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Survey Paper on Routing in MANETs for Optimal Route Selection Based on Routing Protocol with Particle Swarm Optimization and Different Ant Colony Optimization Protocol

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- Priti Swapnil Rathi (1) Email author (pritirathi2@gmail.com)
- C. H. Mallikarjuna Rao (1)

1. Gokaraju Rangaraju Institute of Engineering and Technology, , Hyderabad, India

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Abstract

MANETs is one type of network which contains many free nodes. The nodes can be any mobile device or it can be a particle in terms of swarm optimization (PSO). PSO technique looks like a difficult mechanism, but practically it is having very easy, simple, and direct calculations for finding the optimal route to reach to the destination. The calculation in PSO depends on the swarm which is very close for the nodes. It finds out the optimal solution from the search space. PSO runs through the various iteration level gets applied on different nodes with different parameters for finding best, very nearby solution for destination nodes to send data. In MANETs, nodes can act as a sender, receiver, or router. Also, they can dynamically change their location from one place to other place. This dynamic change in the movement of the nodes structure makes the routing more difficult. It results into route disenchantment in entire route detection delivery method owing to information loss as well as communication overheads, makes difficulty to send the data to the destination node, creates various problems for finding the optimum way between the nodes for transferring data to the destination node. So, by using PSO, we need to make the improvement in the routing because of its mobility nature which depends on the network. The objective of the paper is compared various routing protocols which are used for data sending in MANETs and comparing them with the PSO algorithm used in MANETs. Swarm knowledge-based steering calculation will

additionally encourage for particular nature of specially appointed system and will beat in a genuine situation, necessities condition and will change and reproduce to get a productive and fruitful steering convention for MANETs.

Keywords

MANETs   PSO   Search space   Continuous solution   Honeybee
Swarm intelligence technique (SI)   Ant colony optimization technique (ACO)
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