ABSTRACT

The CDMA technology is now familiar among cell phone users. This new

technology has just been applied in the common society and moreover, has been passing

many trials to advance it's quality of service (QoS). In the CDMA technology

application, there are some problems occurred. Those problems mostly occurred because

of inter cell interferences (Interferences among users in the same ares), and the called

near-far problem. Some solutions have been offered to overcome this problem, two of

them are power control technique and multi user detection technique.

Through this final project, we do some research to the work of power control and

multi user detection in overcoming the near-far problem in CDMA communication

system. The object parameter of this research is the signal to interference ratio (SIR) of

the communication after we apply power control and multi user detection technique.

Here, we use 6 dB SIR target, as the standard of CDMA-IS 95. The Result got that

technique MUD own the performance 2x better in overcoming near-far problem

comparing technique power control that is faster reach the area convergence and also

transmission power efficiency.

Following, we will visualize the scheme of this problem through a simulation

program. We use Matlab Graphical User Interface (GUI) software to deliver an

interesting and easier information about mobile communication scheme, problems

occurred and solution offered.

Key Word: power control, multi user detection, near-far problem.