

## ABSTRACT

The requests of improvement on telephone extension demand a development to the system that capable giving the best service for the customer. Costumer population which growth so big, makes it so difficult to served them if only using copper cable network. Applying the Wireless Local Loop (WLL) represents one of the alternatives to replace the copper cable network, so it can make the telecommunications service available more quickly for the society.

At the first time, usage of WLL at Kandatel Bandung can give solution to problems above, but along with the growth of costumer demand and technology requirement, Wireless Local Loop is irrelevant for the time being. In fact, the quality of WLL performance is low.

The aim of this final project is to give study analysis about Broadband Wireless Access technology as well as CDMA 2000 1x technology (Telkom Flexi) which is used to replace the existing Wireless Local Loop technology. The study analysis concludes calculation of budget link power, area coverage and calculation of parameter of traffic for voice that is: Call Seizure, Call Success, and Drop Ratio. Result of budget link calculation and traffic analysis shows the average of ASR quality was 94,25 % for the usage of Broadband Wireless Access and 93,43 % for the usage of Telkom Flexi, and so it is with the average drop ratio that happened. Average drop ratio for the Broadband Wireless Access was 0,47 %, while average drop ratio for Telkom Flexi was 0,61 %. This values is far much better from the existing Wireless Local Loop system which only have the average of ASR quality was 88,10% and ratio drop average was 1,23%.