

Multipath routes are claimed to improve throughput, end-to-end delay and the reliability of data transport in wireless sensor networks (WSNs). However we have observed that multipath routing does not perform better than single path routing because the default parameter settings in 802.11 cause high rates of packet collisions. In this paper we report the results of a series of simulations based on a full-factorial experimental design. Our results show that congestion window size and retry limit are the key factors. Simulations with the tuned parameter values show significant improvement in both zone disjoint and node disjoint multipath routing schemes.