

ABSTRACT

Wireless communications system service which rapidly grow have change customer requirement of wideband wireless system, and its need more wideband frequency. But frequency band is a limited resource and can not updated. Therefore it need a system which owning efficiency usage of high frequency band, so that mean capacities become to go up. System of MIMO represent one of the solution which can fulfill this requirement. Evolution Data Only (EvDO) is a data protocol of wireless radio broadband which adopted by many peripatetic telephone provider of CDMA as part of standard CDMA2000. CDMA 2000 1X EvDO is third generation wireless communications technology which fulfill standard of IS-856. The standard used Chip Rate 1.2288 Mbps. This EvDO can provide high-speed package data service by wearing full spectrum of carrier 1.25 MHz.

In this Final Project analyzed performance and quality of MIMO system at EvDO in each every subsystems by changing the number of input and output antenna ,perceiving and repair analyzing performance of EvDO system at channel of AWGN and multipath fading with MIMO 2Tx-2Rx configuration.

From result of simulation, technique of diversity MIMO-EVDO system can improve performance of system and at addition of Walsh Code from 16 becoming 32 giving better result and signifikan at channel AWGN and also Multipath Fading Rayleigh. Beside that, Space Time Block Code 2Tx-2Rx method owning better performance than method of Receiver Diversity 1Tx-2Rx and Space Time Block Code 2Tx-1Rx at channel AWGN and also multipath fading.

Keywords : MIMO 2Tx-2Rx, EvDO, Mutipath Fading, AWGN