

## **ABSTRACT**

Nowadays, network technology and multimedia, a network technology application like video conference will be popular and needed in all aspects. The need for more comfort in communication, so there must be a guarantee such as Quality Of Service (QoS). RSVP protocol is just one of the methods. In video conference which is a real-time application, a guarantee of bandwidth is needed when the data is being transmitted. The concept of IMS (IP Multimedia Subsystem) technology that complements the NGN (Next Generation Network) based on softswitch is a telecommunications network architecture based on IP (internet protocol). This technology is one of the interconnect architectures developed by wireless and wireline technologies by offering a variety of multimedia services including voice, video, IPTV, and data.

In this Final Project, we have simulated video conference communication into an IP Multimedia Subsystem (IMS) network with RSVP protocol using the simulator OPNET Modeler 14.5. From this implementation, we will analyze from a review of his Quality of Service including delay, packet loss, jitter, and throughput at the client side.

From the testing and analysis results, it showed that the use of RSVP protocol can produce a better QoS. Judging from the results of delay, jitter, throughput, and packet loss, this method can decrease delay until 20,371 %, jitter until 66,319 %, packet loss until 6,15% and also can increase throughput until 50,304%.

**Key words :** IMS, Video Conference, RSVP, QoS