This paper presents a Power Control T-MAC protocol that combines the features from S-MAC and T-MAC protocols for Wireless Sensor Networks (WSN). This protocol has been proposed to reduce the energy consumption of a node. In WSN a node consumes energy in transmitting and receiving of data, listening transmissions of other nodes, and in sleep mode. Therefore, energy consumption of a node has been estimated by adding up the energy consumed in each of the above activity. This has been achieved by estimating the time spent in each activity by a node. The proposed protocol has been simulated using NS-2. The simulation results of Power Control T-MAC shows better energy savings as compared to T-MAC and S-MAC protocol.

Reference
An Analytical Model for Power Control T-MAC Protocol

- Massimo franceschelli & Ronald meester Cambridge University press 2007, Random Networks for Communication
- Minghao Cui, Violet R. Syrotiuk, “Time–space backoff for fair node throughput in Wireless Networks using power control”, Science Direct Ad Hoc Networks, Volume 8, Issue 7, April 2010

Index Terms

Computer Science
Neural Computation
Key words

Wireless Sensor Networks T-MAC S-MAC

Power control

Poisson distribution