

## ABSTRACT

Voice over WLAN is one form of VoIP with huge potential, where the voice signal is passed to the Wireless LAN network. Conventional systems that exist today are using VoIP server and a separate access point, combining both functions in one tool will certainly give many advantages. Using WLAN cards on the server as an access point would be cost less. The use of flashdisk as booting media disk intended to anticipate the weaknesses of harddisk that will quickly obsolete when used 24 hours non-stop, and also because the flashdisk is more economical.

In this final project will compare the QoS parameters throughput, jitter, delay and packet loss on integrated system with non-integrated one. Observations will be conducted through VoIP communication while the network passes through the TCP data by data rate of 0 Mbps - 10 Mbps and while user moving 1meter to 51 meter away from access point

The results obtained from this experiment are the QoS parameters on integrated system that using WLAN card TP-LINK TL-WN551G as access point on lossless condition almost the same as non-integrated system that using access point WRT54GL without significant difference. But in mobile condition up to 51 meter, the differences are quite significant, where the non-integrated system got better QoS parameters than integrated one. But the delay and jitter obtained still in permitted for voice communication ( because delay still under 150ms and jitter still under 30ms.

Keywords: VoIP, Access Point, Voice over WLAN.