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论文

一种Ad hoc网络中的协作路由方案及性能分析

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摘要
该文提出了一种新的Ad hoc网络协作路由方案，通过邻居节点的协同发射，多点接收及路径总功率的比较，形成一条多点协作的能量最小路径。在节点可以获知邻居节点相对位置的假设下，通过在路由请求报文中携带路径总功率和协作簇信息，分布式地实现了路由方案。仿真结果表明协作路由比传统非协作的路由能量效率有30~50%的改善，同时通过协作节点的选择，选择最有效的节点进行协同发射，在能量效率略有下降的同时，降低了协作控制的开销和计算的复杂度。

关键词 Ad hoc；协作路由；能量效率

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A Novel Cooperative Routing Protocols in Ad hoc Networks and Performance Analysis

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Abstract
In this paper, a novel cooperative routing protocol is proposed in Ad hoc networks. A minimal energy multinodes cooperative path is built with the cooperative transmission of neighbor nodes and comparison of total power consumption. Under the assumption that nodes can know the relative location of neighboring nodes, the distributive routing scheme can be implemented by carrying information about power consumption of route and cooperative cluster in Router Requirements (RREQ) packet. Simulation results show that the energy-saving performance can be significantly improved compared with traditional non-cooperative routing. Meanwhile, using the selection strategy of cooperative nodes, the control expense and complexity of computation can be reduced, trading off a little decline in energy-efficiency.

Key words Ad hoc Cooperative routing Energy-efficiency

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