

ABSTRACT

CDMA2000 1xEV-DO is third generation (3G) of cellular system that can comply request for increasing access internet with high speed wireless. CDMA2000 1xEV-DO Rev. A is evolution from CDMA2000 1xEV-DO Rev. 0 and has data rate 3.1 Mbps. Uplink CDMA2000 1xEV-DO Rev A is suitable for application such as : VoIP, video telephony, wireless gaming, push-to-talk (PTT). These application demand a system that can support large numbers of simultaneous users while meeting their desired latency requirements. Some method are used to achieve increasing performance, such as: using scheme modulation with high order, bigger packet size, four branches receiver diversity, Hybrid ARQ, Pilot Interference Cancellation (PIC), smaller packet.

This final project analyzes performance CDMA2000 1xEV-DO Rev. A at reverse link. The analyzed parameters are: alteration of data rate, packet error rate, throughput. Simulation CDMA2000 1xEV-DO Rev. A uses MATLAB 7.0.1 software.

The simulation uses one cell with four active user. It represent variation radio channel condition. It is based on distance's user from BTS. Every user produce 1000 kbit.

The result of simulation indicates first user which distance 100 – 400 meters from BTS has good channel condition. User one has lower power transmit, bigger payload size, high data rate, and bigger throughput. Fourth user which distance 1100 – 1300 meters has bad channel condition. Fourth user has higher power transmit, smaller payload size, low data rate, and lower throughput.