

ABSTRACT

Nowadays, data communication network keeps on growing rapidly. Not only be seen from the device side but also from the application and transmission system used. STT Telkom as one of telecommunication technology based campuses attempts to take benefits from available devices and network to improve its education quality and to make easier for the students in accessing informations as well as given lecture materials.

One of the program realizations is the LAN and WLAN development which has covered entire building in STT Telkom includes boarding house area around the campus. The given bandwidth has also already been in broadband category. But in reality, the network has not been used optimally. Thus, in this final project there will be an implementation of video conference application using H 323 protocol based on web. The existence of this application is expected to be able to support online lecture, online meeting, and other online activities. Before being implemented, this application needs network performance analysis and examination (delay, jitter, packet loss, and throughput) as a consideration for implementation feasibility.

A number of experiments using several scenarios are revealing result that the downlink direction delay is more regular and better than the uplink, the average delay is less than 250ms, the average jitter uplink is less than 30ms whereas the average downlink more than 30ms, the average uplink direction packet loss is 0% and the downlink direction varies with less than 10% on the average, the throughput is good enough, the video quality is good enough based on MPQM which is 3 on the average, and on the whole, it can be concluded that the location with the worst quality is H building (GSG).

Key word : LAN, WLAN, video conference, protokol H.323, web, delay, jitter, packet loss, throughput.