

A review of congestion control algorithm for event-driven safety messages in vehicular networks

Abstract:

Congestion control algorithm in Vehicular Networks (VANETs) has been extensively studied. However, most of congestion control algorithms are not directly applicable to uni-priority of event-driven safety messages. The event-driven safety messages have stringent requirement on delay and reliability. The uni-priority of event-driven safety messages are caused by the traffic of the same priority, typically the warning messages of safety applications from different transmitters. The uni-priority messages should be scheduled before the node starts the transmitting process. In dense network, a large number of vehicles broadcast a beacon messages at a high number of frequency. Then the Control Channel (CCH) easily congested. It's very important to keep the CCH channel free from congestion to ensure timely and reliable delivery of event-driven safety messages [9, 20]. Hence, this study takes a closer look at existing congestion control algorithms to solve congestion problems because it affects the performance of safety messages. The study further exposes the weaknesses and advantages of some of these congestion control algorithms which can assist researchers to tackle the inherent problems of congestions in VANETs. This paper also concludes with a planned future research for disseminating uni-priority of event-driven safety messages while solving congestion problems.