M.Vinoth *et al*, International Journal of Computer Science and Mobile Applications,
Vol.2 Issue. 2, February- 2014, pg. 30-37 **ISSN: 2321-8363**

# Efficient Routing from Multiple Sources to Multiple sinks in Wireless Sensor Networks

**Mr. M.Vinoth[1], Ms. N.Radhika[2]**

[1]PG Student, [2]Assistant Professor, Department of Computer Science and Engineering,

PRIST University, Trichy District, India

[1] vino.fb@gmail.com

**ABSTRACT**

The multi hop routing in wireless sensor networks (WSNs) offers little protection against identity deception through replaying routing information. An adversary can exploit this defect to launch various harmful or even devastating attacks against the routing protocols, including sinkhole attacks, wormhole attacks, and Sybil attacks. The situation is further aggravated by mobile and harsh network conditions. Traditional cryptographic techniques or efforts at developing trust-aware routing protocols do not effectively address this severe problem. To secure the WSNs against adversaries misdirecting the multi hop routing, we have designed and implemented TARF, a robust trust-aware routing framework for dynamic WSNs. Without tight time synchronization or known geographic information, TARF provides trustworthy and energy-efficient route. Most importantly, TARF proves effective against those harmful attacks developed out of identity deception; the resilience of TARF is verified through extensive evaluation with both simulation and empirical experiments on large-scale WSNs under various scenarios including mobile and RF-shielding network conditions. Further, we have implemented a low-overhead TARF module in Tiny OS; as demonstrated, this implementation can be incorporated into existing routing protocols with the least effort. Based on TARF, we also demonstrated a proof-of-concept mobile target detection application that functions well against an antidetection mechanism.

**Index Terms—Wireless sensor networks, routing protocols, security**

Full Text: www.ijcsma.com/publications/february2014/V2I209.pdf