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A PREEMPTIVE ROUTING FOR AD HOC NETWORKS TO CONSERVE BATTERY POWER

S. SUBBURAM AND P. SHEIK ADDUL KHADER

Abstract

In an Ad hoc network there exist frequent disconnection between nodes. The reason for disconnection is as each and every node is mobile and the topology and configuration changes often. So every normal node needs to take care of routing. One of the principal routing protocols used in Ad hoc networks is AODV (Ad hoc On demand Distance Vector) protocol. Whenever a pre-existing route breaks in AODV the nodes in a network try to find an alternative route to the destination. In course of finding the new route they waste a lot of control packets and the latency time incurred in finding the new route has a drastic effect on the efficiency of the communication. The existing routing algorithms of AODV initiate a new route discovery only after the link breaks. The major reasons for link breakage in AODV apart from mobility are signal strength (covers mobility, noise and fading), battery and congestion of packets at the node. In this work we try to predict the link breakage in AODV before it happens by monitoring the Battery power for link breakage and finding a new route. So reducing wastage of control packets and the time involved in discovering new route. So it can be assumed that if the properly algorithm is implemented successfully then the overall efficiency of the network would improve.

Keywords: AODV, Preemptive Routing, Battery Power, Warning Message.