Network coding is a way of improving performance in wireless networks by combining two or more packets to send together as a single packet. Two or more packets are combined together to form a single packet. The main goal of using network coding is to reduce bandwidth requirement. Wireless networks often suffer from various issues like collision, transmission errors etc due to broadcasting of signals. Network coding helps in reducing such issues and improving performance significantly. Various network coding schemes are implemented at physical layer, data link layer and network layer. This research paper introduces a novel network coding scheme TCP-NC – TCP with Network Coding at transport layer. TCP’s most widely deployed variant – TCP NewReno is used. Simulation is performed in NS 2.35. Scenario based wireless multihop networks are designed with different scenarios based on number of nodes, number of hops and type of network(poor or congested). TCP-NC shows a significant amount of improvement when used with the poor network.

Index Terms

Computer Science Wireless

Keywords

Network Coding, TCP, New Reno, Throughput, Packet Delivery Ratio