

## **ABSTRACT**

As the times are so fast, today's technology is required to provide internet access anywhere, anytime, and mobile in real time and continuously. WLAN and mobile development IP.V-6 is expected to be a combination of networks that can provide these services to each user.

At this final task author WLAN network modeling with multiple AP (Access Point) that the user will move from one AP (Access Point) to another AP (Access Point), so that the handover process can be analyzed to see the soft-handover in mobile IP v.6 and analyze parameters during the process of soft the handover. Expected when the process of moving users from one AP (Access Point) to another AP (Access Point), the user can still access the internet and data communications continue running without interruption. This study focused more on the process of soft handover and any matters that could result in soft handover took place on the mobile IP.

On this final task, the author uses the Mobile IP.V-6 is considered to have many advantages compared to Mobile IP.V-4, either in security or auto address configuration. The method used is the author of the design and analysis of network simulations. Things that will be analyzed is the active access point, throughput, and delay. Simulator is used to author the OPNET Modeler network planning. Because of mobile IP, the simulation can be run according to scenario, the user can move from one AP (Access Point) to another AP (Access Point) and allow the soft handover.

Keywords: ipv6, ipv6 mobile, wlan, 802.11, OPNET