ABSTRACT

Now and next year, customer need level towards data or voice communication is increasing. Multimedia is the biggest increasing need. Growth and trend of fast data traffic make bandwidth capacity limited of transport existing system Therefore, bandwidth need become a trouble in access system.

DSL is modem technology which use twisted pair existing telephone line too transmit wideband data. Naturally, DSL growth is technology which use cooper cable media to direct wideband service. xDSL technology is an alternative which can be suggested technically or economically in multimedia era.

In final project, measurement is done field to measure electric cable existing parameter(Loop Resistance, Loss , Isolation Resistance, CrossTalk, SNR and impedance) and increasing throughput capacity in SHDSL 8 port modem. SHDSL simulation uses Delphi 7.0 software. The units are operational parameter which are frequency, cooper diameter, and cooper cable space. The output of simulation are second parameters, increasing throughput capacity (according to the cooper formula mathematically)

According to the measurement had done, STO TEBET existing network in good condition and it can be used for speedy application with speed 2 MBps. In this measurement gets loss value≤ 38 dB, loop resistance between 900 Ohm, isolation resistance > 10 MOhm, Crosstalk > 10 DB and impedance value 80-170 Ohm, S/N ≥ 24 dB. The data that send are not 100% as input data as. When 100 MBps inputted data which sent are 65,6 Mbps and accepted are 31,9 Mbps. Throughput capacity which produce are 5,376 Mbps/pair