基于**ZigBee**的加权质心定位算法的仿真与实现

作　者：郜丽鹏, 朱梅冬, 杨丹

单　位：哈尔滨工程大学信息与通信工程学院

基金项目：

摘　要：

为了研究节点定位算法的实现方法，通过对无线电传播路径损耗模型的分析，结合具体环境的实验，得到信号传播的经验模型，利用加权质心定位算法，用信点对未知节点的不同影响力来确定加权因子，以提高定位精度。在对定位数据处理和分析的基础上，提出了选取三个RSSI最大的信标节点进行定位计算的方法一步改善了节点定位精度。仿真和实验结果表明，这种加权质心算法可应用于区域定位。

关键词：ZigBee；定位；加权质心算法；RSSI

Simulation and Implement of Weighted Centroid Localization Algorithm Based on ZigBee

Author's Name:

Institution:

Abstract:

To study an implement approach about nodes localization, it obtains signal transformation experiment model with the analysis of the model of radio wave propagation los and the experiment in a specific environment, then use a weighted centroid localization algorithm that uses coefficients, which are decided by the influence of beacons to unknown nodes, to prompt localization accuracy. Based on locating data processing and data analyzing, it provides the method of choosing the three maximum-RSSI bea for localization, in order to further improve localization accuracy. The result of the simulation and experiment indicates that this weighted centroid localization algorithm c used to area localization.

Keywords: ZigBee；localization；centroid algorithm；RSSI

投稿时间：**2009-08-18**