一种基于**RSSI**相似度的室内定位算法

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摘 要：

无线传感器网络中节点的位置信息在很多应用中具有重要意义。本文研究了实际环境中节点的RSSI的特性，为提高无线传感器节点定位的精度，提出了无线传感器节点在空间环境上的RSSI相似度概念，采用RSSI相似度作为权重因子，改进了加权质心算法。实验结果表明，改进后的算法具有更小的平均定位误差、更强的环境干扰鲁棒性。

关键词：无线传感器网络; 室内定位; RSSI相似度;加权质心定位

An Indoor Location Algorithm Base on RSSI-Similarity Degree

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Abstract:

In the wireless sensor network(WSN), the position information of the nodes is very important to many applications. The characteristics of RSSI in real environments are investigated in this paper. In order to improve the effects of RSSI error to WSN node localization precision, a conception of Node's RSSI-Similarity Degree in space environment is presented, which is used as weight factors to improve the Weighted Centroid Localization (WCL). Experimental results show that the proposed algorithm has a smaller average location error and stronger robustness to environmental disturbance.

Keywords: wireless sensor network; indoor location; RSSI-Similarity degree; weighted centroid localization

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