

## **ABSTRACT**

Limitations of the telecommunications infrastructure in Indonesia have led to the gap in ease of getting information. Broadband powerline may be one solution to these problems, because BPL allows communication of data over the power network grid that has been available up to the village level.

This thesis aims to analyze the performance of BPL networks when used for IPTV services as one of the alternative media in disseminating information. The study was conducted on broadband powerline network designed in the laboratory CnC Faculty of Electrical Engineering University of Telkom.

The results of the analysis showed that the addition of background traffic in the network QoS parameters that affect BPL measured. The largest delay is found on the computer client 14 that is 13,538 ms at 2 mbps but still at the standard recommended by ITU T. Imposition also affects jitter on the network, with the largest jitter is 7,244 ms on the computer client 2 when 40 mbps bitrate imposition. Throughput decreases with increase of traffic load on the network. Client 1 throughput was below standard since the imposition of 1 mbps, while on client 2 throughput was below standard since the imposition of 2 mbps. Recommended minimum throughput for video streaming is 1.15 mbps. In this study, the ratio of packet loss are measured at both the client is 0%, where no packets are lost during the measurement is made.

Keyword : broadband powerline. iptv