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Development of an IoT Based Smart Campus: Wide Shuttle Tracking System

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Abstract

Vehicle tracking systems are a versatile technology which enables commuters to determine the location of the buses in real-time. Bus operators can also deploy it for fleet management purposes. In this work, an integrated, embedded GPS-GSM vehicle tracking system is designed and implemented. The application enables passengers to view the location of bus shuttles in real-time. It also allows bus managers to ascertain the driver behaviour and observe the past and present locations of the bus shuttle. The system has been designed to provide more functionalities with some modifications and additional hardware, such as Accident detection, Fire detection systems and Fuel monitoring. The location of buses can be accessed by the users either using the SMS request option or logging into the mobile application developed for this purpose. Upon receipt of a location request, the tracking system sends feedback which includes both the latitude and longitude coordinates of the vehicle and also a link that enables the

display of the bus location of a google map. The location is also logged onto a server managed by the bus operators to monitor the bus activities.

Keywords

IoT Micro-controller GPS Vehicle tracking

The original version of this chapter was revised: The names of the co-authors have been updated. The correction to this chapter is available at https://doi.org/10.1007/978-3-030-63092-8_73

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