

## **ABSTRACT**

Multimedia application streaming such as IPTV, video streaming, audio streaming and so on are going to be a trend in IP network usage. Video streaming is one of the real time communication multimedia that using streaming process in video data packets transfer. IP network has real time and best effort delivery feature that impact on QoS lowering potential. Using wireless LAN (WLAN) network as a video streaming media access has been some thing commonly. In the other side, kind of bandwidth limitation always be a problem, this is happen because of using network as a streaming media could impact overload. Multicast technologi become a great solution for solving the network overload, because of its bandwidth efficiency feature in streaming data transfer.

In this final assignment research, would observe the video streaming system with multicast addressing method base on Internet Group Management Protocol (IGMP), that will be implemented on CV GLOBAL INDOTELEKOMUNIKA WLAN network. There are some research scenario will be done, such as analyze the impact of active user adding, both in low or busy network traffic, to a QoS quality and bandwidth condition. It will be done using some QoS parameter such as delay, jitter, packet loss and troughput.

From the result of measurement concluded by using the comparison of QoS parameter in network performance such as inter-arrival-packet delay ( $\delta$ ), delay jitter, packet loss, and throughput, generally the CV GLOBAL INDOTELEKOMUNIKA WLAN existing network does not support the video streaming service yet. This is looked from packet loss average that exceed the tolerate value. And then, the video output performance which has measured and analyzed using MOS measurement did not reach a satisfied result, which is the highest score is just 2,1333. So that, need doing some network optimizing, especially in hardware side.

**Keyword: video streaming, WLAN, multicast, IGMP**