



## Electronic Auto Information query System in Educational Institutions

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### **Abstract:**

The main of the project is to provide student information query system, this will provide the an automated information passing to the induudal student this information is can be broadcasted to the internal database numbers by the management, this information is more secure and this will works without any interrupt, we can request a notification to know the status about the organization holiday or any important. Information can be broadcast to the registered persons in the form of SMS with the help of GSM technology.

### **I. INTRODUCTION**

An embedded system is a special-purpose computer system designed to perform one or a few dedicated functions, sometimes with real-time computing constraints. It is usually embedded as part of a complete device including hardware and mechanical parts. In contrast, a general-purpose computer, such as a personal computer, can do many different tasks depending on programming. Embedded systems have become very important today as they

control many of the common devices we use.

Since the embedded system is dedicated to specific tasks, design engineers can optimize it, reducing the size and cost of the product, or increasing the reliability and performance. Some embedded systems are mass-produced, benefiting from economies of scale. Physically, embedded systems range from portable devices such as digital watches and MP3



players, to large stationary installations like traffic lights, factory controllers, or the systems controlling nuclear power plants. Complexity varies from low, with a single microcontroller chip, to very high with multiple units, peripherals and networks mounted inside a large chassis or enclosure.

An embedded system is some combination of computer hardware and software, either fixed in capability or programmable, that is specifically designed for a particular kind of application device. Industrial machines, automobiles, medical equipment, cameras, household appliances, airplanes, vending machines, and toys (as well as the more obvious cellular phone and PDA) are among the myriad possible hosts of an embedded system. Embedded systems that are programmable are provided with a programming interface, and embedded systems programming is a specialized occupation. Certain operating systems or language platforms are tailored for the embedded market, such as Embedded Java and Windows XP Embedded. However,

some low-end consumer products use very inexpensive microprocessors and limited storage, with the application and operating system both part of a single program.

## II. EXISTING AND PROPOSED METHOD

### **Existing System:**

In every institute or industry there is always an information desk that provides information about the staff, institute, and its departments and about everything related to that institute. In the existing system the issue is that a person needs to go in the institute at the information desk in order to get information from them. The problem is that it requires some staff that is dedicated to that purpose and that must have up to date information about the institute and the recent happenings in the institute.

### **Proposed System:**

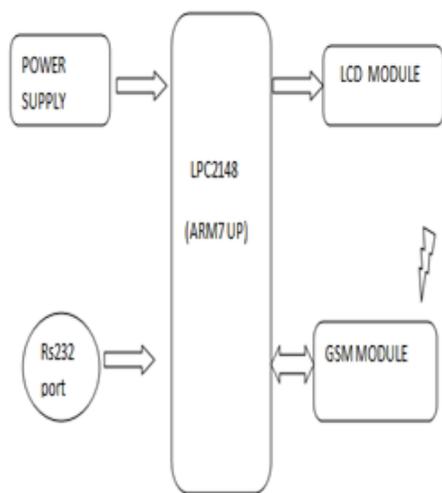
In this paper we have proposed and implemented a mechanism for conveying information to students/employees in a

university. The basic idea of the system is to employ an automated notification and information counter. The system works using a GSM module to provide remote connectivity, users can interact with system using SMS messages. When the system receives an SMS, it determines the sender and the information required and replies the sender with the requested information.

The LPC2148 microcontrollers is based on a 32-bit ARM7TDMI-S CPU with real-time emulation and embedded trace support, that combine microcontrollers with embedded high-speed flash memory ranging from 32 kB to 512 kB. A 128-bit wide memory interface and 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, LPC2141/42/44/46/48 are ideal for applications where miniaturization is a key requirement, such as access control and point-of-sale. Serial communications interfaces ranging from a USB 2.0 Full-speed device, multiple UARTs, SPI, SSP to I2C-bus 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

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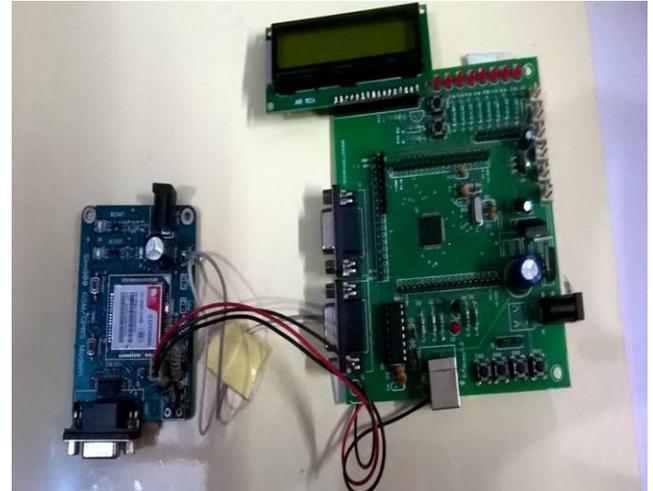


## 2.1 GENERAL DESCRIPTION OF LPC2148:

buffer size and high processing power. Various 32-bit timers, single or dual 10-bit ADCs, 10-bit DAC, PWM channels and 45 fast GPIO lines with up to nine edge or level sensitive external interrupt pins make these microcontrollers suitable for industrial control and medical systems.

### III. RESULT:

Hardware module for design and implementation of information dissemination in educational institutions using embedded technology was done and output was obtained. The following figure shows hardware module for design and implementation of information dissemination in educational institutions using embedded technology.



### ADVANTAGES OF PROJECT:

- Students or employees easily get important notice or information by message anytime 24\*7
- Within seconds organization can change notice or information by sending SMS only.
- Admin can change the display message or notice from any place or anywhere.

### DISADVANTAGES OF PROJECT:

- If anybody wants information they have to do message and every new information they have to send-



message again and again to the system,

- For SMS we have to pay or we have to give extra charges to organization.
- Security and network issues may occur sometimes.

#### IV. CONCLUSION

The project “**An Electronic Information Desk System for Information Dissemination in Educational Institutions**” has been successfully designed and tested. In this paper, an automated information desk system for universities was proposed and implemented. The system consists of a small embedded system, a GSM module to perform communication with the outside world and an EEPROM for storage of information to be distributed. The system was shown to work well when requiring information remotely on a mobile device via SMS. A complete framework was described on the organization and storage of the information to be distributed. This

system has wide ranging utility as an add-on to notice boards for convenience of information transmission and use as a standalone help assistant in various applications.

#### FUTURE SCOPE

In future, improvements to this system could be the hardware design for adding this to an electronic notice board. This would form a complete system for information distribution in public places. Another improvement to the current system could be an embedded server which could Results of an Examination sent by system to Requesting user also provides access to information via the internet. GSM was used for communication in this project due to its low cost and wide availability, it is therefore assumed that application of this system is carried out in an environment where it does not interfere with medical devices such as pacemakers, hearing aids etc. In such a situation, other communication schemes may be employed.



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