ABSTRACT

Education in Indonesia is experiencing an increasingly follow the evolution of technological development. In this final project, e-learning system based on Moodle which is integrated with Google Talk. With a system of teaching and learning activities is expected to be more effective and communicative, in addition to the Google Talk service can supplement a chat facility found on Moodle. System testing is done by measuring the performance of the Moodle website which is integrated with Google Talk, with a variation of a given bandwidth will be known loading time needed by the client. To find out the QoS (Quality of Service) of the network then be measured with multi-user and bandwidth variation for Google Talk chat with the existing facilities on the web Moodle by using 1000 characters.

From the test results obtained, when measuring the performance of web Moodle with 5 client, the fastest loading time is when the bandwidth is 256 Kbps with a client whereas the longest loading time is when the bandwidth of 64 Kbps with 5 client is 19.192 s. From the measurement of QoS (Quality of Service) network with a maximum of 4 clients obtain the greatest throughput 62174.34 bps. Packet loss is the greatest value on the bandwidth 256 Kbps to 2 client that is 0.000762%. Duration of greatest value is in the bandwidth of 64 Kbps with 3 client is 1.248917 s. Based on the test throughput, packet loss and the duration is strongly influenced by the bandwidth and the number of clients.

Keywords: Moodle, Google Talk, QoS of network