

# Cluster Based Routing Algorithm to Enhance Energy Efficiency and Security in Multicast Ad-Hoc Networks

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*Abstract* – An Ad-Hoc network is a multi-hop wireless network where all nodes cooperatively maintain network connectivity without a centralized infrastructure. If these nodes change their positions dynamically, it is called a mobile ad-hoc network (MANET). Since the network topology changes frequently, efficient adaptive routing protocols such as AODV, DSR are used. As the network is wireless, security becomes the major issue in Mobile Ad hoc Networks. Recently many studies have focused on designing mobility based multicast routing protocols for wireless mobile ad hoc networks (MANET) on the assumption that the energy of host is an important parameter to be considered. Some of the attacks such as modification, fabrication, impersonation and denial of service attacks are due to misbehaviour of malicious nodes, which disrupts the transmission. In this Synopsis we proposed an efficient secure AODV routing protocol. Our proposed routing algorithm will provide a better level of security and performance than existing works. The results parameters will show in terms of improvement of the network performance, in terms of throughput, Network lifetime, device arrangement and end to end delay for the proposed secure & efficient routing protocol.

*Keywords* – MANET, AODV, DSR, Throughput, Network lifetime.