ABSTRACT

IT Telkom as one of the campus-based telecommunications technology and networks to make use of devices that are available to improve the quality of education and to facilitate students in accessing college information and material being taught. One form of realization of the program is to build a LAN (Local Area Network) and WLAN (Wireless Local Area Network), which has included all the buildings in the IT Telkom. Along with technological development, then the service has developed and implemented in a variety of multimedia applications.

One of them is video conferencing. Video Conference is one of the multimedia services that can satisfy users who need real time communications and interactive. To route calls in an IP network requires a server. One type of server that can be built yourself, open source and freeware is the asterisk. With Asterisk, video conference communication on an IP network can be done cheaply multipoint. In the area of IT Telkom campus is being developed video conferencing technology to get pictures and crystal clear sound quality to support the learning process.

The problem is many IT Telkom Academicians both lecturers and students living in housing complexes and in boarding houses where the video conference service is also required. At the end of the project is to implement technology-based video conferencing over Asterisk WLAN by taking on-campus location of IT Telkom (Learning Center) and housing Permata (Block B, no.65), so the end result is expected to connect the two places in order to communicate with each other both in audio and video . It also analyzed the video conference service kualiatas factors include delay, jitter, packet loss, throughput, and MOS using G.711 codec as the audio codec and H.263 as video codec.

From the test results, factors of quality video conferencing is still in the range of ITU-T standard so the quality of video conferencing is implemented is feasible to implement. It can be seen from the results of testing with a delay of 19.99 to 23.77 ms, and jitter between 12.36 to 14.49 ms, packet loss from 0.00 to 5.78%, the throughput from 0.359 to 0.196 Mbps and MOS 2, 5 to 4.01 with - good quality average.

Keyword: **LAN, WLAN, video conference, delay, jitter, throughput, packet loss, Asterisk**