

Abstract

Road transport takes about 70% of the transportation systems in Tanzania. The number of vehicles and urbanization had been increasing while the road infrastructure capacity remained the same; hence the number of road accidents, casualties and deaths kept rising. The rate of road accidents has to be reduced. Wireless technologies have shown to be a good candidate for facilitating road safety and transport efficiency through vehicular communications. Hence, it has been an area of active research work. It has been considered to integrate traffic information from traffic unit into cellular networks and to broadcast the information to road users as a means to increase road safety and to optimize road usage. This work tested the use of wireless technologies to support road users using North Chiang Tung University Network Simulator which showed that broadcasting traffic information to road users at a particular point using cellular networks can increase road safety. In this paper causes of road accidents, the different wireless technologies used in vehicular communications and the model to provide traffic information with focus on the use of cellular networks are presented.