ABSTRACT

In this short paper, we introduce our ongoing work MaWi, a hybrid indoor localization scheme based on magnetic field and WiFi Fingerprints.

Keywords

WiFi fingerprinting,Magnetic Field,RSS

INTRODUCTION

Nowadays indoor localization is an often considered topic and despite numerous proposals research is still going on. At present with the spreading use of the Internet, Wi-Fi is no longer without a place. A group of possible localization methods are based on WiFi. They are economical, adaptation is easy, there is no need of any infrastructural hardware, the coverage zone is quite high, and the moment of signal translation being better than other methods suggested. We will create a hybrid model using various algorithms. And also we decided to take advantage of the earth's magnetic field. The proposed is based on the so-called fingerprinting method.

DETAILS OF THE METHOD

There are two states of the fingerprinting method. These are “offline training phase” and “online determination phase”. During the offline training phase in the step reference points are selected. WiFi received signal strength (RSS) values that taken in a certain period are recorded into the database. The RSS values are taken from the Access Points (APs). During the Online Determination Phase, RSS information of the mobile user to an unknown place. And we compare with the information stored in the database before. Later to define the user's location we use the embedded algorithm in the hardware. In addition to that, we will record database with the values of RSS and values coming from magnometer.

REFERENCES