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Abstract

Indoor localization and tracking systems are harvesting more attention from the researchers. Recently, several approaches for localization systems have been proposed that use the sensors which are available on smartphones. In this paper, a new filtering approach based on Hidden Markov Model (HMM) techniques to enhance the accuracy of the localization system is presented. The proposed approach filtered out the undesirable Received Signal Strength (RSS) values which affect the accuracy of the system using the hidden states. The proposed approach helps in the direction and the distance estimation. The results of the proposed approach show a significant improvement in terms of distance estimation and the filtering of the RSS values.