Cross Layer based Optimal Path Selection Reactive Routing in MANETs

Abstract

In MANETs, routing is a complex task as many factors affect the network performance. The major factors in routing are node mobility, node energy and congestion in the wireless bandwidth limited channel and battery operated nodes with dynamic topology. A new routing protocol is proposed (OPS-AODV) to select an optimal path in MANET by including the node energy and congestion status in route selection process. A cross layer approach is used to address the issue of node mobility by monitoring the received node signal power (RNSP), which indicates the node movement with respect to another node. The RNSP is used to address the node mobility issue while energy and congestion metric are used in selecting optimal path between source and destination.

References


Index Terms

Computer Science Networks
Keywords

MANETs, AODV, Optimal Path Selection, OPS-AODV, RNSP.