

移动无线传感器网络中带有重叠分簇检测的节能路由策略研究

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摘要: 高效的路由策略可有效提升移动无线传感器网络的性能.传统的分簇路由策略忽略了网络的重叠分簇结构特征, 使得其对网络性能的提升有限.对此提出了重叠分簇检测方法, 准确检测网络中的重叠分簇节点, 进而设计了高效、节点的路由策略, 充分利用重叠分簇节点进行路由转发.结果表明, 相比传统的分簇路由, 所提机制有效提升了数据的投递率与网络寿命性能.

关键词: 移动无线传感器网络; 路由策略; 重叠分簇

Energy-saving Routing Strategy with Overlapping Cluster

Detection Method in Mobile Wireless Sensor Networks

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Abstract: Efficient routing strategy can effectively improve the performance of mobile wireless sensor networks (MWSN). Traditional clustering routing mechanisms ignore the overlapping cluster structure characteristic of the network, which lead to their poor network performances. An overlapping cluster detection method is proposed to accurately detect overlapping cluster nodes in the network. Moreover, an efficient and energy-saving routing strategy is designed by fully exploiting the advantage of overlapping cluster nodes. Simulation results show that compared with traditional clustered routing mechanisms, the proposed strategy obviously enhances the data delivery rate and network lifetime performance.

Key words: MWSN; routing strategy; overlapping cluster

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