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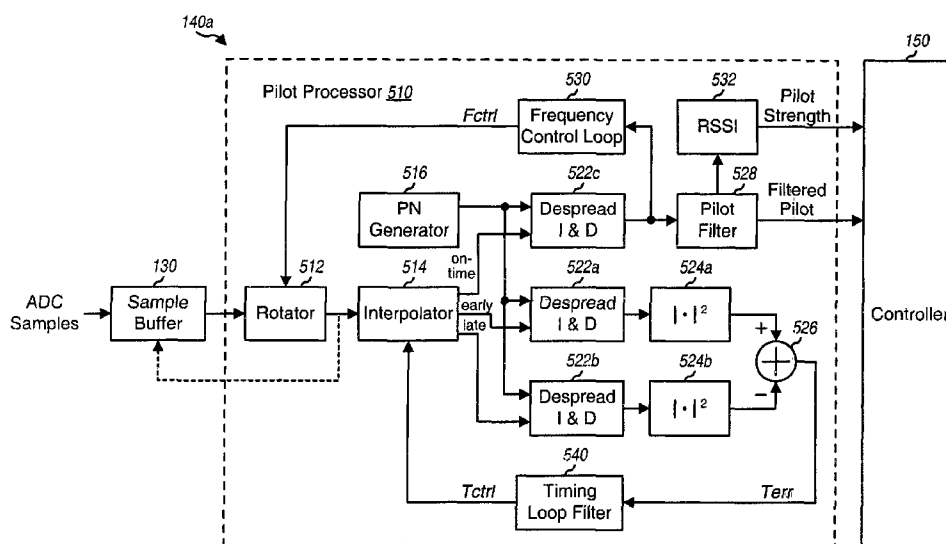
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(54) Title: PILOT FREQUENCY ACQUISITION BASED ON A WINDOW OF DATA SAMPLES



(57) Abstract: Techniques to acquire the frequency of a signal instance based on a window of data samples covering a time period shorter than the time needed to achieve frequency lock. The window of data samples is initially captured and stored to a sample buffer. A segment of data samples is then retrieved from the sample buffer for processing. The retrieved data samples are rotated by a current frequency error estimate to provide frequency-translated data samples, which are further processed to provide one or more pilot symbols. An updated frequency error estimate for the frequency-translated data samples is then derived based on the pilot symbols using a frequency control loop. The window of data samples is processed for a number of iterations until frequency acquisition is achieved for the signal instance or termination is reached. For each iteration, one segment is processed at a time and typically in sequential order.



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