

## **FAMWIFI AND FAMWIFI-MOBILE: RELIABLE AND USER FRIENDLY SURVEYING FOR IEEE 802.11 BASED INDOOR LOCALIZATION**

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Volume: **Special Issue on MCCT'14**

Pages: **57-68**

Date: **December 2014**

### **Abstract:**

Indoor localization is quite a popular research area of this decade and for that a lot of research is being carried out for the improvements of indoor localization based on IEEE 802.11 networks as it reduces the device dependency and the requirement of dedicated localization devices. Instead it supports the already deployed Wi-Fi network for the location estimation. One of the most time consuming and labour required part of wireless local area network (WLAN) based positioning is the collection of fingerprints in offline mode. Fingerprinting involves the site surveying for the received signal strength indicator (RSSI) values at different locations within an indoor site. In this paper a software solution both on windows desktop client and android mobile clients has been proposed that will facilitate surveying the indoor region for the localization based on Wi-Fi fingerprinting. Different site surveying software are available in the market but they are more linked with wireless planning but are not suited for localization applications and features are not fully supportive for the fingerprinting phase. The developed sampling software fingerprinting and monitoring of Wi-Fi (FaMWIFI) and FaMWiFi-mobile provide fully automated and flexible features along with the indoor floor maps to better log and visualize RSSI values for the localization applications.

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