Research Title	"Survey on VANET technologies and simulation models"
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Abstract

Vehicular ad hoc network (VANET) is a distinctive form of Mobile Ad hoc Network (MANET) that has attracted increasing research attention recently. The purpose of this study is to comprehensively investigate the elements constituting a VANET system and to address several challenges that have to be overcome to enable a reliable wireless communications within a vehicular environment. Furthermore, the study undertakes a survey of the taxonomy of existing VANET routing protocols, with particular emphasis on the strengths and limitations of these protocols in order to help solve VANET routing issues. Moreover, as mobile users demand constant network access regardless of their location, this study seeks to evaluate various mobility models for vehicular networks. A comparison of IEEE 802.11p and Long-Term Evolution (LTE) technologies for several applications in the vehicular networking field is also carried out in the study. One key component in the VANET structure that this study intends to draw special attention is the warning structure consisting of Intelligent Traffic Lights (ITLs), which is designed to inform drivers regarding the existing traffic situation, thus enabling them to make appropriate decisions. Last but not least, the VANET simulation tools for data collection are also evaluated.