

ABSTRACT

DSLAM (Digital Subscriber Line Access Multiplexer) is access network equipment which contains modem and multiplexer to serve xDSL user. DSLAM positioning in network is between access and backbone network. In the earlier, DSLAM positioning is in central telephony office, but in the reality, this positioning has a distance problem, which usually user location is over than DSLAM's maximum capability. After fiber optic access network operated, it is possible to put DSLAM remotely to shorter the length of copper wire to serve more users. Newly, PT TELKOM develop DSLAM with post it for outdoor which called remote DSLAM to make copper internodes between DSLAM and user terminal (CPE) shorter.

In this final project, parameters that define DSLAM and remote DSLAM performance from 2 aspects are measured. Those two aspects are transmission channel and traffic. The parameters that measured are throughput, upload and download speed, SNR, attenuation, and output power. Transmission channel is measured using BAMS (Broadband Access Measurement System) for copper wire and OTDR for fiber optic. Beside that, mathematic calculation will be done to get copper wire attenuation value. The result of DSLAM and remote DSLAM from those two measurements will be compared to know which have the best performance.

Base on the measurements, remote DSLAM has better performance in throughput, upload and download speed, SNR, attenuation, and transmission channel attenuation, and DSLAM has better performance in output power. That measurements result shows that relatively remote DSLAM have better performance than DSLAM.