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BAGALKOT
2008-2009

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A Project Report On

"MULTI- AGENT BASED DATA DISSEMINATION IN VEHICULAR AD-HOC NETWORK (VANETs)"

(Sponsored by KSCST Bangalore)

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ABSTRACT

Vehicular ad- hoc networks(VANET's) are an envision of the intelligent transportation system (ITS) .vehicles communicate witch each other in two ways: (1) Inter-vehicle communication (2) Vehicle to roadside communication. VANETs are based on short range wireless communication between vehicles. Unlike infrastructure –based networks such as cellular networks, these networks are constructed on the fly(self organising. VANETs are special case of mobile ad-hoc networks(MANETs).The key differences as compared to MANETs are following: Components building the network are vehicles, restricted vehicle movements, high mobility and time varying vehicle density.

Data dissemination can be defined as broadcasting information about itself and the other vehicles it knows about. Each time the vehicle receives information broadcast by another vehicle, it updates stored information accordingly, and differs forwarding the information to the next broadcast period, at which time it broadcast its updated information. The dissemination mechanism should be scalable, since the number of broadcast messages is limited, and they do not flood the network.

VANET Characteristics like high speed node movement, frequent topology change and short connection life time especially with multi hop paths need some typical data dissemination models for VANETs. This is because topological transmission range to needs to maintain a path from the source to the destination but the path expires quickly due to frequent topology changes.

Software agent is a piece of software that acts for a user or other programme in a relationship of other agency. The idea is that the agents are not strictly invoked for a task, but activate themselves. If more number of different agents involved for a single task, then the system is said to be multi agent system. This project proposes multi agent system based data dissemination in VANETs.