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WIMB-WHERE IS MY BUS

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ABSTRACT

A Smartphone application which basically helps the daily commuters who usually travel by bus to track & check where the bus is exactly on Google maps and keep a track of all the available busses on the current route and also estimate time of arrival to their stop.

Keywords- *Live Bus Tracking On Map, Destination Alert, Bus Arrival Time, Save Time.*

I. INTRODUCTION

An effective public transportation system is a must for the smooth functioning of any urban city. Bangalore, the Silicon Valley of India, attracts a large number of youngsters for better educational and career opportunities. Over 62% of this city's population consists of migrants from all parts of the country. The city has seen a steady increase in the number of vehicles being registered — from nearly 41.5 millions in March 2012 to 55.9 millions in March 2015, and now over 60 million by February 2016. Transport Department officials said at least 100 thousands more vehicles had been added to this tally this March. Because of these large number of vehicles on the road, traffic jams will be a common problem in Bangalore. Most of the common people use bus transport for everyday commute. The following are the most common problems faced by the regular commuters.

Problem 1: Bus Time.

We wait and we wait, but the fate is not too kind. So we continue waiting. Due to heavy traffic sometimes the bus arrives late. And when the bus finally does arrive, it is crowded. And we would rather continue waiting, than consider getting on the bus. Or maybe it's time we hailed an auto.

Problem 2: Most of the bus boards are in regional language.

Some have a difficult time deciphering which bus goes where. And this is because most of the signs (boards) are in regional language. While some manage to read it, but for those who are from foreign & other states they might find it bit difficult to read the bus signs.

Problem 3: Uncertain Bus Strikes.

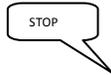
We all know last year (2016) there was an uncertain bus strike in Bangalore and also when buses started to run, due to some actions the buses were stopped during mid-day and most of the colleges and school declared half day and next the students had to suffer and they kept waiting for their bus for hours and only few buses had come which were too much crowded.

Now have you wondered why the bus that you are waiting for is not coming? You must have asked the question to others who are waiting for the exact same bus. We all might have come across such problems above mentioned. So what is the solution? How can we save our time & lead a productive life?

II. THE SOLUTION

Introducing a Smartphone application called WIMB (Where Is My Bus?) which works with an internet connection and can basically help the daily commuters who usually travel by bus to check where the bus is exactly on Google maps and keep a track of all available busses on the current route and also estimate time of arrival to the stop, where they will get on-board? And in case if they are late to the bus stop or the available bus is crowded they can decide whether to take the bus or catch the next bus with the use of WIMB app.

So with use of WIMB app the commuters can reduce their time wasted waiting for the bus and can save their time and lead a productive life.



(figure 1.1)

III. KEY FEATURES

1. Live Bus Tracking On Map

See exactly where your bus is on the map in real-time.

2. Estimate The Bus Arrival Time.

Know when your next bus is arriving with real-time predictions.

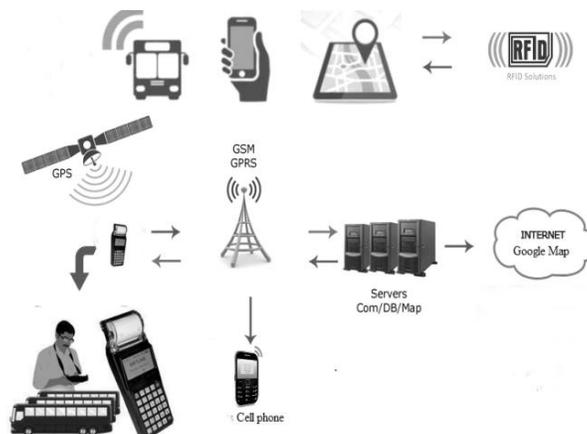
3. Destination Alert.

In case you slept in the bus, no worries the app will alert you when you're about to reach your destination.

4. What all Locations It Can Travel.

To those who find it difficult to read the regional language, the app will show the bus details such as which all locations it can travel and where the bus is heading next and what is its final destination.

IV. HOW IT WORKS?



(figure 1.2)

Now a days in Bangalore every BMTC bus conductor's have Trimax electronic ticket machine device by which tickets are generated and the ticket machine has an embedded GPS and its connected to a server which exchanges data from its database.

Global Positioning System (GPS) is a method used to track anything with respect to its geographical location A GPS tracking system, can be placed on a vehicle, or a cell phone, or a special GPS device such as Trimax device used by BMTC conductor's for issuing tickets. Each Trimax device has a unique ID including the bus number and other details.

The operation of the GPS is based on a mathematical principle called trilateration. Trilateration can be divided into two categories: 2-Dimensional (2D) and 3-Dimensional (3D). In order to make the position calculation, the GPS receiver must know two things. First, it must know the location of the place that is to be traced by at least 3 satellites above that place. Second, it must know the distance between the place and each satellite. So with the help of BMTC agency and Trimax Company our app will act as a direct link which will gather and transmit the available data from Trimax database servers which has the collection of data about each buses and its location and it will redirect the required information to the user with the help of internet connection on their Smartphone.

So when the user input's a request for a particular bus it will go through the Trimax database and will collect the required information and with GPS enabled it will show the live location of the requested bus and it will also display the bus details like estimated time to reach the bus stop and what all locations the bus can travel.

V. FUTURE ENHANCEMENTS

Globalize the App: in future the app will be available in all the cities.

VI. CONCLUSION

With the use of WIMB the commuter's travelling problems will be dramatically reduced and they can save their time and live a productive life.

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