

## ABSTRACT

Nowadays, The development of Internet Protokol (IP) technology brings great effects for human lifes. Most of people wants to access internet, everywhere and anywhere, they exist although in mobile condition. This matter makes Mobile IP technology appeared. A technology that can serve their user with mobile device for moving and communicate between different network that still mantain the existence of connection from communication. This Mobile IP makes a new problem , handover. Handover process in Mobile IPv6 (MIPv6) needs much times, so it has not support standart service that has realtime characteristic like Voice Over Internet Protokol (VoIP). For supporting VoIP service , simple and fast handover method is needed. For solve that problem , there are addition protocol for Mobile IP like Fast Handover for Mobile IPv6 (FMIPv6).

In this final task was designed a Mobile IP network that support IPv6 with another application that run , VoIP. Parameters that been observed such as delay handover MIPv6 and FMIPv6 also QoS from VoIP , include interarrival packet delay, jitter, troughput, and packet loss.

The results from this task are delay handover MIPv6 and FMIPv6 also QoS from VoIP will be know. Handover delay latency from MIPv6 is ranged between 1,9 second and 2,5 second, eventhough handover delay latency from FMIPv6 ranged between 90,6 ms and 147,1 ms. From QoS result that been got, It can make a conclusion that FMIPv6 protocol has not support VoIP service . But, FMIPv6 performance is better than regular Mobile IPv6.

**Key words :** MIPv6, FMIPv6, handover, QoS, VoIP