Abstract

This paper investigates the applicability of star, tree and mesh topology schemes for large scale Wireless Sensor Network (WSN) complying with IEEE 802.15.4 standard. The main focus of this work is to evaluate the performance of such network through simulation which is carried out via the discrete event OPNET simulator (version 14.5). The performance metrics of interest include throughput, end to end delay and packet drop rates. Performance comparison and analyses of different topologies have been made, and it is concluded that the selection of topology scheme depends on the application context.

References


Index Terms

Computer Science

Wireless

Keywords

WSN, OPNET, IEEE 802.15.4, Performance Analysis.