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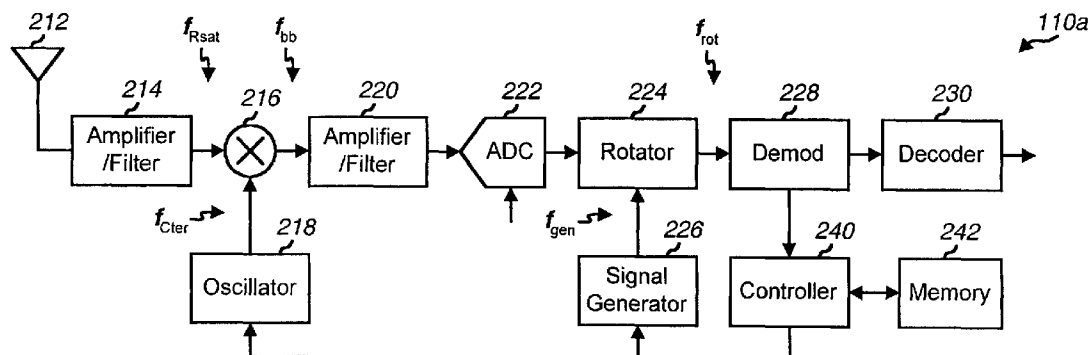
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(54) Title: METHOD AND APPARATUS FOR ESTIMATING VELOCITY OF A TERMINAL IN A WIRELESS COMMUNICATION SYSTEM



(57) Abstract: Techniques to estimate the velocity of a terminal in a wireless communication system. Movement by the terminal results in a Doppler shift in the frequency of each transmitted signal received at the terminal. In one method, the positions of the terminal, a base station, and each of two or more satellites are initially determined. A residual rate of a change of pseudo-range may also be determined for each satellite, e.g., based on (1) an estimated baseband frequency error that includes the Doppler frequency shift due to the terminal's movement and (2) an estimated Doppler frequency shift due to movement by the satellite. A set of equations is then formed based on the determined positions of the terminal, the base station, and the satellites and the determined residual rates of change of pseudo-ranges for the satellites. The velocity of the terminal may thereafter be estimated based on the set of equations.



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