

## Abstract

Long Term Evolution (LTE) is the latest technology network technology that was developed by the Third Generation Partnership Project (3GPP) which allows greater data transmission and low delay compared with 2G or 3G networks. In addition to the LTE enables voice service better than ever with the quality of High Definition (HD). There are ways to use the voice services by using Voice over Internet Protocol (VoIP) networks. However, there is a limit to expressing recommended positions for VoIP services and therefore the need for research to find out recommended positions for using VoIP services. Therefore, a comparison of performance networks on voice services within the verification of Quality of Service (QoS) from number of users. This final task will perform the simulation to verify the performance of these networks using NS-3 simulation.

**Keywords:** LTE, VoIP, QoS, NS-3