

## ABSTRACT

To build connection between rural and city area, there are so many telecommunication company use wire as its media transmission. It is not efficient because as geographically, rural area is located far from server or center of telecommunication and really hard to be reached by wire. Because of that, some of telecommunication company make simple network with cheap expense, it called VoIP by using wireless network. And of course, with quality as well as wire network usage.

To give service to the *user*, it should have research for the network service quality which will be built. The network service quality which usually called *quality of service* (QoS) can be measured with the certain metrics or parameters, like end-to-end delay, throughput, packet loss, and delay variation (jitter), but not at all for voice communication application to be focused. There is a certain priority for voice communication like end-to-end delay, packet loss, and jitter because voice communication is very sensitive to *delay*.

So, on this network should have research about the QoS ( Quality of Service). The parameters of QoS on VoIP network which is prioritized are delay, jitter, and packet loss. On this experiment will be compared about network QoS which is resulted by using different user number, different codec, and different MAC WLAN scheme. From this comparison will be defined the network specification which appropriate with QoS standard.

*Key Word : VoIP, WLAN, QoS, delay, jitter, PCF, DCF.*