ABSTRACT

Nowdays , the development of wireless technology can establish high speed data rate. In this case, we can see the evolution in CDMA system network. In CDMA, the evolution has reached to 3,5 generation   (3,5 G) or familiarly known as EV-DO (*Evolution Data-Optimized*).This system is a feature of CDMA 1X celluler system that can serve data and voice transmissions.In this network, we can access data with the bit rate up to 2,4 Mbps and can support video conference service.

The ability of this CDMA EV-DO system can detect multi user simultaneously, but in the other side , it can make a problem in channel allocation that must be supported with cell site parameters such as : traffics , blocking probability and soft handoff region. In this final project, its will be analyzed how to allocate the channel for soft handoff in EV-DO. Soft handoff is a process of movement the connections from one cell to another cell without disconnect the connection with the old cell.

The calculation will be done in soft handoff region that have width (b) and the maximum channel capacity.From the calculation, the optimal value of b is 0.2,so the capacity can increase to 55 (for E_b/N_o = 7 dB and α=0,4) dan 22 (for E_b/N_o = 7 dB and α=1).

Keywords : *EV-DO , Soft handoff , Soft handoff region (SR)*