Chain-based Data Dissemination in Vehicular Ad-hoc Networks (VANETs)

ABSTRACT

VANETs have made a great evolution in vehicular systems, where their main purpose is maintaining the security of drivers on the road. Thereby, several standards (i.e. IEEE 802.11p and IEEE 1609.4) are used for this purpose. These protocols have defined several schemes that can be used to manage one control channel (CCH), where safety packets are broadcasted, and six service channels (SCHs) are used to transmit data packets. However, many applications of these schemes still are not defined. Dynamic time allocation between CCH and SCH is one of those applications. Here, the need of dynamicity can be seen when the vehicle density is low (e.g. in rural areas), a portion of the allocated time for safety packets can be used to transmit data packets on SCHs without losing broadcasted safety packets during CCH intervals. In this paper, we propose a new mechanism that will help, when possible, to improve the throughput of service packets while maintaining acceptable the probability of successfully received safety packets.

EXISTING SYSTEM

- In existing system, cross-layer algorithm for sending safety messages by coupling the network-MAC and physical layers for broadcasting.
- It gives each node a specific time before sending its agreement to the source, so it assures by this way that packets will not collide, but this will cause the system to need more delay in choosing the forwarder, where this will affect the whole system performance.

PROPOSED SYSTEM

- We propose an efficient protocol in VANETs, which works both on increasing the throughput on SCH while safety packets rate is not high and maintaining the normal reception of safety packets.
- If the received message is from the application data layer, then this will be a request for this node to act as a source.
- Therefore it will follow the source's procedure, however if the message from another source node, then this node will act as a forwarder.

SYSTEM REQUIREMENTS

HARDWARE REQUIREMENTS

- Processor - Intel core i3
- RAM - 2B
- Hard Disk - 20 GB

SOFTWARE REQUIREMENTS

- Operating System : LINUX
- Tool : Network Simulator-2
- Front End : OTCL (Object Oriented Tool Command Language)

REFERENCE

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