

## **ABSTRACT**

Development of network technologies currently heading towards NGN (Next Generation Network) which will be implemented on all IP-based networks. One technology that will become the standard technology of NGN is IMS (IP Multimedia Subsystem), IMS is basically a technology that integrates the services of data, voice and some of other multimedia applications over IP network infrastructure.

The ability or resources of IP networks used by the IMS are limited, especially when available resources is smaller than needed because the network is used by multiple of multimedia applications. It is necessary for handling the quality or commonly referred to Quality of Service (QoS). QoS has the ability to provide quality assurance, which is by using a queue strategy to improve QoS parameters such as fairness, delay, packet loss, and jitter when congestion occurs on the network.

In this final Project QoS is used to improve the quality of the applications supported by IMS technology especially a realtime applications such as VoIP. From the results of experiments LLQ queue techniques are better from CBWFQ to ensure the QoS of VoIP IMS applications with the best packetloss value, smaller delay and jitter, while the value of fairness depends on the weight specifications set by the user to find the perfect balance for maintain network resources.

**Keyword : IMS, VoIP, QoS, LLQ, CBWFQ**