

User Interactive Application for Public Transportation



S. Dhanalakshmi, G. K. Anu Keerthana, G. Sivasakthimeena, A. Saravanaselvan

Abstract: A fundamental challenge for rapidly growing cities of nowadays is to offer public transport services to fulfill the increasing demands for mobility. In our country, a widely adaptable and convenient mode of public transport is by bus. The buses in the running and bus arrival time are considered as the essential data for almost every open transport travelers. Excessively longer waiting periods at bus stations frequently deter travelers and the non-availability of information about the buses running makes them reluctant to take buses. So to make passengers more informative, we present a system for the manifestation of the on-road buses and its' arrival time based upon the bus passengers' participatory detecting. The bus passengers' encompassing environmental framework is successfully gathered with the help of commodity mobile phones and employed to present the bus traveling pathways and to reckon the estimated time of arrival of the bus at several bus stations through the mobile application. The suggested framework entirely depends upon the cooperative attempt of the partaking users and the driver in the designated route, therefore it can be facilely adopted to fortify bus accommodation framework excluding the demanding assistance through the specific bus operating organizations. We develop an archetype system with variants of Android-predicated mobile phones. The suggested framework is usually more accessible and energy cordial.

Keywords: App-development, live-tracking, online booking public transportation.

I. INTRODUCTION

There are numerous factors contribute to the severity of transport problems in most of the developing countries. The quick development of large cities due to the increment in populace coupled with an increment in urbanization has

postured genuine challenges in creating satisfactory foundation facilities. The significant transportation problems are haphazard and unplanned development with small or no arrangement of transportation facilities, deprived quality of public transport facilities, insufficient parking lots, and also increase in the number of private vehicles. These issues have a great impact on mobility. In the proposed system, we tend to concentrate on public transportation - such as buses, and minibusses -, in which the aim of the project is to design a framework as enabling technologies for estimation, outlining and therefore further improving the public transportation system. Indeed in spite of the fact that our framework can be as entirety or parts can be applied all over the world we generally target the developing countries. The main objective is optimizing the utilization of accessible open transportation assets and time. Initially, the project plan includes the development of an android application that bridges the communication gap between passengers and public transport by presenting a transparent system that tabulates the bus time chart and the buses in the running. We have planned to extend our boundary to create a web-based application as a part of the future work. The proposed system will be a user-friendly framework as well as a step ahead of the systems in use. We find that the system will grow into a dependable one since most of the people, who had to travel most of the time, want to make their journey in public transport. This hope may be due to their savviness, economical awareness or environmental concern. Thriving public transport and proper utility of the same make this service a mutually beneficial one.

II. LITERATURE SURVEY

A preceding version of our system was presented in [1]. The suggested framework entirely depends upon the cooperative attempt of the partaking users and is not dependent on the bus operating organizations, therefore it can be facilely adopted to fortify bus accommodation framework excluding the demanding assistance through the specific bus operating organizations. In place of alluding to GPS-enabled location data, the system depends on more commonly accessible and high yielding sensing facilities, such as mobile phone tower signals or transmission tower, kineticism positions, audio recordings, etc., like resources that would bring lesser troubles to the partaking users and embolden involvement of them. Here, the development of the archetype system is with variants [5] of Android-predicated mobile phones [9],[10].

The paper [3], lays out traveling reservation, a procedure intended at amelioration of the accuracy of peregrinate periods [4] and also an incrementation of the efficacious utilization of road size.

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* Correspondence Author

S. Dhanalakshmi*, Department of ECE, National Engineering College, Kovilpatti, Thoothukudi, Tamilnadu, India.
Email:manu99keerthi@gmail.com

G. K. Anu keerthana, Department of ECE, National Engineering College, Kovilpatti, Thoothukudi, Tamilnadu, India.
Email: anukeerthanagk@gmail.com

G. Sivasakthimeena, Department of ECE, National Engineering College, Kovilpatti, Thoothukudi, Tamilnadu, India.
Email:sakthimeena127@gmail.com

A. Saravanaselven, Department of ECE, National Engineering College, Kovilpatti, Thoothukudi, Tamilnadu, India. Email: asselvan1981@gmail.com

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Furthermore, it sanctions the distribution of facilities among several arrangements [2], and each arrangement has its own operating time window. The framework focuses on open dedicated infrastructure, like the bus lines and dedicated freight lanes, and maintains the independence of both the contributor and user of the infrastructure.

The benefit affirms are fortified by simulation outcomes for primary structural layouts.

The paper [8], states the traces of positioning co-ordinates as a top-level abstraction of an incipient group of cell phone uses which includes ride-sharing, location-predicated cooperation, and health monitoring. All the track is the result of ingressions recording of the individual's time, position, and application-concrete information. The Star Track will be able to effectively work on thousands of tracks. The position will be achieved by a number of designates, which includes Wi-Fi beacons, cell tower triangulation, and GPS hardware.

Mobile contrivances are mainly provided with the software and hardware [6] accommodations sanctioning them to figure out the positions, but assist for building positioning-cognisant employments [7] continues to be elementary

III. PROPOSEDWORK

The proposed work provides the user with information regarding the available buses to the required destination. For

this purpose, the application needs the source and destination from the user as input. The system also provides the facility for user registration. This logging action helps in maintaining and storing the user's search results and frequently sought about routes. This can help in quicker search and response action. Once the application receives the source and destination inputs, the data related to the search is extracted from the database. This database is fed with information about buses, their routes, arrival time by the bus operators. The system is designed such that the result for the search includes buses from the time of search.

The figure Fig.1 gives a pictorial representation of the proposed system. The system would be reliable and user-friendly.

IV. RESULTS AND DISCUSSION

The main purpose of the proposed design of application is to show the scheduled buses in the given route. In this experiment, the user has given his source as Tirunelveli and destination as Morapanad. The data given by user is taken to backend and searched for buses matching the inputs and the backend would return results relevant to the search and departure time.

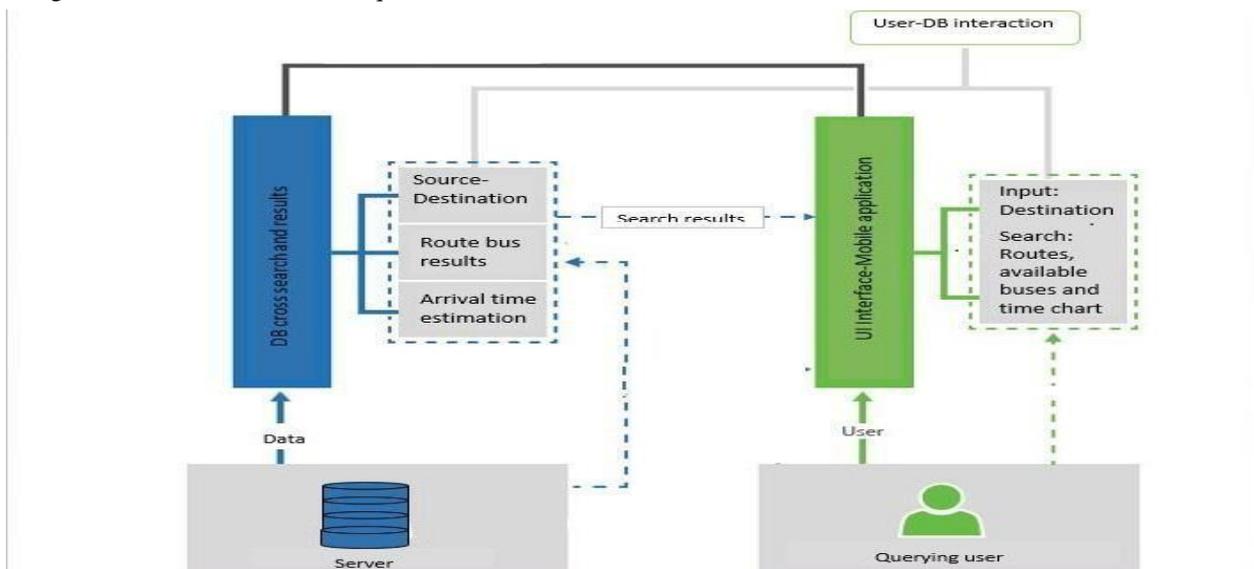


Fig. 1 Functional Diagram



Fig.2 User Login Page



Fig. 3 User account generation
ON THE WHEELS

Route Finder

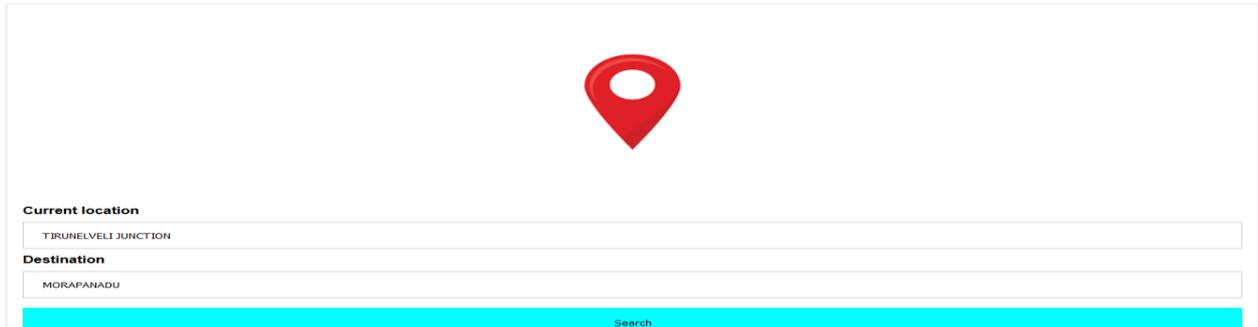


Fig. 4 Source and destination given as input

ON THE WHEELS

Route Finder

BUS NO	SOURCE	DESTINATION	BUS NAME	TIMINGS	BUS TYPE
1	TIRUNELVELI Junction	MORAPANADU	Morapanadu	3:15	Government
2	TIRUNELVELI Junction	MORAPANADU	Vallanadu	3:30	Government
3	TIRUNELVELI Junction	MORAPANADU	RAJA	3:35	Private
4	TIRUNELVELI Junction	MORAPANADU	150, Tuticorin	3:35	Government
5	TIRUNELVELI Junction	MORAPANADU	ARAVINDH	3:45	Private

Fig.5 Matched results output information

V. CONCLUSION

This proposed project intends to resolve the problems with long waiting times and public transport route discovery faced by people. The proposed application route scheduling and arrival time estimation will equip the user with necessary information. So users would need a reliable internet connection. We hope that our application will play a consequential role. We are considering adding more features and improvements such as notification messages and ticket booking. Hence the proposed project informs the user about the route buses available from source to destination and avoid the confusion of the people over unfamiliar routes to their destination. People from various sectors would increasingly use public bus transport with the help of our design. As it also helps to schedule their plan according to the buses and time available to the corresponding persons.

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AUTHORS PROFILE



S. Dhanalakshmi, is an undergraduate student in department of Electronics and communication Engineering at National Engineering College, Tamil Nadu, India. Her research interest includes application development and networking.

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G. K. Anu Keerthana, is an undergraduate student in department of Electronics and communication Engineering at National Engineering College, Tamil Nadu, India. Her research interest includes Networks security and web designing.



G. Sivasakthimeena, is an undergraduate student in department of Electronics and communication Engineering at National Engineering College, Tamil Nadu, India. Her research interest includes embedded and IoT .



A. Saravanaselvan, is an Assistant Professor (SG) in the Department of Electronics and Communication Engineering at National Engineering College, Tamil Nadu, India. He received his B.E. Electronics and Communication Engineering degree from PGP College of Engg & Tech, Periyar University, Salem, Tamil Nadu in the year 2003. He completed her M.E. Applied Electronics from Anna University of Technology, Tirunelveli, Tamil Nadu in 2011. He is currently doing Ph.D. in Anna University, Chennai. He has 14 years of academic experience. He has presented six papers in the international conference . His research interest is about Sensor Network. His is a life member of IE society bodies.