# **ABC INSTITUTE OF ENGINEERING AND TECHNOLOGICAL**

**GREATER NOIDA**

VTU%20LOGO

A PROJECT SYNPOSIS ON

# **GSM BASED E-NOTICE BOARD**

**By:**

**Team Name: T-16**

**A ROLL NO**

**B ROLL NO**

**C ROLL NO**

**Under the Guidance of**

**Prof ABC**

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**7th Semester B.TECH ECE, Academic Year: 2013 – 2015**

**Department Of Electronics Engineering, A.B.C. College of Engineering & Technology, GREATER NOIDA.**

**(Autonomous Institution under Visvesvaraya Technological University, Belgaum-590 018)**

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# **Declaration**

This is to declare that we the members of the team with team ID:T16 are going to initiate the project with title “**GSM BASED E-NOTICE BOARD**” from the date 25/8/2013 as per the requirements of final year academic project (for 14 credits in two phases) in the Department of Computer Science Engineering of SDM College of Engineering and Technology during the year 2013 – 2014. The summary containing the detail of project title, project domain, project team, project guide, project objectives and outcomes is listed below.

**Project Title** : GSM BASED E-NOTICE BOARD

**Project Domain :** Embedded System

**Project Group** :T-16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl.No | ROLL NO | Name | Semester &  Division | E-Mail & Mobile Number | Signature |
| 1 | 1 | A | VII- A |  |  |
| 2 | 2 | B | VII- A |  |  |
| 3 | 3 | C | VII- A |  |  |
| **GUIDE** | | …………………… | |  |  |

Project Objectives:

1. To learn the concepts of Embedded System and implement the same.
2. Enhancing Programming skills (mainly in Assembly level language/C).
3. Learning AT commands.
4. To design the hardware circuits.

Project Outcomes:

1. Knowledge about microcontroller ATMEGA328, GSM and many other hardware devices.
2. Getting Expertise in any particular programming Language ( language/C).
3. Designing a proper working circuit.
4. Designing a final product.

# **Introduction**

Due to advances in wireless communication it is possible to control devices withoutphysical movement. This is possible with the use / design of an embedded system in communication giving comfort and safety to human life. The main aim of our project is to design a SMS driven automatic display board that can replace the currently used programmable electronic display.The Receiver and display board can be programmed from an authorized mobile phone. The message to be displayed is sent through an SMS from an authorized transmitter. The microcontroller receives the SMS, validates the sending Mobile Identification Number (MIN) and displays the desired information. In the project reprogramming is not required unlike the electronics display. The display board programs itself with the help of incoming SMS with proper validation. Such a system is helpful for immediate information transfer.

# **Architecture**

**Regulated**

**Power Supply**

Data bus

**GSM Modem**

**D0 – D7 LCD**

**ARDUINO**

**Mobile Phone**

# **Business Scope**

1. This product can be used to display the messages quickly and remotely.
2. Can be used in Institutions and hospitals and many other places to display some important notice.

# **Product Features**

1. The product is limited to one user it checks for sender’s number verifies it and then displays the message received
2. Device continuously checks for new message and if no message has been received then continues displaying the previous one.
3. The GSM device in the product provides authentication for the new message before displaying. So only authorized people can access it.
4. Device displays a message until and unless it has received the new one or the power supply is being turned off.

# **Prerequisite/Expertise**

1. GSM and AT commands.
2. Arduino uno basics.
3. Arduino uno interfacing.
4. Uno ide software.
5. C Programming skills.

# **Hardware Requirements**

1. Microcontroller(ATMEGA-328)
2. GSM Modem
3. Display Unit
4. Power Supply

# **Software Requirements**

1. GSM Modem-ARDUINO Interfacing

# **Limitations and Assumptions**

* 1. Message displayed will be SMS type. Only short messages can be displayed.
  2. Only one person who is authorized can access the system.

# **Risks and Mitigation Plans**

1. Failure of any component may lead to failure of the device.

# **Future Enhancements**

* A commercial model can be able to display more than one message at a time.
* Alphanumeric LCDs have a limitation on size as well as no of characters. These can be replaced with large LED display boards which are not only eye catching but display characters in a moving fashion one after the other.
* In our project we are sending messages via GSM network and displaying on a LCD by utilizing AT commands. The same principle can be applied to control electrical appliances at a distant location.
* Robots can be controlled in a similar fashion by sending the commands to the robots. This can be used for spy robots at distant locations, utilized by the military to monitor movement of enemy troops.

# **References**

* The ATMEGA328 Microcontroller and System

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* GSM and Personal Communications Handbook

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