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REAL TIME RAILWAY INDICATOR

Nishant Wadkar[1], Abhishek Joshi[2], Akshay kumar Vallakati[3], Prof. Mittal Solanki[4]
[1,2,3,4] Electronics & Telecommunication Department, Bharat College of Engineering, Badlapur.
wadkarnishant2@gmail.com

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Abstract— Railway is known as the lifeline of the Mumbai. Railway authorities have to work hard to keep this lifeline on track and on time. There are all kind trains schedules, timetable, schedule books of train timing etc. but trains do not run on time due to various reasons or causes. The moto of the project is to display the passenger information display message on the mobile phone application in real time in which data from railway server will be collected and displayed on the mobile application with the help of application programming interface (API) and database. It will also display the important messages and an announcement in the application.

Keywords- *Application programming interface; SQL; Android studio; passenger information display; Train Management; Integrated Passenger Information*

I. INTRODUCTION

Mumbai local trains are the primary mode of transport for hundreds and thousands of people who travel for as many as five hours every day to and from work. Boarding a train in Mumbai is one of the wars everyone has to face after waking up in the morning. There are all kind of train schedules, Time Table etc. but it is very difficult to maintain the schedule. Many problems occur in monsoon. We have heavy rainfall in Mumbai as a result water logging, floods and errors occur during monsoon season. Due to which Trains are not able to run as per schedule. Sometimes trains have to be cancelled to get the system on schedule. The inconvenience has to be barred by the commuters. Their time is wasted; they cannot reach to their destination on time.

The idea is to get that data of passenger information display from the control room. Decode the data from its coded form used by the indicator displays. Create a local server with the database of all stations. Create an Application to communicate with the server to get the real time data, which will be displayed, in the application. Display important announcements in the application. It will be an autonomous system, which will work 24 x 7 to help the authorities have a direct communication between commuters and them.

II. LITERATURE SURVEY

Earlier train movement information was sent manually from station to control office. It didn't provide much assistance for taking decision to control the train. If any unusual event took place the system would come to a halt. Information to the Assistant Station Master (ASM) was also not available for ensuring correct displays and announcements.

To match high volume traffic of suburban section, it was necessary to provide 'ON LINE' information of train movements to the various Agencies E.g. Controller, ASM etc., who then can take timely and effective steps in case of disruption of the operation. Therefore, a need was felt for provision of Train Management System (TMS) [1]. Countdown in Minutes for minute-to-minute train arrival information to commuters and Automatic Announcements at stations from TMS Control Centre is the main aim.

Railway system is a computer-based system located in the control office, which collects signaling status information, points, track circuit etc. from the various station interlocking in real time basis. It also collects train identification information like train no., rake, name of crew and platform number from the train originating station where it is manually fed. The above information is processed automatically and display regarding various train movements together with status of signals, points, track circuits etc. made available on the controller's video screen on selective station/section basis. Display information is also available on a big rear view indicator.

Currently used Integrated Passenger Information System is a *Computer-based system* providing audio and visual information to passengers through multiple displays spanning over the entire station.

III. PROPOSED SYSTEM

A. Problem Definition

The basic problems faced by the commuters are that they do not have any idea which train is on which platform. During the peak hours, the trains are delayed or cancelled without any prior information to the commuters.

Integrated Passenger Information System, which is used currently by the Indian Railway, provides the information on the status of the trains arrival, departure and approximate arrival time. The problem with this system is that the information can only be accessed from the railway stations. For E.g. If a person is standing outside the station don't have any idea which train is arrival or what is the expected time of the train due to which he has to hurry and come to know that the train is not arrived due to delay. Because of this, the platform gets crowed to which people get irritated. This has been seen during the monsoon of this year at Badlapur station due to train delay the commuters got angry and did "rastarok".

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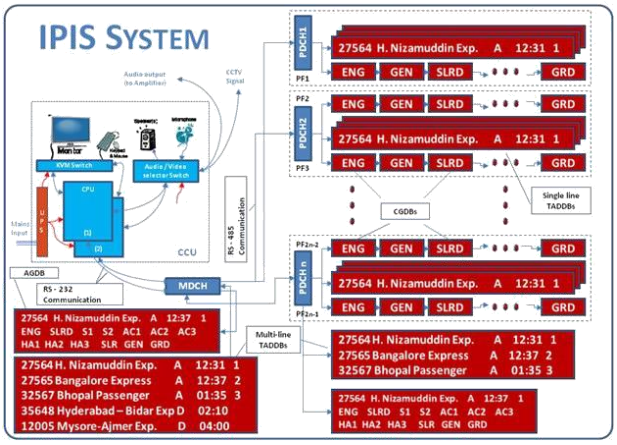

Fig 1: Integrated Passenger Information System

If the communication between train management and commuters has been transparent, such events could be avoided.

B. Proposal.

As the name suggests Real Time Railway Indicator, it will display the passenger information display message information on mobile application in real time. The data, which is send by the Integrated Passenger Information System to various indicator on the platform, will be feed to the project. This data will be decoded in character form and uploaded to database at its particular place. A server will hold the database and API server. This data, which is uploaded to database, will be available to call by the application via API until the next update and this process will keep repeating. Mobile application [2, 3] will have the list of stations buttons. Which when pressed will show the information of the indicators from the platform to the application. Application will access the database and collect the information from it.

Get that data of indicators from the control room.

Decode the data from its coded form used by the indicators. Create a local server with the database of all stations.

Create an Application to communicate with the server to get the real time data that will be displayed in the application. Display on important announcements in the application.

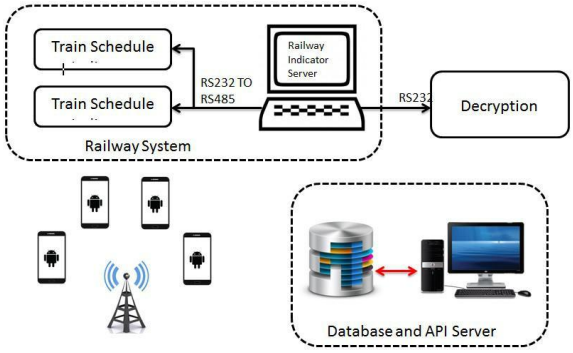

Fig 2: Proposed System for Railway Indicator

Android Studio: - Android Studio is official IDE for development of android applications. It consists of all the tools required to build quality applications for all android devices.

MySQL: - MySQL [4, 5, 6] stands for sequential queue logic. It is Relational Database Management System. It is a free software and widely used in Information system/ embedded systems. MySQL is used to create its own server and clients.

IV. CONCLUSION

Project concludes that developing such a system is possible. It helps in transparent communication between an organization and the customers in this case it will help the authorities to directly communicate with the commuters it will help the commuters to plan their journey and use their time more efficiently. It will help reduce commotion among the commuters

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