ABSTRACT

In computer data communication world, protocol organizes how a computer communicate with others. TCP (Transmission Control Protocol) is one of protocol that organize data communication in internet. TCP is used commonly by internet server like HTTP, FTP, and telnet. TCP Vegas and TCP SACK are TCP protocol which often used in internet.

TCP SACK adds fast recovery mechanism and SACK option after reducing window size because the loss packet, so can give performance repaired to regular TCP. Meanwhile TCP Vegas execute congestion avoidance control mechanism based on differences between *throughput expected value* and *throughput actual value* in order to more stablely.

In this final duty will search compatibility between TCP Vegas algorithm and TCP SACK. Will compare throughput performance and indeks fairness from both of TCP. Buffer method which used is DropTail and RED (Random Early Detection).

Analysis which observed are comparison of TCP Vegas with TCP SACK based on change of bandwidth, RTT. Buffer capacity, and propagation of delay in network to throughput and indeks fairness.

Key Word : TCP Vegas, TCP SACK, Drop-tail, RED (Random Early Detection)