Document details

2019 7th International Conference on Mechatronics Engineering, ICOM 2019
October 2019, Article number 8952037
7th International Conference on Mechatronics Engineering, ICOM 2019; Putrajaya; Malaysia; 30 October 2019 through 31 October 2019; Category numberCFP1951N-ART; Code 156771

A Cloud-Based Bus Tracking System Based on Internet-of-Things Technology (Conference Paper)

Akter, S.[a], Islam, T.[b], Olanrewaju, R.F.[c], Binyamin, A.A.[d]

[a]Kulliyyah of Engineering International Islamic University Malaysia, Department of Electrical and Communication Engineering, Kuala Lumpur, Malaysia
[b]Kulliyyah of Engineering, International Islamic University Malaysia, Department of Electrical and Computer Engineering, Kuala Lumpur, Malaysia
[c]Kulliyyah of Engineering, International Islamic University Malaysia, Department of Electrical and Computer, Kuala Lumpur, Malaysia

View additional affiliations

Abstract

The technological rise in public transportation is on the horizon, but the bus network structure and intelligent bus tracking system should first be in place. Bus transport service is on the edge of digital revolution, generating real-time tracking information about the bus service using smartphones. In this paper, a cloud-based bus tracking system based on IoT is proposed to reduce human intervention, waiting time and energy. The exact location and arrival time of the bus can be tracked dynamically by using a mobile application to provide better and efficient bus service. Furthermore, passengers can buy tickets without queueing and book the available seats by making online payments. The proposed scheme allows more flexibility and user satisfactory service to the rider in terms of time loss and encourages more people to ride by providing real-time bus tracking information to improve passenger satisfaction. The main objective is to minimize the unnecessary waiting and queueing time uncertainty of passengers. Riders can utilize their waiting time more productively by choosing the nearest route and alternative transportation. The sustainability of public transport service can be maintained by providing noteworthy benefits to the passengers using the proposed IoT-based bus tracking system. © 2019 IEEE.

SciVal Topic Prominence

Topic: Global positioning system | Global system for mobile communications | GPS module

Prominence percentile: 92.738

Author keywords

Bus Tracking | Cloud Computing | Internet of Things

Indexed keywords

Engineering controlled terms: Buses | Cloud computing | Internet of things | Tracking (position) | Transportation routes

Engineering uncontrolled terms: Digital revolution | Human intervention | Internet of things technologies | Mobile applications | Passenger satisfaction | Public transport service | Public transportation | Real time tracking

Engineering main heading: Bus transportation

Funding details

Funding sponsor	Funding number	Acronym
Ministry of Higher Education, Malaysia		MOHE
	IRG19-005-0005	

Funding text
ACKNOWLEDGMENT This work was partially supported by the Ministry of Higher Education Malaysia (Kementerian Pendidikan Tinggi) under KNOWLEDGE TRANSFER PROGRAMME - RESEARCH INITIATIVE GRANT SCHEME (KTP-RIGS SDG) 2019 number IRG19-005-0005.

ISBN: 978-172812971-6
Source Type: Conference Proceeding
Original language: English
DOI: 10.1109/ICOM47790.2019.8952037
Document Type: Conference Paper
Sponsors: Inspilogix,ProStram Technologies
Publisher: Institute of Electrical and Electronics Engineers Inc.

Top of page