Abstract

The important tasks in a wireless sensor network such as routing, target tracking are highly dependent on the location of a sensor node. Hence localization becomes an essential criterion in wireless sensor networks. Higher the localization accuracy better is the performance of the sensor network as a whole. Traditional mathematical algorithms can be used for localization. But these algorithms do not give very high localization accuracy. Genetic algorithm is proven to be effective in searching a solution space and hence can be modeled for the localization problem in Wireless Sensor Network (WSN). The strategy used in this paper for localization uses two phases. The first phase uses a traditional range free localization algorithm based on mobile anchor to estimate the location of a sensor node roughly. The second phase is a post optimization phase that uses Genetic algorithm which increases the accuracy of localization.

References


Error Minimization in Localization of Wireless Sensor Networks using Genetic Algorithm

Index Terms

Computer Science Wireless

Keywords

Wireless Sensor Networks Localization Mobile Anchor Post Optimization Genetic Algorithm