ABSTRACT

Learning management system is a system which supports an electronic learning implementation (e-learning). However, even in learning model that applied contents system like LMS, the direct contact between the teacher and students is still needed. Moodle, one of LMS applications, has not have such application that enables this direct contact to be done. One application that can meet this need is video call application, which can be gotten either by commercial way or open source.

In this final project, the analysis of the implementation of video call application in a synchronization system of LMS which using LAN network configuration and variations of 64 Kbps, 128 Kbps, 256 Kbps, 384 Kbps, 512 Kbps, 1 Mbps, and 2 Mbps bandwidth have been done. Network parameters used in the implementation are packet loss, jitter, delay, throughput, time needed to synchronize, and MOS which is tested to seven audiences. The test has found that the value of throughput was decrease and packet loss was increase. Regarding from synchronization of 10.6 MB data in the integrated system, the longest time needed is 1919.04 seconds within 128 Kbps bandwidth, and the fastest is 75.28 seconds within 2 Mbps bandwidth. After all tests are conducted, it is concluded that the integrated system between video call and LMS synchronization can run well within minimum 1 Mbps bandwidth based on ITU-T.

Key words: Learning Management System, video call.
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