

ABSTRACT

Rapidly growing population and demand for data services on the campus IT Telkom, and poor quality of the Hot Spot on campus, the frequent occurrence of disruption and breakup the internet, making communication service providers to further improve the quality and accommodate the needs of the data service. In order to serve customers well then needed a good cell coverage. It is necessary to do a cell coverage planning on that area, so that will be able to improve the quality of data services.

In this final project discusses about a cdma 2000-1x EVDO cell coverage planning analysis at it telkom campus area. Currently, IT Telkom area is served by three base stations, covering base station Cipagalo, base station Dayeuhkolot, and base station Baleendah but the signal quality of the three base stations are still not good. This planning is done based on traffic forecasting, calculating the number and the length of cell, pathloss calculating, and the placement of base station on existing network and the simulation of signal quality based on coverage. In preparing this final project collected field data such as population, geographic conditions, and existing network is useful in the dimensioning phase.

This final project is to produce coverage area that can serve the data communications on the CDMA 2000-1x EVDO system at campus IT Telkom, as well the placement of base stations to cover the campus area of IT Telkom. In the simulation process obtained cell radius $0,24 \text{ km}^2$, wide of cell coverage $0,15 \text{ km}^2/\text{sel}$, receive signal level -75 dBm , and 3 of new base station placement.

Keywords: *Hot Spot, coverage, planning, CDMA 2000-1x EVDO*