

DUAL-NETWORK ARDUINO-BASED VEHICLE LOCATOR USING GPS

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**In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science**

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ABSTRACT

A Dual Network Arduino-Based Vehicle Locator Using GPS is designed and implemented for tracking the movement of a vehicle. It incorporates a dual network to reduce signal loss throughout all of the sites where the researchers conduct their research. Due to the fact that there is a pressing need to develop a device that will help establish a safe and secured environment for the benefit of land vehicle owners, the researchers aim to develop a system that can be used for tracking the vehicle in any case that vehicles are stolen and used without asking the owner's permission.

To gather the respondent's opinions and ideas that are pertinent to the study, the researchers used convenient sampling and modified SUS survey questionnaires. The results according to SUS scale are six (6) Respondents graded the system as "Good", twelve (12) Respondents graded the system as "Okay", 5 respondents graded the system as "Poor", and eight (8) respondents graded the system as "Awful".

The proposed system was able to carry out and demonstrate the paper's concept, as well as the present location of the vehicle using the application, and via SMS. Although some IT experts desired the application for IOS as well, it is not possible for now because it is only intended for android phones.

For the benefit of the future researchers, high-end resources and a premium Map API can improve the system performance. Furthermore, future researchers can use other software in making the application to be possibly installed in IOS.

Keywords: android application, Arduino, Dual Network, GPS, map API