

Development of a Congestion Controller of Computer Network Using Artificial Intelligence Algorithm

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Abstract : Congestion in network occurs due to exceed in aggregate demand as compared to the accessible capacity of the resources. Network congestion will increase as network speed increases and new effective congestion control methods are needed, especially for today's very high speed networks. To address this undeniably global issue, the study focuses on the development of a fuzzy-based congestion control model concerned with allocating the resources of a computer network such that the system can operate at an adequate performance level when the demand exceeds or is near the capacity of the resources. Fuzzy logic based models have proven capable of accurately representing a wide variety of processes. The model built is based on bandwidth, the aggregate incoming traffic and the waiting time. The theoretical analysis and simulation results show that the proposed algorithm provides not only good utilization but also low packet loss.

Keywords : congestion control, queue management, computer networks, fuzzy logic

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