Abstract

The Mobile ad hoc network (MANET) are infrastructure-less, self-organizing, rapidly deployable wireless networks, they are highly suitable for applications involving special outdoor events, communications in regions with no wireless infrastructure, emergencies and natural disasters, and military operations. Routing is one of the key issues in MANETs due to their highly dynamic and distributed nature. In particular, energy efficient routing is the most important design criteria for MANETs since mobile nodes will be powered by batteries with limited capacity. The routing mechanism is based on minimum hop counts, the distance between each pair of nodes becomes larger and hence higher transmission power is required for the communication. Power failure of a mobile node not only affect the node itself but also its ability to forward packets on behalf of others and thus the overall network lifetime. The low residual energy might be one of the reasons of route breakage. Also the mobility of nodes makes link failure and retransmission of packet. In this paper we have modified the Energy Conscious DSR protocol which has basic protocol Dynamic Source routing (DSR). The paper focuses on the mobility of nodes, low residual energy which is the cause of route breakage and packet retransmission, which get solved and communication is keep going without any interruption and
the network lifetime increases. We have validated our proposed protocol through ns-2. 34 and evaluated the performance of the networks by considering few energy metrics. We got the results as our modified ECDSR outperforms DSR and Ad-Hoc on demand Distance Vector (AODV) in performance analysis.

References


Index Terms

Computer Science Networks
Keywords
MANET  Energy efficiency  AODV  DSR  ECDSR.