

## 1805888093 - An Anonymity-Based Secure On-Demand Routing for Mobile Ad Hoc Networks

**Authors :** M. Gunasekaran and K. Premalatha

**Abstract :** Privacy and Security have emerged as an important research issue in Mobile Ad Hoc Networks (MANET) due to its unique nature such as scarce of resources and absence of centralized authority. There are number of protocols have been proposed to provide privacy and security for data communication in an adverse environment, but those protocols are compromised in many ways by the attackers. The concept of anonymity (in terms of unlinkability and unobservability) and pseudonymity has been introduced in this paper to ensure privacy and security. In this paper, a Secure Onion Throat (SOT) protocol is proposed to provide complete anonymity in an adverse environment. The SOT protocol is designed based on the combination of group signature and onion routing with ID-based encryption for route discovery. The security analysis demonstrates the performance of SOT protocol against all categories of attacks. The simulation results ensure the necessity and importance of the proposed SOT protocol in achieving such anonymity. Keywords: Routing, anonymity, privacy, security and MANET.

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**Conference Title :** ICEP 2014 : International Conference on Electronic Publications

**Conference Location :** journal city, WASET

**Conference Dates :** November 23-23, 2014