Abstract

Existing reliable-oriented routing protocols computes link reliability based on the packet reception ratio and neglects impact of various parameters such as noise, shadowing, battery-lifespan, uncertainty and geographic locations. In this paper, we propose a Link Reliable Reactive Routing (LR3) protocol for WSNs to accomplish reliable and resilience to out-of-order transmission and path diversity at each hop. The log-normal shadowing model is used to estimate link reliability and a back-off scheme is used to determine delay. A new cost estimated to find forwarding nodes on mentor path that includes link reliability, delay, status of queue at forwarding node and packet advancement at the forwarding node. LR3 is simulated using NS-2 and results show that it outperforms other reactive routing protocols in terms of packet delivery ratio, latency, link reliability and data transmission cost[1] [2].


Index Terms

Computer Science   Networks

Keywords

Log-normal shadowing model, mentor node, forwarding node, packet advancement, link reliability