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# IMPROVING TCP/IP TRAFFIC SHAPING FOR REAL-TIME CONGESTION MANAGEMENT FOR EFFECTIVE PERFORMANCE IN MANET

**K ABDUL RASAK**

Research Scholar, Department of Computer Application,
Sri Satya Sai University of Technology & Medical Sciences, Sehore, M.P., India

## ABSTRACT

From emergency response to military operations, mobile ad hoc networks (MANETs) have shown to be a reliable and flexible method of wireless communication. However, owing to MANETs' inherent instability and scarcity of resources, guaranteeing QoS for real-time traffic is still a significant obstacle. This article provides a traffic shaping technique for the TCP/IP protocol suite as a network model, with a primary emphasis on real-time congestion management. The output of the flow determines the number of tokens in the buffer and the size of the bucket used for tokens in real time. The findings presented here show that the recommended strategies fare better in the case of heavy traffic congestion. The special difficulties presented by MANETs' dynamic topologies and few resources are examined in the context of congestion, a major barrier to attaining QoS.

*Keywords: Packet, Token, Receiver, Controller, Real-time.*