

## **ABSTRACT**

This thesis proposes a new technique of address translation called Automatic Network Address Adjustment (ANAA). ANAA allows computer that contains wrong IP configuration to be able to access the Internet without any modification. ANAA translates the packets generated from these computers. The translation starts from capturing the packet from the Ethernet network, verifying the packet information, correcting (if needed) the wrong information and then putting it back to the network.

The proposed method allows the computer from outside network (e.g. mobile computer) or the computer that mis-configures the network configuration, to use network immediately without reconfiguration. This technique also allows the use of private IP to solve the shortage of IP addresses.

The thesis includes the study and implementation of ANAA technique and testing result is given.