WSN数据收集中移动**sink**的路径规划和簇头节点选取问题的综合研究

作 者：惠晓威, 刘彦每, 张颖

单 位：辽宁工程技术大学

基金项目：

摘 要：

针对较大规模的无线传感器网络通过多跳传输进行数据收集而引起的能量空洞问题，本文提出了一种基于移动sink的簇头节点数据收集算法（MSRDG），该算法基于图论原理，在满足时延性的条件下，综合考虑了普通节点到簇头节点路由和移动sink遍历路经选取的问题，构建了一条通过的簇头节点尽可能多的移动轨迹。通过NS-2仿真软件对算法的性能进行评估，结果显示出该算法能减少数据的多跳传输，降低无线传感器网络节点的能量消耗，延长网络寿命。

关键词：无线传感器网络；簇头节点；移动sink；路径规划；MSRDG算法

Comprehensive study on the problem of mobile sink path planning and the cluster head node selection in WSN data collection

Author's Name:

Institution:

Abstract:

For large-scale wireless sensor networks via multi-hop transmission for data collection and cause the energy hole problem, this paper presents a mobile sink based rendevous data gethering (MSRDG) algorithm, The algorithm is based on graph theory, to meet the conditions of delay, considering the common nodes to the cluster head node routing and mobile sink traversing path selection problem, Construction of mobile trajectory through a cluster head nodes as much as possible. Through the NS-2 simulation software to evaluate performance of the algorithm, results shows that the proposed algorithm can reduce data of multiple hops, reduce the energy consumption of wireless sensor network node, extend the life of the network.

Keywords: WSN;rendevous;mobile sink;Path planning；MSRDG algorithm

投稿时间：**2013-10-09**

查看pdf文件