Abstract

The problem of guaranteeing Quality-of-Service (QoS) routing in wireless sensor networks (WSNs) with node mobility is a difficult problem, even without possible interference from external radio sources. Difficulties arise because node mobility can cause frequent network topology changes, communication channels can have high error rates, the jitter rate is high and several different applications can be sharing the use of the communication medium. In this paper we propose a reliable and robust QoS routing protocol for WSNs based on a Combined Weight (CW) Value. The CW is based on the QoS parameters link quality, residual energy and available bandwidth. In addition to this, we propose an adaptive rate control mechanism in order to avoid congestion losses. By simulation results, we show that our proposed protocol is reliable and robust when compared to existing routing protocol.

References

A Reliable and Robust QoS Routing Protocol for Mobile Wireless Sensor Networks

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