

## ABSTRACT

Communication technology has developed to multimedia services. It is pioneered with the development of MoIP. By using MoIP, we can do speech and video communication through data packet simultaneously. Video conference is one of multimedia services that can satisfy user needs to communicate interactively and real time. Later on, as the technology developed so this service were tested to be implemented in the Wireless LAN. To route an originating call in IP network, a server is needed. One of the servers that can be built by user, open source and freeware is asterisk. With the existence of Asterisk, video conference in MoIP network can be done in multipoint and with small cost. JOINT (Jatinangor On Internet) that is a brand of CV CARAKA PEKAJAMAN, is an internet service provider division for corporate and retail, that using Wireless LAN network as its access medium. Most of JOINT customers are college students who live in a boarding house. As an internet service provider, good and optimal services are needed to satisfy its customers. As an alternative way is adding service application such as video conference in existing network. With its existence, hopefully it will make communication easier and minimize call cost between JOINT's customers.

In this final project, it implement video conference over wireless LAN based on Asterisk that took place in JOINT (Jatinangor On Internet) Bandung. Furthermore, quality factor in video conference service on Wireless LAN network will be analyzed, that are delay factor, jitter, packet loss, throughput, and MOS. The experiment try to communicate softphone by softphone in every BTS to the distance changed, and experiment by increasing client. Codec that is used G.729 codec as audio codec and H.263, H.264 as video codec.

From the result of experiment, the quality of video conference still reasonable to be held. This can be seen from the result of experiment with one way delay value is 64,21344 – 66,49592 ms, jitter among 12,36 – 25,78 ms, packet loss 0% - 4,7 %, throughput 0.313Mbps - 0.39 Mbps and MOS 3,3 – 4,3 by quality average is good.

**Keyword : MoIP, WLAN, Video Conference, Asterisk**