

ABSTRACT

IEEE 802.11b has been representing a standard for the Wireless of LAN operating on frequency 2,4 GHZ. IEEE 802.11B is increasingly being used in public and private. Since 802.11b is by far the most popularly used wireless lan (WLAN) standard, the study of voice over these networks brings the greatest value to address the VoIP QoS issue.

In this final project, I assess the suitability of 802.11b networks to carry real-time voice traffic. To analyze, measurement conducted by two aspect, they are transmission aspect and traffic aspect. In transmission aspect, conducted by measurement in *line of sight* at indoor and outdoor, beside that, by entangling obstacle was performed. In traffic aspect, measurement conducted by implicating TCP stream generated by other node. This measurement focussed at measurement of Qos Voip such as *loss*, *delay*, and *jitter*. Theoretically, 802.11b network can support requirement of *real time* communications when there is clear line of sight connection to peer node or when communicating node are close. Distance and obstacle also prove to cause *loss* and *burstiness*, when traffic increased, the *delay* also increased so quality become poor.

The Result got from the mesurement, value of *loss*, *delay* and *jitter* in adhoc LOS indoor was worse compared to adhoc LOS outdoor at the same distance. At 100 meters distance in LOS outdoor (*Jitter* 1,49 ms, *Delay* 180,15 ms, *loss* 0,06 %), whilst in LOS indoor at 80 meters distance (*Jitter* 3,63 ms, *delay* 180,11 ms, *loss* 0,15%). By entangling obstacle, The value were variated due to the receiver position, however compared to LOS indoor, existence of obstacle, value was bigger caused of obstacle which can block or reflec radio signal. With competing traffic, value of *loss*, *delay*, and *jitter* were according to the number of competing node. Collision was happened according to the number of node send packet.