URN etd-0407109-183704-215
Author yong-ming huang
Author's Email Address No Public.
Statistics This thesis had been viewed 83 times. Download 0 times.
Department
Year 2008
Semester 2
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title High-Accuracy Localization Method with Verification Mechanism for Unstable-Signal Sensor Networks
Date of Defense 0000-00-00
Page Count 37
Keyword
wireless sensor networks
unstable signal
localization
verification
RSSI

Abstract
Wireless sensor networks receive much attention in these few years due to its wide spectrum of applications. Localization is one of the significant techniques in the ubiquitous sensor networks, and most localization techniques nowadays apply RSSI-based ranging techniques to compute the location of the object in wireless sensor network. However, a wireless sensor network is of a fading-signal environment that comprises noises, and the noises cause RSSI to become unstable and lead to abrupt distance estimates. In this paper, we propose Verification-Based Localization Method (VBLM) to alleviate the effect of the unstable signal and provide the high-accuracy location estimates in wireless sensor environments. The basic idea of VBLM is to prune noisy signals in the localization process. In our method, the sensor node would use another neighboring beacon to assist to verify the quality of received signal under acceptable communication cost, and thus, the noisy signals can be removed to avoid increasing the error in the localization. The experimental results show that VBLM indeed reduces the localization error in the unstable signal sensor networks than other localization methods.
Advisory Committee Chao-Chun Chen - advisor

Files No Any Full Text File.
Date of Submission 2008-06-12