
International Journal of Computer Applications
Foundation of Computer Science (FCS), NY, USA

Volume 129
Number 5

Year of Publication: 2015

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10.5120/ijca2015906912

Abstract

The causes of road accidents lead to emergency communication between vehicular nodes. It is true that the on-the-spot messaging helps in rescuing victim’s life. The establishment of unprepared communication across vehicular nodes is possible with the intervention of automatic messaging. This leads to active research in data dissemination methods using heterogeneous devices. In this paper, the data dissemination in VANETs is done by Sensors, RFID(Radio Frequency Identification) tags, Bluetooth technology and from people passing over the roads. The communication across VANET nodes is simulated using RFID tags, the sensors available in the Android mobiles and the Bluetooth available in Android mobiles. This provides ease in communication across VANET nodes. The Web Server transmits this information to VANET nodes. The Web Server transmits this information to VANET nodes using WAVE(Wireless Access Vehicular Environment) protocol. The data collection and transmission across VANET is through Web Server(Middleware). Since collection of data is from different sources, Web Server plays crucial role in reception and transmission of messages across VANET nodes. In this paper, the communication methodology is optimized using ABC(Artificial Bee Colony) algorithm and Ant Colony algorithm. The gain of the solution is
cross-verified using Least Square Fitting method and Polynomial regression for evaluating the accuracy of transmission of messages by different means.

References


Index Terms

Computer Science Wireless

Keywords

IEEE 802.11p, WAVE, VANET, Sensor, RFID, GSM, Least Square Fitting Model, Polynomial Regression.