

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.