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# An Ant Colony Optimization Algorithm for the Mobile Ad Hoc Network Routing Problem Based on AODV Protocol

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## Abstract:

In this paper, we present a modified on-demand routing algorithm for mobile ad-hoc networks (MANETs). The proposed algorithm is based on both the standard Ad-hoc On-demand Distance Vector (AODV) protocol and ant colony based optimization. The modified routing protocol is highly adaptive, efficient and scalable. The main goal in the design of the protocol was to reduce the routing overhead, response time, end-to-end delay and increase the performance. We refer to the new modified protocol as the Multi-Route AODV Ant routing algorithm (MRAA).

## Keywords:

Mobile Ad-hoc Network, Routing, Ant Colony Optimization.

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