

ABSTRACT

In progressively growing at wireless mobile communication, especially in third generation (3G). hence, It's needed some developing technique to support their system in position and location users determination that more increasing. Because of that, there is development technique to estimate the direction of arrival from a users and it's develop in many technique. Direction of arrival can be useful to locate the incoming signal and from the incoming signal we can know the users.

This final project investigates DOA (Direction of Arrival) estimation with MVDR (Minimum Variance Distortionless Vector) Algorithm. The Analysis of this final project is focused in the effect of correlation level of arrival signal to number of output angles and the effect of number of arrays, number of angles, SNR, and number of samples (waves) to accuracy, resolution, and calculation time.

From the simulation result, it has been earned that the increment of difference of number of arrays and number of angles, SNR, and number of waves, the accuracy of MVDR Algorithm will increase. For resolution, the increment of difference of number of array and number of angle and SNR, the pre-resolution and minimum resolution of MVDR Algorithm will increase. The Calculation time will increase for the increment of number of arrays and number of samples, except for number of angles, it has only influenced a bit.