An Enhanced Vehicular Ad Hoc Routing Protocol for City Environments

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Abstract

Vehicular ad hoc networks are more helpful in providing road safety and many other commercial applications. As routing plays very important role in VANET applications because it has to handle efficiently rapid topology changes. The most recent routing protocols are very useful in city environment but they cause end to end delay in some cases. In this paper, we propose a new technique for routing in VANETs (ERP) by applying position based routing strategy with the consideration of nodes moving direction, and predicable mobility in city environment. It consists of two modules (1) Dynamically selecting the junctions through which the packet must pass to reach the destination and (2) applying efficient routing by keeping two hop neighbors information to forward packet between two junctions. Simulation results show that ERP performs better in terms of increased packet delivery ratio as well as decreased average end to end delay against GyTAR.