

网络、通信、安全

LEACH协议的簇头多跳 (LEACH-M) 改进算法

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摘要 节能高效的实现路由转发是路由设计的一个关键点。总结了目前已有的无线传感器网络的传输路由模式, 发现早先提出的LEACH协议虽是无线传感网中的低功耗自适应分层路由算法, 但会造成簇头节点负载过重。成簇算法是传感器网络中减少能量消耗的一种关键技术。提出的是基于LEACH算法的多跳路由改进算法, 并在考虑簇头最优个数的选择下, 通过采用簇头之间的多跳算法达到减少能量消耗、延长传感网的寿命的目的。实验表明此方法有效。

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Improved algorithm of cluster head multi-hops based on LEACH

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Abstract

One of the key points of network routing design is power management. The paper summarizes the current transmitting routing model in wireless sensor networks, and finds that although the LEACH protocol is low power and adaptive lamination route algorithm, it might lead to overload of some cluster head nodes. Clustering algorithm is a kind of key technique used to reduce energy consumption. This article proposes a multi-hop routing improved algorithm based on the LEACH algorithm, and taking the optimization of the number of cluster heads into account, it can reduce energy consumption and prolong the lifetime of sense network through the use of multi-hop algorithm among cluster heads. Experimental result indicates it is effective.

Key words [Low Energy Adaptive Clustering Hierarchy \(LEACH\) protocol](#) [cluster head](#) [round](#) [cluster head multi-hops based LEACH](#)

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