

ABSTRACT

In the telecommunication, VoIP is not to be ignored by any problem that it belongs. Data communication development also directed to the wireless network. Wireless network is designed for data communication early. But, recent, the voice communication is tried to be implemented in the data network. Voice information characteristic that has to be real time and reliable become a specific question for the wireless network. Whether voice communication on WLAN can be accepted?

This research tried to analyze voice quality factor on WLAN by noticed the weakness off data distortion on wireless network. Delay, packet loss, and throughput factor become parameters which be analyzed. So voice communication is proper on WLAN or not. The experiment started by designing a network which is contained by SIP network entities. Scenario is designed to take any value of parameter. Scenarios were reach test, codec test, and access point test. To analyze SIP performance, author also compare SIP with H323.

From the test result and analysis, it is mentioned that voice quality on WLAN still fulfill the proper and ITU standard. From the test result one way delay for SIP VoIP is 59.634 ms which is fill on range best ITU standard 0-150 ms. Jitter has an average 0.921 ms. Packet loss has an average 0 %. Throughput also reach 100 %. Coverage reached 40 meters for LOS (Line of Sight) condition and 15 meters for non LOS. All of test parameter show that VoIP has proper level to be implemented in wireless area. SNR level also affected throughput on voice communication. In WLAN SIP have better performance 2 % than H.323 according to MOS test.

Keyword : VoIP, SIP,WLAN