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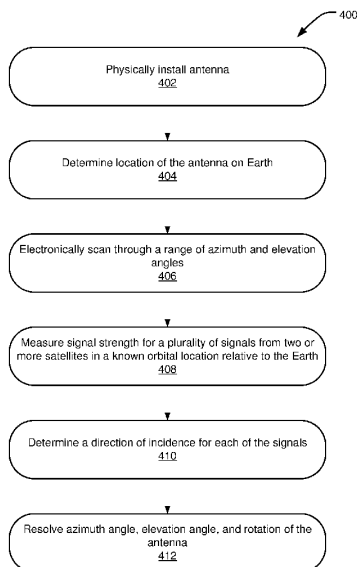


FIG. 4

(57) Abstract: Determination of a set physical orientation of an electronically steerable satellite antenna using received signals at the satellite antenna is described. The set physical orientation of the satellite antenna may be static for the antenna. In turn, the antenna may scan a beam through a range of angles to measure signal strength of signals from transmitters (e.g., satellites) to determine a direction of incidence of the signals. The direction of incidence of the signals from corresponding known orbital locations of the satellites allow the satellite antenna to determine the set physical orientation to a high degree of precision. Specifically, the high degree of precision allows avoidance angles to non-target satellites to be minimized to allow more efficient antenna operation with fewer interference mitigation operations.

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