3



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FIG. 4

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