

## ABSTRACT

The development of technology has established VoIP which offers the alternative solutions of communication services like conventional telephone with lower cost, easy to use, and reliable. One of the challenges in the VoIP development is how it is to manage network traffics because VoIP is just one of the thousands of traffics that are using internet networks. Meanwhile, internet is convergent networks which is always very busy with so many applications using it.

The implementation of queueing mechanisms that are able to distinguish network traffics is one of the mechanisms to manage network traffics. PQ and CBQ are some of that mechanisms which are able to distinguish and group the traffics into several classes with each priority. This final task is done to analyse the performance and QoS from the implementation of PQ and CBQ to manage VoIP services.

The simulation results show that CBQ implementation with link-sharing is more suitable than PQ implementation to be implemented in networks with VoIP services running on it because CBQ can share the network resources among the other network traffics.

**Keywords:** VoIP, PQ, CBQ, link-sharing, QoS, resource.