

Traffic vehicular network modelling for VANET inter-vehicle data scavenging

ABSTRACT

The increases of road vehicles also causes a higher chances of car accidents happened and more severe traffic congestion. Many researches have been done to relieve such situation including altering with traffic signal timing plan, either in single intersection or in multi-agent system. Another research area will be the wireless communication in vehicular network. In this study, the focus will be on modelling a vehicular ad hoc network (VANET) for data scavenging. Traffic Control Interface for MATLAB (TraCI4Matlab) is implemented to allow communication among Simulation of Urban Mobility (SUMO) and MATLAB, so that to achieve a vehicular network platform. SUMO is used to generate vehicles trace which will be used as data for later protocol assessment in MATLAB. Results from this study showed some of the features in TraCI4Matlab. Using the traffic control interface commands, properties of vehicles such as position, speed, acceleration, vehicle length, vehicle color, etc. can be retrieved into MATLAB. With the details obtained, routing protocol can be computed and assessed through the vehicular network platform.