Abstract

Indoor Location Finding Systems (ILFS) have gained tremendous interest in the last few years because the indoor environments are growing larger and more complex continuously. ILFS are based on communication networks, and the fast growth of these networks had a significant and useful impact on developing these systems, where the variety of communication networks was reflected upon the manufacturers of ILFS and led to a large number of algorithms, techniques and measuring metrics to be used for ILFS.

In this paper, practical implementation of some of the well-known ILFS that can provide reasonable accuracy and avoid the complexity and high-cost constraints were achieved. Two systems were built, the first system is RF scene analysis based system which uses the cluster. The adopted platform was the regular Smartphone. The results show that the K-NN, WK-NN, COP, and RPM easily implement in the mobile platform without any significant degradation of the performance of the mobile. Around 33% of the CPU usage and only 1.2 % of RAM usage can be considered acceptable.
References


Index Terms

Computer Science  Information Systems

Keywords

Mobile, Indoor Location Finding System (ILFS) ,K-NN.