**A Probabilistic Source Location Privacy Protection Scheme in Wireless Sensor Networks**

**Abstract:**

. With the recent developments of Wireless Sensor Networks (WSNs), computing and communication have experienced huge advancement. Meanwhile, security has not received the same attention to go along with such developments. In this paper, we focus on the source location privacy problem in WSNs, a hot research topic in security, and propose a probabilistic source location privacy protection scheme (PSLP) for WSNs. A more powerful adversary, which can use Hidden Markov Model (HMM) to estimate the state of the source, is considered in this study. To cope with this type of adversary, phantom nodes and fake sources, which are responsible to mimic the behavior of the source,are utilizedtodiversify theroutingpath.Then, theweight of each node is calculated as a criteria to select the next-hop candidate. In addition, two transmission modes are designed to transmit real packets. The simulation results demonstrate that the proposed PSLP scheme improves the safety time without compromising the energy consumption.

**SYSTEM REQUIREMENTS:**

**HARDWARE REQUIREMENTS:**

* System : Pentium Dual Core.
* Hard Disk : 120 GB.
* Monitor : 15’’ LED
* Input Devices : Keyboard, Mouse
* Ram : 1 GB

**SOFTWARE REQUIREMENTS:**

* Operating system : Windows XP/UBUNTU.
* Implementation : NS2
* NS2 Version : 2.28
* Front End : OTCL (Object Oriented Tool Command  Language)
* Tool : Cygwin (To simulate in Windows OS)