Abstract

Flooding is a phenomenon used in adhoc networks to get the information about the other nodes in the network. Whenever the topology in adhoc network changes the node has to perform the flooding technique to get the shortest path for neighborhood nodes. By using this technique, the information seeking packets from the source nodes are sent to all the other nodes in neighbor to get the information regarding the different routing paths and the routing distances for the other nodes. Ant algorithm is one of the best approaches to get the shortest path of the neighborhood nodes. The shortest path is get by using flooding technique in ant algorithm but there is a problem, when the changes in the network are frequent & dynamic, for each & every change, the node has to perform flooding to get the shortest path which give rise to the problem of congestion & decreases the throughput. Both of the problems results in the increase of end to end delay. This motivates the need of clustering technique to handle such problems. The present work describes that the whole network nodes are divided into clusters. So rather then using the flooding technique for all the neighbor nodes, the flooding is used only among the clusters which reduces the network congestion and results in the increase of throughput & decrease in the end to end delay.
An Optimized Ant Colony Algorithm to Reduce the Impact of Flooding using Clustering in Ad Hoc Networks

References

- Hussein O., Saadawi T., "Ant Routing Algorithm for Mobile Ad-hoc Networks (ARAMA)*

Index Terms

Computer Science
Algorithms

Keywords

Flooding  Ant  Clusters.