

## ABSTRACT

MC-CDMA ( *Multicarrier CDMA* ) system is multiple access techniques combination of CDMA ( *Code Division Multiple Access* ) with OFDM ( *Orthogonal frequency Division Modulation* ). There are three kinds of combination between CDMA and OFDM : MC-CDMA, MC-DS-CDMA and MT-CDMA. MC-CDMA system divides bandwidth channel into several narrow band subcarriers which have a different channel respond. It si possible to combine MC-CDMA with MIMO ( *Multi Input Multi Output* ) system.

MIMO is a system which use multiple antenna in the radio station transmitter and receiver. The system has the possibilty to use a large bandwidth efficiency, in order to fullfill the needs of wide transmisi3n bandwidth.

This final Project will analyze a simulation to compare between MIMO system for MC-DS-CDMA and MC-CDMA in a wireless communication system The result of the simulation show that MIMO can increase the performance of MC-DS-CDMA by 2.99 dB and MC-CDMA by 3.02 dB.