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AUTOMATIC RAILWAY PLATFORM ANNOUNCEMENT AND POSITION BASED FEEDBACK

Swapnil R. Sukale[1], Vaibhav V.Gurgude[2], Vishal V.Thorat[3]

[1,2,3]*Student, E&TC Department, G.S. Moze College of Engineering, Balewadi*

ABSTRACT

With remarkable progress in railway industry and train passengers, especially those in the long distance journeys. The main aim of this paper is to make an automated place announcement system for train using GSM & GPS for tracking station data. The paper consists of microcontroller, automatic answering machine, GSM & GPS. The whole system is attached to the railway station. The automated system for the railway which makes the announcement of platform when train reaches at particular platform. Now that days when railway is coming on station there is LCD display to show that on which platform railway is coming. But if any person get late then first he should see on LCD display and hear announcement at that time he missed train. So for avoid this situation we provide the service of SMS and Call on passenger's mobile phone that inform passenger train is coming on which platform When passenger travelling at time of night passenger can't recognize the station name, then passenger will miss his station. So for avoid this we send a SMS & Call on his mobile phone which inform when his station will come. So passenger cannot miss his station

Keywords: GPS,GSM, MICROCONTROLLER, RFID, SMS, TRAIN

I. INTRODUCTION

During night time there is a possibility that train passengers can miss their destination station when travelling over long distance. Otherwise they reach unknown station. This project will overcome this problem Embedded systems are computer systems which is capable of performing specific task. It has Varity of applications and used for real time purpose, it is less expensive. For embedded systems, program instructions run with circumscribed computer hardware resources and limited memory, like other system models, these systems does not affect the redundant programming The use of GSM and GPS technologies allows the system to track train and provides the most up-to date information about ongoing user. This system finds its application in real time traffic surveillance. It could be used as a valuable tool for real time traveler information, congestion monitoring, and system evaluation. The GPS receiver of the unit is capable of identifying the latitudinal and longitudinal position and ground speed of the specific train by receiving information Mostly vehicle tracking systems are based on GPS and GSM. Short Messaging Service (SMS) is a feature available on all mobile phones which allows a small amount of text to be sent between one user and another. GPS consists of a network of 24 satellites in six different 12-hour orbital paths spaced so that at least five are in view from every point on the

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globe. One of the main context information is location, which enables a wide set of cell phone. So a cost effective system is introduced here by using GSM and GPS.

II. SYSTEM DESIGN

The LPC2148 microcontrollers are based on a 32/16 bit ARM7TDMI-S CPU with real-time emulation and embedded trace support, that combines the microcontroller with embedded high speed flash memory ranging from 32 kB to 512 kB. A 128-bit wide memory interface and a unique accelerator architecture enable 32-bit code execution at the maximum clock rate. For critical code size applications, the alternative 16-bit Thumb mode reduces code by more than 30 % with minimal performance penalty. Due to their tiny size and low power consumption, LPC2148 are ideal for applications where miniaturization is a key requirement, such as access control and point-of-sale. A blend of serial communications interfaces ranging from a USB 2.0 Full Speed device, multiple UARTS, SPI, SSP to I2Cs and on-chip SRAM of 8 kB up to 40 kB, make these devices very well suited for communication gateways and protocol converters, soft modems, voice recognition and low end imaging, providing both large buffer size and high processing power. Various 32-bit timers, single or dual 10-bit ADC(s), 10-bit DAC, PWM channels and 45 fast with up to nine edge or level sensitive external interrupt pins make these microcontrollers particularly suitable for industrial control.

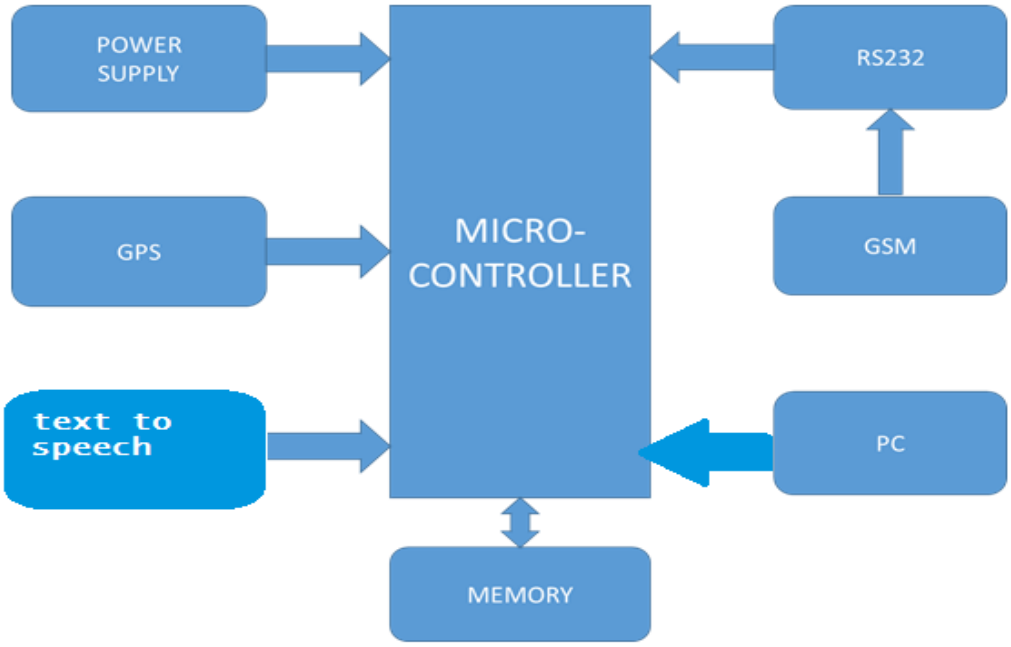

Fig 1 Implementation of project

III GSM DISCRIPTION

Each country developed its own system, which caused problems: System worked only within the boundaries of each country. Mobile equipment manufacturers markets were limited by the operating system. Solution was GSM, which is digital technology and was developed by. The Goals of GSM Improved spectrum efficiency International Roaming Low-cost mobile sets and base stations High-quality Speech Compatibility with ISDN

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and other telephone company services. Support for new services GSM is truly becoming the GLOBAL System for Mobile Communications. It's been clear for a long time that GSM would be used across Europe. Now, many countries around the world, which have been delaying their decision, have selected GSM. GSM has become a Pan Asian standard and is going to be used in much of South America. Personal Communications Networks PCN started in the UK with Mercury One-to-One and Hutchison Microtel (Orange) offering the first two networks to use DCS1800. The UK PCNs have had overwhelming success with their competitive business tariffs and cheap off-peak calls. Germany's E net followed the UK PCNs. DCS1800 is becoming more widespread with systems in Thailand, Malaysia, France, Switzerland and Australia. Further systems are planned in Argentina, Brazil, Chile, France, Hungary, Poland, Singapore and Sweden. The USA, which did not adopt GSM900, is about to use the GSM-based PCS1900 for one of its PCS systems. In the USA, GSM will share the allocated bands with other systems based on CDMA, NAMPS and IS-136 TDMA. The PCS1900 licenses already cover approximately half of the US population

IV. GPS GLOBAL POSITIONING SYSTEM

GPS Global Positioning System The GPS is a It is the only fully functional GNSS in the world. It uses a constellation of between 24 and 32 earth orbit satellites that transmit precise radio signals, which allow GPS receivers to determine their current location, the time, and their velocity. These satellites are high orbit, circulating at 14,000km/hr. and 20,000km above the earth's surface. The signal being sent to the earth at the speed of light is what is picked up by any GPS receiver Over the last five years Global Positioning Systems (GPS) have changed the way fieldwork is conducted. There are two principal reasons for using GPS in the field; these are navigation and determining co-ordinates for points in the GIS. This manual will not deal in depth with navigation, as this topic is described well elsewhere, even though GPS are excellent tools for field navigation, their very nature as electrical equipment means they are fallible. As such, a more traditional backup including a map and compass are essential

V. INTERNET OF THINGS

The Internet of Things (IoT) is an important topic in technology industry, policy, and engineering circles and has become headline news in both the specialty press and the popular media. This technology is embodied in a wide spectrum of networked products, systems, and sensors, which take advantage of advancements in computing power, electronics miniaturization, and network interconnections to offer new capabilities not previously possible. An abundance of conferences, reports, and news articles discuss and debate the prospective impact of the “IoT revolution”—from new market opportunities and business models to concerns about security, privacy, and technical interoperability.

The large-scale implementation of IoT devices promises to transform many aspects of the way we live. For consumers, new IoT products like Internet-enabled appliances, home automation components, and energy management devices are moving us toward a vision of the “smart home’’, offering more security and energy efficiency. Other personal IoT devices like wearable fitness and health monitoring devices and network enabled medical devices are transforming the way healthcare services are delivered. This technology promises to be beneficial for people with disabilities and the elderly, enabling improved levels of independence and quality of

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life at a reasonable cost.1 IoT systems like networked vehicles, intelligent traffic systems, and sensors embedded in roads and bridges move us closer to the idea of "smart cities'', which help minimize congestion and energy consumption. IoT technology offers the possibility to transform agriculture, industry, and energy production and distribution by increasing the availability of information along the value chain of production using networked sensors. However, IoT raises many issues and challenges that need to be considered and addressed in order for potential benefits to be realized

VI. CONCLUSION

The main aim of this project is to make an automated platform announcement system for train using GSM & GPS for tracking station data. The paper consists of microcontroller, automatic answering machine, GSM & GPS. The whole system is attached to the railway station. The automated system for the railway which makes the announcement of platform when train reaches at particular platform. read continuously to check against the station latitude and longitude values and the same will be updated on the Google map. The system can further be enhanced by providing "SMS on Demand" service. In this service an alert message is forwarded to the requesting users about the location information through the GSM/GPRS service or the server. This feature will ease the waiting time for the passengers for trains, as they can track it through the SMS request to the system

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