

ABSTRACT

Adaptive beamforming is a technique in an array antenna for reaching maximal acceptance at certain one way with estimating signal coming from the wanted is one way, while signal with same frequency from other direction can possibly be refused. This thing is reached by various weights from each antenna which are applied in the form of an array. In adaptive beamforming, there are optimal weights which are calculated iteratively by using a complex algorithm based on a certain criterion.

An algorithm for adaptive beamforming constructively uses the Kalman filter, compiled by using a technique in despread-respread at DS-SS-SS, where the result of respreading the signal later is a reference signal for determining signal estimation user which is wanted by using the Kalman filter. Before all, the Kalman filter does the temporal observation in interference and CDMA system gain. Hence the observation is used as the estimator to measure the interference and the gain values in the next condition.

The Kalman filter is one of the estimation methods which is based on measurement of noise. The Kalman filter step consists of prediction and correction to make the Kalman filter as one of the methods for estimating who is enough relying.

The target from this final project is to show the performance of the algorithm Despread-Respread Kalman Predictor Multitarget Array (DRKPMTA) in boosting up system capacities at AWGN channel and Rayleigh fading channel with the Jakes method.

Keyword : Beamforming adaptive, Despread-Respread, Multitarget, Filter Kalman