

## ABSTRACT

Multicast is one of technologies which has important role in multimedia growth especially for real time application that involve large users. TV and radio broadcasting are applications that could use the multicast technology. Multicast networks need some supporting components such as server, client, multicast enable router and protocols. IGMP was used to communicate between client and multicast-enable router. The protocol is used to determine which multicast addresses are active in a network.

This final project will implement the purpose of multicast for real-time transmission on TV broadcasting through Local Area Network. It also analyzes the performance of multicast compared to the unicast and determines the threshold of multicast on TV broadcasting.

The implementation uses on Ipv4 networks. This implementation is divided into a server, client multicast enable router. The traffic measurement done using packet sniffer and searching the threshold with the help of the traffic emulator.

From the measurement we conclude that multicast have a better performance than unicast for a numbers of client. The threshold when the loss and jitter reach the number of 1,79% and 85,58 ms.