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Efficient IOT Bus Transaction

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Abstract: People who uses public transportation vehicles wishes to know the information regarding the general public transportation vehicles and they wish to grasp the travel time of the vehicles while travelling between two places and waiting at the bus stops. The planned system is victimisation GPS which is able to take the location of the user from Google map. Information of the vehicle will be transferred to the central server through a GPS module that functions integrated to android system and net services. We are proposing a system that can provide instant help in a better and faster way. Android phone on the bus stops offer communication with the central server through net services and therefore the bus stops, public transportation vehicles and central server fashioned data network of the transportation.

Keywords: Public Transportation Information System, GPS, Real-time System, Mobile Computing, Client/server, Mobile communication systems, User tracing.

I. INTRODUCTION

The speedy development of cities and therefore the increase in their population disclosed the matter of transportation. The fundamental and only resolution for the transportation drawback within the cities with massive populations is popularizing the general public transport systems.

Though the general public transport vehicles square measure employed in the cities with massive populations presently and therefore the efforts to broaden its scope square measure dead, the system still employs some handicaps. The quality of public transportation is that existence of over one lines, over one vehicles and routes causes we've got problem in managing this method.

The demand of the directors UN agency manage the general public transportation and therefore the people that use this method for observant the system higher, build their plans when examining the position and travel info of the vehicles and use the system additional effectively could be a clearly expected demand. The directors of the massive cities square measure seeking the ways in which solutions for this drawback exists. Exploitation numerous strategies of knowledge and management and good bus stations became a current issue and diverse applications were dispensed.

The software developed to manage the system provided the authorities the advantages of instant status observation, remote-informing and updating related to the management of the status and travel of the public transportation vehicles.

Through this developed system, moreover, it was ensured that the position and travel information of the vehicles through the monitors both inside the public transportation vehicles and at the bus stops, increase the life qualities of the people who use the public transport vehicles and facilitate their urban life cycles.

II. LITERATURE SURVEY

[1] G. Mintsis , S. Basbas, P. Papaioannou, C. Taxiltaris, I.N. Tziavos "Applications of GPS technology in the land transportation system" European Journal of Operational Research 152 (2004) 399–409.

G. Mintsis et al. Studied on determining the locations of the vehicles travelling both on the land and in the sea and determine a road map using the GPS (Global Positioning System)

[2] Pankaj Verma, J.S Bhatia, Design and Development of GPS-GSM Based Tracking system With Google Map Based Monitoring, International Journal of Computer Science, Engineering and Applications (IJCSEA) Vol.3, No.3, June 2013

Verma et al. showed the user that it was possible to follow the travelled route and position of the vehicle through GPS and showed the position of the vehicle using a web based system which that had developed.

[3] Zechun Huang, Dingfa Huang,Zhu Xu ,Zhigen Xu "GPS Vehicle Positioning Monitoring System Integrated with CORS and Mobile GIS "Procedia Environmental Sciences 10 (2011) 2498 – 2504 2011 3rd International Conference on Environmental Science and Information Application Technology (ESIAT 2011)

Zechun Huang et al. Pointed out the significance of Continuous Operational Reference Station System (CORS), and mobile CBS technology and GPS.

In establishing smart transport systems and they designed the architecture of vehicle positioning monitoring system.

[4] El-Medany W. Al-Omary A., Al-Hakim R., Al-Irhayim S., Nusaif M., "A Cost Effective Real-Time Tracking System Prototype Using Integrated GPS/GPRS Module", 2010 Sixth International Conference on Wireless

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and Mobile Communications, ss. 521-525, 20-25 Eylül, Valencia, 2010.

Using Microsoft SQL Server 2003, El-Medany et al., developed a monitoring system, established graphical user interface using Active Server Pages (ASP) and showed the position of the vehicle on the map.

III. OUR APPROACH

We proposed smart bus system which will help passenger to travel conveniently through bus. Android app is developed which display all details of bus and its route. Driver will possess same application. Driver will receive all information of passenger. Third important factor is corporation. Amount of tickets paid by the passenger is stored in bank database.

A database was developed in order to record the information related to characteristics and the routes of the vehicles provide public transportation in the city and bus stops and an application was developed to manage this information.

IV. PROPOSED SYSTEM

1. System introduction
In this system, a information was developed so as to record info the knowledge the data} associated with characteristics and therefore the routes of the vehicles give public transportation within the town Associate to bus stops and an application was developed to manage this information.

Moreover, associate to system that allows transmission the data associated with speed, location and routes of the general public transportation vehicles connected into the GPS module was designed and at the bus stops, this system helps to gift the data of positions and time associated with arrival of the vehicle on moving to the stop. Through this developed system, the directors might instantly observe the general public transport traffic; and it had been aimed to tell the folks each within the public transportation vehicles and at the bus stops looking ahead to public transportation vehicles

1. System modules
The system contains mainly three modules
1. USER Module
2. Driver module
3. DATABASE Module
- Corporation module
- Bank module

2. System features
- Eco friendly system
- Consume less time duration
- Economically affordable
- Convenient for user

V. DIAGRAM

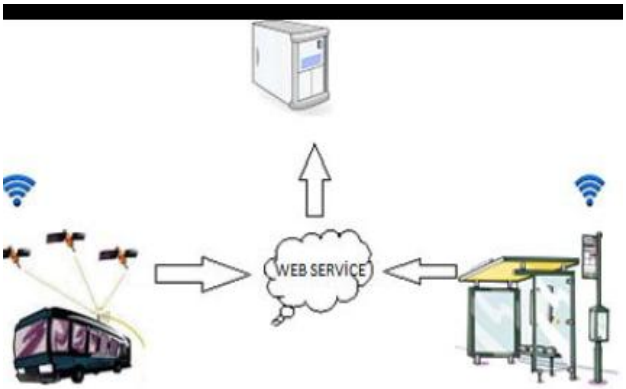

Fig:- IOT bus system

VI. MATHEMATICAL MODULE

Let _S‘ be the | transportation system that is final set
S = {……}
Identify the inputs as I
S = {U}
U = {U1, U2, U3, U4 …| _U‘ given number of users}
Identify the outputs as O
S = {L, R}
L= {L1, L2, L3 …| _L‘ given location of bus}
R = {R1, R2, R3 … | _R‘ gives different routes of bus}
Identify the functions as _F‘
S = {…
F = {F1 (), F2(), F3(), F4(), F5(), F6(), F7()}
F1 (U) = login to application
F2 (U) = Enter required bus details.
F3 (L) = Fetch location of bus.
F4 (R) = Track route of bus
F5 (S) = analysis and monitoring.
F6 (S) =get details of bus on user`s app

VI. CONCLUSION

By implementing this idea, we can improve the transportation safety and the quality of services to the Public in rural and urban cities of India. The safe and easy data exchange on web services made major contributions to the progress of the system and its currency.

VII. FUTURE SCOPE

We are hope to include Smart cards, token travel, comfort, ease, speed , in-transit entertainment, clean station premises, clean and green energy to power those systems will soon be a reality, once the governments and the citizens start to co-operate.

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