ABSTRACT

In this time,growth of telecommunication is very fast. Not only growth technological beside, but also requirement from service society of telecommunications. One of growth technology which attended is WiMAX as technology access from Broadband Wireless Access (BWA).

This Final exam, the network planning of WiMAX technology implementation using frequency operation 3,3 GHz and channel bandwidth 3,5 MHz for the service of fixed access.

The process of the planning is beginning by doing network dimensioning. Dimensioning conducted with approach capacities of traffic and coverage. From calculation with the approach obtained by a first canal requirement in the year is 27 cell for urban and 5 cell for suburban area. After determining canal requirement, conducted visualisation dimensioning in planning area.

This final project will analyze broadband wireless access technology with IEEE 802.16d standard. Performance parameters used are link budget estimation (RSL), signal quality (SNR), calculation of delay, and throughput. The result are: smallest SNR 6,5 dB in RisTi Widyaloka 1 Building, highest SNR 18,5 dB measured in RM Barito Minang Rancaekek. Average RTT delay SSs to BS is 25 ms. Percentage downlink throughput is higher than uplink throughput.

Key Word *: WiMAX, performancy*