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IACOP - Route Optimization in Wireless Networks Using Improved Ant Colony Optimization Protocol

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Abstract : Wireless networks have gone through an extraordinary growth in the past few years, and will keep on playing a crucial role in future data communication. The present wireless networks aim to make communication possible anywhere and anytime. With the converging of mobile and wireless communications with Internet services, the boundary between mobile personal telecommunications and wireless computer networks is disappearing. Wireless networks of the next generation need the support of all the advances on new architectures, standards, and protocols. Since an ad hoc network may consist of a large number of mobile hosts, this imposes a significant challenge on the design of an effective and efficient routing protocol that can work well in an environment with frequent topological changes. This paper proposes improved ant colony optimization (IACO) technique. It also maintains load balancing in wireless networks. The simulation results show that the proposed IACO performs better than existing routing techniques.

Keywords : wireless networks, ant colony optimization, load balancing, architecture
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