Abstract

Node localization is one of the major issues of wireless sensor networks that determines the physical positions of nodes. The location data is useful to many communication protocols such as packet routing and sensing coverage in wireless sensor networks. It has been a daunting task to develop a practical algorithm for node localization in an environment where sensor nodes are with limited power, low cost etc. In this paper a novel idea to conserve energy required in a localization algorithm by integrating it with duty cycled MAC protocol in wireless sensor network has been modelled. To model the idea the RSSI localization method and a sensor S-MAC protocol to regulate the control of energy wastages has been considered. Finally, every minute aspect of sensor network localization model including the topology, mobility, and channel and propagation schemes with scheduled transmission access, have been discussed in this paper.

References

- Ou Yang, Wendi Heinzelman, "Modeling and Performance analysis for S-MAC with Retransmissions in Multihop Wireless Sensor Networks;"

Index Terms

Computer Science
Wireless

Keywords