

Localization in Wireless Sensor Networks using diversity for multipath effects mitigation

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Abstract

Localization of nodes in wireless sensor networks is essential in several applications. In this work we investigate the effect of antenna height in multipath propagation for outdoor environments. To this end, two localization algorithms are used. The first one is based on least square minimization of measured distance obtained from a channel model. The second one is based on weighted centroid method. Some simulated and experimental results are presented. In addition, we propose the utilization of frequency diversity to mitigate multipath propagation effects.