Summary of my project

Mobile services requiring the user locations help operators customize their advertisement to subscribers. Wi-Fi localization is motivated by its accuracy and cost effectiveness compared to the global positioning system (GPS). Thus, indoor mobile tracking has gained tremendous attention to better match the advertisement to the location of the mobile user. In 60GHz WiFi, the tracking is coordinating the location estimation of an entity is susceptible to error because of the presence of obstacles and humans. We propose to estimate the mobile user location through a learning algorithm which exploits a path loss with shadowing model and the Received Signal Strength Indicator (RSSI) measurements. Our proposal adaptively estimates the parameters of the model through RSSI measurement before applying the fingerprinting technique. As the indoor environment changes, our learning algorithm computes the model parameters to improve the accuracy of the fingerprinting.