

## ABSTRACT

Along with the rise of social demand for packet-based communications from voice, data and video, the communication technologies also develop the IP Multimedia Subsystem(IMS), to realize the Next Generation Network (NGN) ideas. It's possible to build a call center that served not only voice call, but also video call. So, the communication process from the client to the operator becomes more alive because they can see each other. However, in order to realize a real-time communication with the as small as possible delay, the high-speed access technologies are really necessary. Currently, high-speed access can be enjoyed through HSDPA network with downlink speed up to 3.6 Mbps or through ADSL network with high speed connection, such as 3 Mbps.

In this final project, it was implemented an IMS-based call center use an Open IMS software from FOKUS. The IMS server is interconnected to Trixbox and Enum servers. The call center has hunting system facilities consist of three recipients. Then, for the media access from the client to the call center, it through ADSL network by Telkom Speedy and HSDPA network that's represented by Indosat-M2 and Telkomsel Flash to analyze the QoS value of the video call process between them.

The QoS values obtained from the measurement for those network are 0,161s for ADSL's delay, 0,03073s for ADSL's jitter, 1,49% for ADSL's packet loss and 21720 bps for ADSL's throughput. Next, the HSDPA network got 0,1635s for delay, 0,032s for jitter, 2,1% for packet loss and 9384,5 bps for throughput. This show the delay and jitter of those networks are still poor, but the packet loss of them are good. However, from the MOS value, the user satisfy result for those network are "fair" in the user opinion.

**Keywords:** IMS, Video Call, Call Center, ADSL, HSDPA, QoS