

Bayes Timeslot Utilization for Efficient Contention Access in VeMAC-VANET

¹K.Selvakumaran, ²K.Saravanakumar

¹M.E-CSE, ²AP-CSE

V.S.B. Engineering College,
Karur, Tamilnadu, India

selvakumaranrk@gmail.com, saravanakumar.mtech@gmail.com

Abstract— Vehicular ad hoc networks (VANETs) are high priority safety applications that need medium access control (MAC) protocol for efficient broadcast service. The existing work presented VeMAC, a novel multi channel TDMA MAC protocol for VANET supports efficient one-hop and multi-hop broadcast services on control channel using implicit acknowledgments and eliminating hidden terminal.

The drawbacks of existing work allow a node to reserve only one slot in an information frame. Once a node has reserved a slot it ceases contending for other slots.

The proposed work presented a Bayes Timeslot Utilization Scheme for improved contention access on control channel in VeMAC. Nodes are allowed to contend for more than one slot in a reservation frame according to priority criteria. The advantages of proposed work allow nodes to reserve a slot adaptively in the information frame as per priority. Simulation methodology is adopted to eliminate the artificial boundary effect of VeMAC.

Index Terms— Ad hoc network, Media Access Control (MAC) protocol, Five-Phase Reservation Protocol (FPRP), Contention Slot.