Abstract

The Vehicular Ad-Hoc Network (VANET) is a subset of Mobile Ad-Hoc Network (MANET). In this technology moving cars are used as nodes to create a mobile network. Every participating car in VANET is turned into a wireless router or node and is allowed to connect and create a network with other such nodes and the ROAD SIDE UNITS (RSUs) called the Access Points (APs). Message passing through wireless network is the only possible way of communication among these moving nodes. Various clustering algorithms have been suggested by researchers for message passing. In a VANET scenario the timely delivery of useful messages is of as much importance as receiving those messages is. This can be achieved by decreasing the number of messages exchanged in the network. For this a hybrid scheme is suggested, in which the Access Points (AP) are made the Cluster Heads (CHs) which are further connected to routers that store the information regarding the nodes. Making the APs as CHs eliminates the CH selection process which decreases the number of messages passed and hence reducing the interference and delay in message delivery caused by the flooding of unnecessary messages.
received to a node.

References

1. Reducing Interferences in VANETs by Dmitry Zelikman and Michael Segal, Senior Member, IEEE.
2. A new stability based clustering algorithm (SBCA) for VANETs by Ahmed Ahizoune, Abdelhakim Hafid at Network Research Lab, University of Montreal, Canada.

Index Terms

Computer Science    Wireless

Keywords

Vehicular Ad-Hoc Network (VANET), Interference Reduction, Intelligent Transportation System
(ITS), Cluster Head (CH), and Access points (AP), nodes, cars, message passing routers.