Abstract

In wireless sensor networks (WSNs), sensor nodes are vulnerable to false vote and false report injection attacks since they are widely deployed without infrastructure. Although some en-route filtering schemes can effectively detect the two attacks, these schemes need to set up various security factors before deploying the sensors in a sensor field. In this paper, we use a simulation model and find the proper security factors for a security scheme in a real-world simulation environment. We demonstrate that the scheme achieves better energy savings and detection power when the number of required message authentication codes (MACs) in a report is five and the number of detected MACs is two.

References

Discrete Event Modeling and Simulation of Probabilistic Voting-based Filtering to Find Proper Security Parameters in Wireless Sensor Networks


Index Terms

Computer Science Wireless

Keywords

WSN, Voting-based Filtering, Discrete Event Modeling