

多源信息融合专刊

无线传感器网络中一种新的分布式定位方案研究

匡兴红, 邵惠鹤, 冯瑞

1. Department of Automation, Shanghai Jiao Tong University, Shanghai 200240, P.R. China

2. College of Engineering Science & Technology, Shanghai Fisheries University, Shanghai 200090, P.R. China

3. Department of Electrical and Computer Engineering, Fudan University, Shanghai 200433, P.R. China

收稿日期 2007-6-1 修回日期 2007-9-24 网络版发布日期 接受日期
摘要

Node localization in wireless sensor networks (WSN) is treated as a functional dual of target tracking from a novel perspective in the paper. Different from the traditional tracking problem in WSN, using the static location-ware node to estimate the moving target, the mobile node is used to help unknown nodes to accurately discover their positions. A new node localization scheme virtual beacons-energy ratios localization (VB-ERL) and its refinements for the WSN are presented. In the scheme, the mobile node moves in the surveillant field based on the Gauss-Markov mobility model and periodically broadcasts the information packets. Each static unknown node receives the virtual beacons and energy in its sensing range, and estimates its location by finding the intersection of a set of hyper-spheres. Simulation results show the proposed scheme is efficient.

关键词 [Wireless sensor networks \(WSN\)](#) [node localization](#) [virtual beacon](#) [energy radio](#)

分类号

扩展功能
本文信息
▶ Supporting info
▶ PDF(1418KB)
▶ [HTML全文](0KB)
▶ 参考文献[PDF]
▶ 参考文献
服务与反馈
▶ 把本文推荐给朋友
▶ 加入我的书架
▶ 加入引用管理器
▶ 复制索引
▶ Email Alert
相关信息
▶ 本刊中 包含“Wireless sensor networks (WSN)”的 相关文章
▶ 本文作者相关文章
· 匡兴红
· 邵惠鹤
· 冯瑞

A New Distributed Localization Scheme for Wireless Sensor Networks

KUANG Xing-Hong, SHAO Hui-He, FENG
Rui

1. Department of Automation, Shanghai