

## ABSTRACT

The development of network and multimedia technology has made multimedia as an important feature in internet. Most of multimedia application needs realtime traffic, high bit rate, and wide bandwidth. One of multimedia product, such as video conference will be popular and greatly needed for many puposes. Video conference is an application that needs special service from the network. In order to gain good performances, video conferenceapplication requires bandwidth with minimum loss, delay, and jitter.

A technology that offers high bit rate , mobility and wide bandwidth is ADSL. ADSL offers broadband series by optimizing fixed telephone line to a high speed digital line for internet access. Services that are provide by this technology are POTS, internet, broadcast TV, VoIP, video conference, file transfer, online games, etc.

This final project implemented the video conference over ADSL2+ network in PT. Telkom Bandung. This application used Asterisk<sup>TM</sup> as server and SIP as signaling protocol. To know the performance of implementation which have made, the field study is needed, from this way gotten data which is used for performance analyze. The testing scenario are by changed the bandwidth and changed the amount of client. Codec that used are G.729 and G.711 a Law, as audio codec, and H.263 and H.264 as video codec.

From the result, the quality factor of video conference is still in ITU-T standard range. This given by range of *one way delay* is 65.4158 ms – 71.8024 ms, *jitter* range is 1.3817 ms – 10.659 ms, *packet loss* 0% - 19.92%, *throughput* 0.084 Mbps - 0.419 Mbp and MOS 2.3190 – 4,2506 . From the implementation and calculation, the maximum capacity of video conference and the maximum range of video conference user has been calculated.

Keywords: *Video conference, ADSL2+, SIP, bandwidth*