Abstract

Ant Colonies have emergent problem solving nature like food foraging of Ants etc. Such problem solving nature of Ant Colonies have inspired emergence of efficient routing algorithms, especially in Ad Hoc Wireless Networks (AWN). They get inspiration from Ants which use simple rules with no direct communication and finds the shortest path by sensing the chemical called Pheromone. Ant Colony Optimization (ACO) is one such routing algorithm. ACO is Agent based routing algorithm and such agent based routing algorithms provide adaptive and efficient utilization of resources in a dynamic environment and also cater for load balancing and fault management. However there are few issues with ACO to be addressed while adapting ACO for routing on AWN. One of the Major issues is load balancing due to a problem called Stagnation. Stagnation occurs when all the packets starts travelling on the optimal path and loses packets due to congestion. There are many techniques adopted in ACO to alleviate this problem. This paper focuses on study of different techniques to address the stagnation problem.

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