Abstract

This paper presents an analytical model based upon discrete time Markov chain analysis of receiver-initiated protocols for multi hop Ad hoc networks. Three-way receiver initiated
(RTR-DATA-ACK) scheme for collision avoidance in Ad hoc networks has many protocols with it. In the proposed model, the nodes are randomly distributed according to a two-dimension Poisson distribution with density $\lambda$. For the modeling, the effect of hidden terminals has been considered. As per the condition of saturation every node always has packet to transmit. The results show that the receiver-initiated collision avoidance scheme (proposed work) achieves higher throughput than the sender-initiated collision avoidance scheme for both the cases including short data packet as well as long data packet.

Reference

in Wireless Networks. Wireless Networks, 8, 249-263.

Index Terms

Computer Science Wireless

Key words

Adhoc networks Markov Chain
Receiver Initiated Protocols