ABSTRACT

Active Queue Management (AQM) is the process of signaling *TCP sources* from core routers with the objective of *managing queue utilization and delay*. *Active Queue Management (AQM) routers* will play a key role in meeting tomorrow's increasing demand for performance in Internet applications. Such applications include voice over IP (VoIP), class of service CoS) and streaming video where packet size and session duration exhibit significant variations. It is essentially a feedback control problem. Based on a recently developed dynamic model of *TCP's congestion-avoidance* mode, there are important several things which need to get attention., it relates key network parameters such as the number of TCP sessions, link capacity and round-trip time to the underlying feedback control problem.

For the this Final task will be analysed an alternative scheme of AQM using *Fuzzy Explicit Marking(FEM)* method supporting *explicit congestion notification(ECN*) by using Fuzzy Logic Controler (FLC). To see how far performance of this alternative AQM method, writer will compare performance from this method with method preexist that is Random Early Detection(RED) by using simulation from ns-2 and show real result from use of FEM in management of use and delay at queue in an TCP *best effort* network.

Keywords : AQM, queue, FEM, ECN, Fuzy Logic, RED