

ABSTRACT

One of telecommunications services that growing and promising are voice and video communications. User requirements for voice and video communications are high for the company is the largest donation telecommunications service provider in Indonesia. Going forward, with the progress of communication technology in order to direct all based on IP (Internet Protocol). This technology will make users can connect remotely to the appropriate quality standards and relatively low prices. For that voice and video communication needs to be developed on an IP-based network. IP-based communication is strongly influenced by the delay, throughput, and other parameters. On the other hand voice and video communication should be realtime and reliable. It is a challenge for service developers. Here will be tested the feasibility of video conference services on IP-based network.

This final project implementing video conferencing services on OpenIMSCore with Mobicents as the application server. Implementation is further analyzed from the aspect of its Quality-of-service parameters delay, jitter, throughput and MOS. The analysis was performed based on the results of testing the delivery of voice and video from the server to the client with multiple clients and background traffic. In this final performance was also tested on a server with wired and wireless media.

Obtained from the testing and analysis of one-way delay value of 19.99367 ms, 0.391403 ms jitter, and throughput measurements 0.305433 Mbps for 3 clients. Then the background traffic for a maximum of 80 Mbps ms, delay value 20.00081 ms, 0.185085 ms jitter, and throughput 0.2635 Mbps. The results obtained are still below the maximum limit of the standardized ITU-T and Cisco, it is concluded this system to function properly. As well as using a wired medium will give better performance results than using the wireless medium.

Keywords: Video Conference, SIP, OpenIMSCore server, Mobicents, QoS