Abstract

Vehicular Ad-hoc Networks (VANETs) where vehicles are described as the moving nodes, is a subclass of Mobile Ad-hoc Networks (MANETs) in which moving nodes has the potential of self-organization without need of fixed infrastructures. VANET provides road safety, traffic control management and spreading the important information to drivers of the moving vehicles in highly mobile environments. Various safety and non-safety applications provided in time-critical situations, high node density and varying mobility distinguishes VANETs from other wireless networks. Routing protocols for MANETs are not suitable in VANETs but position based routing protocols are much suitable. In this paper, we describe the essentials of VANETs and elaborate various routing protocols mostly position based routing protocols with preference to border nodes and compare the existing protocols by considering some simulation criteria.
characterized by network size, number of nodes and time to simulate the network using the NS2 simulator and evaluated the performance of routing protocols and compute the results in terms of packet delivery ratio, end to end delay, throughput and describe which protocol gives the better results.

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Index Terms

Computer Science
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Keywords

VANET  MANET  NS2  RSU  IVC  V2V  V2I  Routing Protocols  network simulation