A Cluster-based Highway Vehicle Communication in VANET

Abstract

The last few years VANETs have received several ideas related to safety as well as non safety applications for security enhancement and communication methods. In this paper a new technique is proposed for highway vehicle communication, taking the simple highway model for efficient communication among the vehicles. A cluster based vehicle model has been proposed for vehicle communication; the proposed model has applicability in the highway road. This paper focuses on the development of clustering technique, based on the vehicle density, speed.
and position of the vehicles. The proposed cluster technique is based on the vehicle density on the highway road; RSU is placed on the highway every 3km to 5 km. The cluster head is elected by comparison of each vehicle speed and position of the vehicles. The cluster head is to transfer the traffic related information's like warning messages and alert messages that are frequently sent to the other vehicles. The cluster head switching technique is proposed technique that is if the new vehicle speed is greater than the cluster head than the new vehicle is elected as the cluster head. The new cluster head is transferred messages, warning alerts to the RSU for efficient communication and to avoid the delay overhead.

References


Index Terms

Computer Science
Communication
Keywords
Cluster  Delay Overhead  Obu  Rsu  Vanet.