Abstract Details

Title: An ACO based Routing Protocol for VANET

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Abstract: The vehicular ad-hoc network (VANET) is an instance of MANET that establishes wireless connection between cars in the road network. The main characteristic of VANET system can be summarized as high dynamics, predicable mobility, large scale, no power limitation etc. It is very difficult to maintain communication between the vehicles in VANET system due to their high mobility and which is mainly depends on the routing protocols. In this work, we propose a routing protocol for VANET system namely, Cluster Based Ant Colony Optimization (CBACO) which combine the characteristic of clustering and bio-inspired technique, based on real time interaction of ants known as the Ant Colony Optimization (ACO). Clustering the network reduces network overhead, redundant message exchange and the randomized behaviors of the artificial ants displayed a high efficiency in packet delivery to the nodes available in network with less latency. To realize the efficiency of CBACO in VANET System, the MATLAB-R2014a simulator is used. Hence, in this paper we tried to contribute in the improvement of Intelligent Transport System (ITS) in VANET technology.

Keywords: VANET, MANET, CBACO, ACO, ITS.