ABSTRACT

The rapid growth of information technology and the role of video becomes very important. Not only to communication, the human uses of video services is now also into the world of security services, one of them is CCTV over IP. Applications that can be used to build a network of CCTV over IP is Zoneminder. The advantages of this application is the user can enjoy additional features such as motion detection, recording etc

To build up a network of CCTV over IP, needs a good transmission medium. Broadband Powerline Communication (BPLC) is a new type of powerline communication (PLC) which can provide higher data rates than previous PLC system. The use of electricity networks that are already available can save costs and provide access broadband interconnection between devices. PLC technology utilizing frequency channels that are not used as the transmission frequencies, between 10 KHz to 300 MHz. In this final analysis is the result of the implementation of CCTV over IP on the BPLC network in O building Telkom University.

Results of analysis of the implementation of CCTV over IP on the BPLC network. found that the electrical phase difference, long transmission distance power cables, charging electrical devices, traffic loading and branching electrical network an impact on QoS and QoE of CCTV over IP network. The lowest network bandwidth acquired is 14.57 Mbps, which can be said that network is Broadband. The lowest Throughput is 338.4318406 kbps. The highest value of delay is 0.859581267 s, the value does not meet the standard of ITU-T G114 is <150ms but still within the ITU-T G.1010 standard is <10 s . packetloss contained in QoE measurement that is 0.814%. The value still on the QoS standards of ITU-T G114 and ITU-T G.1010. on the client side highest RTT value is 0.003722201 s, and also found the lowest throughput value is 1.0235 Mbps.

Key Word : *CCTV over IP*, Zoneminder *BPLC, PLC, QoS*