

## **.ABSTRACT**

Metro Ethernet technology is one means for the creation of Next Generation Network (NGN). This technology has the ability to transfer data up to 10 Gbps. Its growth has been able to share with the data communication lines that require large bandwidth, such as Audio, Video Streaming, Online Gaming, and Distance Learning, and one of examples of digital video services is the IPTV. Television service was developed by one of the reasons demand for multimedia services that increasing.

In this final will be simulated Multicast Streaming IPTV service on Metro Ethernet networks and analyzed its performance. Simulations conducted to determine the performance of IPTV service on the Metro Ethernet network based on parameters that became a benchmark of the performance of that service. Peformansi emphasis on QoS parameters (*Delay, Jitter, Throughput* and *Packet Loss*).

In this research this time founded that the results of the performance of Multicast Streaming IPTV service in Metro Ethernet networks by looking at the parameters of Quality of Service (QoS) specifically delay, jitter, throughput, and packet loss. Where these QoS parameters greatly affect the number of users that where a growing number of users will affect the QoS parameters, although with a relatively small value, distance between the more distant regions will also affect the QoS parameters but not on the throughput and packetloss, and the existing background traffic maximum for IPTV service is 1 Mbps. Therefore, by knowing the performance of Multicast Streaming IPTV on Metro Ethernet networks, we can perform optimization of Metro Ethernet networks so that IPTV services can work more optimally.

Keyword : IPTV, Streaming, Metro Ethernet