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A REAL TIME MONITORING AND TRACKING SYSTEM BASED ON INTERNET OF THING (IOT) PLATFORM

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Abstract: The Internet of Things (IoT) is defined as an integrated part of the future Internet, which ensures that `things' with identities can communicate with each other. IoT will be applied in different areas, e.g. smart cities, agriculture, energy, environment protection, health, home automation, etc. different their architectures are based on the applications. Here an advanced monitoring and tracking system is proposed and this tracking system is designed to monitor the Train from any location A to location B at real time. The system works on Global Positioning System (GPS) for realtime tracking and monitoring mechanism. The GPS gives current location of the train and it can be viewed from the freeboard. Freeboard is an opensource dashboard for sharing and monitoring data. Thus any one from any corner of the world can access the location information of the train using an IoT platform

Index Terms **- IoT,GPS,Real time,tracking system,Android**

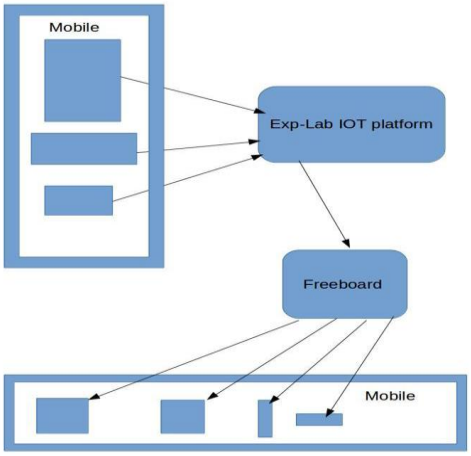
I. INTRODUCTION

II. EXISTING SYSTEM

An advanced vehicle monitoring and tracking system isdesigned for monitoring the school vehicle from any location A to location B at real time and provide safety environment to the traveler.The proposed system works on Global Positioning System(GPS) and Global System for Mobile Communication (GSM) which is used for vehicle tracking and monitoring mechanism. For this purpose SIM908 Module is used which includes all the three things namely GPS GPRS GSM. The GPS gives current location of the vehicle; GPRS sends the tracking information to the server and the GSM is used for sending alert message to vehicle's owner mobile. The proposed system would place inside the vehicle whose position is to be determined on the web page and monitored at real time. In the proposed system, there is comparison between the current vehicle path and already specified path is the file system of Raspberry pi. Hence if the driver drives the vehicle on the wrong path then the alert message will be sent from the proposed system to the vehicle's owner mobile and if the vehicle's speed goes beyond the specified value of the speed, then also the warning message will be sent from system to the owner mobile.

PROPOSED SYSTEM

IoT (Internet of Things) is becoming more popular due to the smart devices are network enabled to facilitate many current and emerging applications.A mobile IoT application can be composed of mobile cloud systems and devices, such as wearable devices, smart phones and smart cars.A mobile IoT application can be composed many platform.In this paper An Advanced Real time monitoring and tracking system based on Internet of Thing (IoT) platform is mainly is designed to monitor the Train from any location A to location B at real time with locost. The system works on Global Positioning System (GPS) for real time tracking and monitoring mechanism. The GPS gives current location of the train and send it to



the Exp-Lab IOT platform and it can be viewed from the freeboard. Freeboard is an open source dashboard for sharing and monitoring data. Thus any one from any corner of the world can access the location information of the train using an IoT platform.

SYSTEM ARCHITECTURE

METHODLOGIES

The Internet of Things extends internet connectivity beyond traditional devices like desktop and laptop computers, smartphones and tablets to a diverse range of devices and everyday things that utilize embedded technology to communicate and interact with the external environment, all via the Internet.The starting point for Internet of Things .

DEVOLOPING ANDROID APPLICATION:

In this Module to develop android application for get the location data (Latitude and Longitude) from the Android device of GPS Module and convert this location data in to Map interface then convert this mape interface into JSON object this JSON object is send to the IOT platform in a certain period of time by using platform http communication protocol of POST method

CONNECTING ANDROID TO IOT PLATFORM

In this Module to connect IOT platform with our thing to freeboard.io IOT high-performance, enterprise-class cloud data applications are the things themselves. These edge devices typically have no screen (although that's not always the case), a low-power processorsystem. This System is mainly to visualize the JSON data in a Text formate or graphical formate in this plate form is mainly used for this project to visualize the raw location data on google map.

CONCLUSION

In this Project get the current GPS position and convert this GPS latitude ,longitude In a form of JSON using JAVA JSON class then this JSON Object is POST to the IOT Platform,this app send data to IOT Platform each and every 500 milli second IOT platform is overwrite this data and send JSON Responds.each and every data are send to thing name of IOT platform .To create new user in Freeboard and create custom Dashboard and link the Exp-lab IOT Platform via url.and get the JSON responds from IOT platform then create googlemape board and set the GPS latitude ,longitude to the created google map board with realtimelowcost high performance.

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