ABSTRACK

In the telecommunications, development of Next Generation Network (NGN) technology offer and optimize various alternatives that exist by introducing IP Multimedia Subsystem (IMS). IP Multimedia Subsystem (IMS) network is a network architecture that enables convergence of data, voice and mobile network technologies through an infrastructure based on Internet Protocol (IP). In addition to set the session that appears for each service, IMS network also integrating various multimedia services for mobile and fixed access network.

IMS network can be used to triple play services. Triple play is a convergence or service bundling of voice, data and video on demand on a single access network infrastructure. Triple-play services as a TV based service with adequate bandwidth and dynamic PC-based services, that simultaneously do not disturb the provision of telephony services including features in there. It is believed that triple play services can be a solution for telecommunications carriers. At this final assignment, the design and simulation of triple play services on IMS networks have been made. After the simulation, network performance will be analyzed using Quality of Service (QoS) parameters such as delay, packet loss, and throughput.

The results of the simulation analysis shows that the value of delay, and packet loss, before the addition of background traffic and after the addition of background traffic is increased, while the throughput is decreased. Background traffic makes link capacity full. However, overall the amount of delay, packet loss, and throughput still meet the ITU-T standard.

Keywords: IMS, Triple Play Voice, Video, Data, Delay, Packet Loss, and Throughput