ABSTRACT

CDMA 2000 1x EVDO is third generation of cellular system which meet demand for wireless internet high speed access. CDMA2000 1x EV-DO Rev.A is developing of CDMA2000 1x EV-DO Rev. 0 that have 1,8 Mbps data rate. This technology can support *wide-variety of symmetric, delay-sensitive, real-time, voice and broadband services* in same time. *Fast uplink rate control, fast hybrid ARQ, Incremental Redundancy Feedback, uplink channelization, Short Transmission Time Interval (TTI)* were used in CDMA2000 1x EV-DO Rev. A to get high speed reverse access on packet switched.

This final project monitoring and analyze HARQ error control method in CDMA2000 1x EV-DO Rev. A reverse link (uplink) which based on 3GPP2 standard.

To find out the result of research, Matlab 7.1 sp.3 is used. This software used to simulate the position of several users where send data in same time. Distance and user position influences of throughput, reverse link quality to support applications which need the symmetric sensitive delay.

In final project gotten optimal performance on CDMA 1x EV-DO rev.A especially reverse link with HARQ method multi-user system where number of user is 4 and 16 that can reach BER 10^{-5} until for 120 km/hours and 50 km/hours.

keyword : : *Hybrid* ARQ**,** EVDO Rev.A, BER, Throughput