

## ABSTRACT

*Next Generation Network* offers many alternative development that is mean to optimize and efficiently the network used. IP Multimedia Subsystem (IMS) is a network architecture based on packet switch and IMS allow to convergence fixed network and mobile network (fixed-mobile convergence).

In this final project was simulated interconnection between GPRS Network and ADSL Network on a network IMS based. GPRS will be interconnected to ADSL on IMS Network as center node. Simulation in this final project using a software called Opnet Modeler. Tests conducted with VoIP dan FTP service. From the simulation results will be analyzed by looking at QoS parameters delay, jitter, troughput and packet loss.

From the simulations that have been made available that the GPRS network communication links and ADSL on IMS-based network can be done. But these networks are vulnerable to the movement of the user, when the user moves up to a speed of 100 km / h, reaching 268.1 ms delay and packet loss for VoIP 41.779%, while for FTP 25.44% packet loss. It is beyond Tiphon standards and expressed in a bad condition. In this simulation are also given bitrate changes on the ADSL network. Giving bitrate tida packet loss too influencing change, because it does not add bandwidth. The decrease packet loss is only about 0.207%.

Keywords : *GPRS, ADSL, IMS, QoS.*