Abstract

A channel model is introduced which considers shadowing fading on coverage probability for underwater sensor networks using electromagnetic signals. A model for finding the probability of detection and coverage using log normal shadowing fading has been derived. A comparative study between the sensing channel model and existing model for terrestrial sensor networks is also presented. It is observed the introduced sensing channel model uses far less number of sensors for coverage of underwater networks in comparison to terrestrial networks.
Coverage Probability using EM waves for UWSN in Shadowing Environment

17. A.Shamma, A.Shaw,S.Saman “Propagation of Electromagnetic Waves at MHz Frequencies through Seawater". IEEE Transactions on Antennas and Propagation; 2004

Index Terms

Computer Science Networks
Keywords

Coverage probability, detection probability, shadowing, fading, underwater sensor networks