基于路径损耗模型参数实时估计的无线定位方法

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摘　要：

定位技术在无线传感器网络中越来越重要，许多应用需要对位置信息的测量尽可能精确.针对传统的定位算法中使用固定模型测距造成的误差较大的问题，本文提出了一种基于RSSI的动态调整信号传播模型的协作定位方法。该方法首先根据RSSI确定定位节点所在的最小子区域，再通过该区域内参考节点间的相互合作估算出当时的环境参数，根据真实情况自适应的调整模型参数，使测距更为准确，从而减小定位误差。仿真和实验结果验证了该方法提高了定位精度的可行性。

关键词：RSSI；测距；定位；环境参数

Wireless Localization Algorithm Based on Path Loss Model Parameter Estimated in Real-time

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Abstract:

Localization in wireless sensor networks gets more and more important, because many applications need to locate the source of incoming measurements as precise as possible. According to the problem that it it makes a major error by the use of fixed parameters for the measurement of distance, in this paper proposed an RSSI based cooperative localization algorithm by adjusting the signal propagation model dynamically . We determined the most minimal region where the location node was placed in, then estimated parameters of environment for the model to reduce positional error. From the simulation and experiment, we verify that the proposed algorithm can provide higher localization accuracy

Keywords: RSSI；distance measurement；localization；environmental parameters

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