

- 1) How congestion can be control in Real Time Multimedia traffic?
- 2) How a node becomes self-aware if the link becomes congested on transmitted/selected path?
- 3) How node can select the next optimum path if the selected path becomes congested without exchanging route establishing packet?

The aim of the study would be to explore how congestion control can be reduced both at link and at intermediate node level in opportunistic networks so that the problem of packet loss or packet delay, retransmission can be reduced. The objectives of the research would be to exploring a Bayesian networks and estimation theory in details and then proposing a new method, technique, model or algorithm based on Bayesian theory and networks which can handle congestion issue with minimum delay and packet loss in best manner with good time and throughput at node level.

3. PROPOSED SOLUTION

In this research work Artificial Intelligence based Congestion Control Mechanism (AibCCM) has been proposed by creating a Bayesian networks. This technique will target uncertain domains like one could be found in opportunistic networks. In opportunistic networks with self-intelligence capability if somehow incorporated in a node to decide, calculate best optimum route for traffic dissemination on a congestion free links. Nodes identified in the network by archiving information of the other nodes in the network to cope with node and link level congestion issue via end-to-end and hop-by-hop congestion control mechanisms.

4. EXPECTED RESULTS

“A Model to Overcome Node Level Congestion in Opportunistic Networks” being proposed and validated in my Independent study 02 at SZABIST in my PhD studies. Model was simulated based on only IFQ and TTL parameters of packet droop along with a load balancing technique but after completion of this research study with the induction of artificial intelligence by creating We assume that the results after creating Bayesian networks will be much better in terms of packet loss, delay and throughput in comparison with results produced in independent study 02 and also results found in recent research work been done in handling congestion issue as found in literature review.

5. CONCLUSION

This research study will be focusing on that how artificial intelligence technique based on estimation/ probability theory could be helpful in achieving a better performance in terms of quality of service keeping in mind with less delay and droop rate could be achieved by forming a Bayesian networks so that congestion issue in opportunistic networks / (MANETs) could be handle efficiently and effectively in a pre-active manner.

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