ABSTRACT

Recently, The cellular communication has grown rapidly. one of them known as CDMA 2000 1x EV-DO rev A. The System of CDMA EV-DO rev A has begun to be deployed in some countries to support high data rate in cellular network. With high data rate up to 1.8 Mbps in *reverse link* and 3,1 Mbps in *forward link* it means cdma EV-Do rev A can suport data application and voice in fixed network or wireless, so it possible to enable application like *mobile VoIP*.

Mobile VoIP or mobile Voice Over Internet Protocol is a evolution from VoIP technology which is need a high quality voice. It significantly consequence to customer satisfied, so this system needs monitoring in speech quality such as *BER, PER , Throughput, and latency.*

This final project, research about performance analysis VoIP in wireless network which base on CDMA EV-DO rev A. *BER, PER , Throughput, and latency* are use as measuring key to analyze performance of mobile VoIP.

In this simulation scenario, assuming single cell with 7 user active in that cell. Simulation use G.729 codec and the service is a voice. Each codec in every user will transmitted into EV-DO rev A canal, and next process is packetization and transmitted into AT.

The simulation result indication that first user show better performance than many user active in one cell, it can be proved that simulation reach a BER target 10^{-3} and PER 5% in low SNR. The simulation have a same result in low velocity , Low velocity gives a better performance than high velocity because condition canal in first user is still good.