ABSTRACT

CSMA/CA is one of the access control protocols on MAC layer used in Wireless LAN network. This protocol has been developed because the existing protocol that used in Wired LAN, CSMA/CD is not appropriate if implemented in Wireless LAN network. In progress, there are several method on CSMA/CA, they are Basic CSMA/CA and RTS/CTS CSMA/CA. Both of them have different mechanism and performance.

This thesis analyze the mechanism of Basic and RTS/CTS CSMA/CA. Analysis was done toward throughput, average delay, number of average sending on simulation by applying several scenario with different number of terminal, payload length, and physical layer that appropriate with IEEE 802.11 standard.

The experiment prove that in wireless LAN network which consist of small number of terminal and average sending payload, basic protocol is better than RTS/CTS, whereas large number of terminal and average sending payload, RTS/CTS protocol is better than basic.