A Novel Predictive and Non-Predictive Cooperative Model for Routing in Ad Hoc Networks

Abstract

Ad hoc networks are formed by intermediate nodes which agree to relay traffic. The link between nodes is broken when a node rejects to relay traffic. Various parameters like depreciation in the energy of a node, distance between nodes and mobility of the nodes play a vital role in determining the node's rejection to relay traffic. The objective of this paper is to propose a novel model that identifies the cooperative nodes forming stable routes at the route discovery phase. The weight factor of the different parameters decides the varied type of networks where the proposed model can be applied. Hence, an Artificial Neural Network based non-deterministic generic predictive model is proposed to identify the varied types of networks based on the weight factor. This study has been substantiated by simulation using OMNET++ simulator. We are sure that this paper will give a better solution to identify cooperative nodes thereby improving the performance of the network.

References

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**Index Terms**

Computer Science  
Wireless

**Keywords**

Ad hoc Networks  cooperative behaviour  relay traffic  artificial neural network  non-deterministic

OMNET++ simulator.