

ABSTRACT

The increase of population in the city has increased internet. Perkembangan users will make use of the Internet has also increased the need for the data, even by Allot Communication increased need for data reaches 73%. Problem With such an impact on the decrease in the speed of data access. Users cellular wireless technologies will lead to traffic served by the Base Station will also offload increase traffic. The increase of traffic would affect macro Base Station. so, it cause the decline of the quality of the WiMAX backhaul voice. Price rent of WiMAX cheaper than optical and Vsat will benefit from the business aspect .

In this final project I will do modeling to analyze the feasibility of WiMAX as a backhaul network femtocell technology cdma20001x. WiMAX measurement of performance will be compared with the standardization of femtocell cdma 20001x thus obtained results are worthy to be wimax backhaul of femtocell technology cdma 20001x.

Results obtained in the form of performance WiMAX voice with 11.68ms delay, packetloss 0%, and throughput 0.42886Kbps. After that, for data 18.3176ms delay, packetloss 0%, and 1.063Mbps throughput. And to measure the number of recipients varies obtained 11.68ms delay, packetloss 0.000127% to 0.0004648%, and throughput 1.96928Mbps up 3.3746Mbps. Simulation results are compared with standard ITU G1010 T and ETSI TR 101 856, then it deserves to be cdma 20001x femtocell backhaul.

Keyword : *WiMAX, backhaul, femtocell cdma 20001x, delay, packetloss, throughput, ITU T G1010, dan ETSI TR 101 856*