

## ABSTRACT

Nowadays, Wireless LAN technology is one of solution that gives us easier data exchange between users in the same network with higher bit rate, where users with supported device can communicate with other users without depending on existing physical network. In the other side, VoIP technology development is interesting enough because it can reduce telephone call cost.

To overcome this necessity, a system, that can gives many benefits in user mobility side and also reducing costs that need to spend for a call, is designed. This system is called Voice over Wireless LAN.

In this Voice over Wireless LAN system planning, writer uses SIP protocols to do the signaling function. Signaling is information that sent to do initialization, monitoring and disconnecting between terminals.

From Voice over Wireless LAN system planning results, case study at PT. JalaWave office needs 2 access points. Receive signal power level analysis results, based on measurement in distances 7,3 m shows that RSL value (-51dBm) is bigger than user receiver sensitivity (-91 dBm) on data rate 2 Mbps. Based on experimental and calculation results, R factor value with codec G. 711A is 93,722. It means that Voice over Wireless Lan system can be operated at PT. JalaWave office location.

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