

Bandwidth Efficient Cluster Based Collision Avoidance Multicasting Protocol in VANETs

Authors : Navneet Kaur, Amarpreet Singh

Abstract : In Vehicular Adhoc Networks, Data Dissemination is a challenging task. There are number of techniques, types and protocols available for disseminating the data but in order to preserve limited bandwidth and to disseminate maximum data over networks makes it more challenging. There are broadcasting, multicasting and geocasting based protocols. Multicasting based protocols are found to be best for conserving the bandwidth. One such protocol named BEAM exists that improves the performance of Vehicular Adhoc Networks by reducing the number of in-network message transactions and thereby efficiently utilizing the bandwidth during an emergency situation. But this protocol may result in multicar chain collision as there was no V2V communication. So, this paper proposes a new protocol named Enhanced Bandwidth Efficient Cluster Based Multicasting Protocol (EBECM) that will overcome the limitations of existing BEAM protocol. And Simulation results will show the improved performance of EBECM in terms of Routing overhead, throughput and PDR when compared with BEAM protocol.

Keywords : BEAM, data dissemination, emergency situation, vehicular adhoc network

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