ABSTRACT

Information technology especially the internet has developed so rapidly, the number of data and multimedia services that can be accessed via the Internet to make its internet service providers compete to provide the best services for its customers.

The development of information technology, resulting in many emerging Internet Cafe (Warnet), the need for greater throughput and lower cost makes a lot of Warnet use more than one jalur Telkom Speedy. The problem that arises is when to use multiple lines Speedy using conventional mechanism, whereby the IP *Gateway* must be setting on the PC Client, less flexible if there is interference on lines or network configuration changes and have a low utility lines when not in use.

In this final project was the implementation of three-point method of load balancing Speedy with a case study on Atmosphere Networks, based on the measurement and analysis of the utility of each point of load balancing methods used then found that the Nth method, giving a highest average value of utility on all lines Speedy, with no limit on the bandwidth of the client, with a percentage value of 93,27%, compared with PCC and ECMP method with each percentage value of 92,81% and 83,57%.

Keywords: Load balancing, Speedy, MikroTik, ECMP, PCC, Nth