

## International Journal of Computer Science and Mobile Computing



A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X

*IJCSMC, Vol. 3, Issue. 3, March 2014, pg.1139 – 1148*

### **RESEARCH ARTICLE**

# **A New Approach for Key Forwarding Scheme in WSN Using Mobile Sink**

**E.Revathi<sup>1</sup>, C.Darwin<sup>2</sup>, G.Vivitha<sup>3</sup>**

<sup>1</sup>(Assistant Professor, Department of Computer Science and Engineering)

<sup>3</sup>(PG Scholar, Department of Computer Science and Engineering)

<sup>1,3</sup>(P.S.R.Rengasamy College of Engineering for Women, Sivakasi, Tamil Nadu, India)

<sup>1</sup>(E-mail: e.revathisri@gmail.com), <sup>3</sup>(E-mail: vivithasri86@gmail.com)

<sup>2</sup>(Assistant Lecturer in Information System Networking Engineering, St. Joseph university, Tanzania)

<sup>2</sup>(E-mail: cdarwin2006@gmail.com)

*Abstract-A dynamic en-route filtering scheme is to address both false report injection attacks and DoS attacks in wireless sensor networks. In our scheme, sensor nodes are organized into clusters. Each legitimate report should be validated by multiple message authentication codes (MAC), which are produced by sensing nodes using their own authentication keys. The authentication keys of each node are created from a hash chain. Before sending reports, nodes disseminate their keys to forwarding nodes using Hill Climbing approach. Then, they send reports in rounds. In each round, every sensing node endorses its reports using a new key and then discloses the key to forwarding nodes. Using the disseminated and disclosed keys, the forwarding nodes can validate the reports. Each node can monitor its neighbors by overhearing their broadcast, which prevents the compromised nodes from changing the reports. Report forwarding and key disclosure are repeatedly executed by each forwarding node at every hop; until the reports are dropped or delivered to the base station. We assume that the topologies of wireless sensor networks change frequently either because sensor nodes are prone to failures or because they need to switch their states between Active and Sleeping for saving energy. This paper also proposes a framework to maximize the life time of WSN by using mobile sink. Each node does not need to send the data immediately as it becomes available. Instead the node can store the data temporarily and transmit it when the mobile sink is at the most favorable location for achieving the longest WSN lifetime.*

*Index Terms-- Data reporting, Delay-tolerant applications, En-route filtering scheme, Lifetime maximization, Mobile sink, Wireless Sensor network*

Full Text: <http://www.ijcsmc.com/docs/papers/March2014/V3I3201455.pdf>