

GSM based Agricultural Motor Control

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Abstract: The objective of this project is to control the Machineries in the industrial and appliances in home through the GSM Technique. In this project we interfaced Mobile and Microcontroller; we control the machine through the Microcontroller. The Mobile is interfaced to the Microcontroller with the help of Data Cable and RS232 level converter for anexample when you are away from your home and we wants to switch 'on' the any one Machine such that printing Machine, TextileMachineries (or) Industrial appliance like Fan, water pump, etc .. You have to send SMS that contains the corresponding Machine number and type of mode such that ON (or) OFF to the Mobile Phone. This is interfaced with the Microcontroller in company or home.

I.INTRODUCTION

Recently man's work and life are increasingly complicated with the rapid growth in communication as well as information technology. Due to the rapid economic growth the living standard has kept raising everyday such that people have a higher requirement for dwelling functions. This information based society has changed the people way of life as well as challenged the customs. The intellectualized society brings diversified information where safety, economical, comfortable and convenient life has become the ideal for every modern family Now the trending concept of smart home has focused the attention of researchers, consumer and the life style practitioners to be directed towards the usage of the recent technologies. Considerable efforts have been made for the development of remote control systems in home automation. This system uses the mobile phone as the input controlling device which cannot be connected through any other users interface. 2G networks developed as a replacement for first generation (1G) analog cellular networks. The GSM standard originally described a digital, circuit-switched network optimized for full duplex voice telephony. This expanded over time to include data communications, first by circuit-switched transport, then by packet data transport via General Packet Radio Service (GPRS), and Enhanced Data Rates for GSM Evolution (EDGE). As a result of the network's widespread use across Europe, the acronym "GSM" was briefly used as a generic term for mobile phones in France, the Netherlands, Bulgaria and in Belgium. A great number of people in Belgium still use it to date. Beginning in the late 2010s, various carriers worldwide started to shut down their GSM networks.

II.EXISTING SYSTEM

The existing System focusing on GSM based system for turning on Agricultural motor. Different control technologies are used for monitoring and control of the systems, whereas the communication between a system and a user is generally realized online via wireless communication techniques such as RF, ZigBee. Also, Mobile communication programs are utilized for developing user interfaces. However, wireless communication programs do not provide adaptability for users because of their expensive libraries. RF, ZigBee and GSM technologies are widely preferred in easy-to-use applications due to the short range between the sender and the receiver, and the small volumes of data transferred.

DRAWBACKS:

- GSM will communicate only through 2G and 3G network Only.
- So using this project we can only control the motor using only signal is available.

III.PROPOSED SYSTEM

GSM Pump Motor Controller Circuit using Arduino In this post we are going to construct a farmer friendly GSM pump motor controller circuit which could turn on and off the irrigation system remotely from anywhere in the world via cellphone SMS and return you with an acknowledgement message. Agriculture is one of biggest industry in India which serves food for more than a billion people every year. Producing vast amount of food is never an easy task; irrigation is one of the factor. Most of the agriculturist's crop field is situated far from their residence, just turning on the water pump costs huge for their transportation per year. This SMS based GSM pump motor controller takes a baby step towards agricultural development, this may not be a revolutionary project

but, it may bring delight among agriculturists.

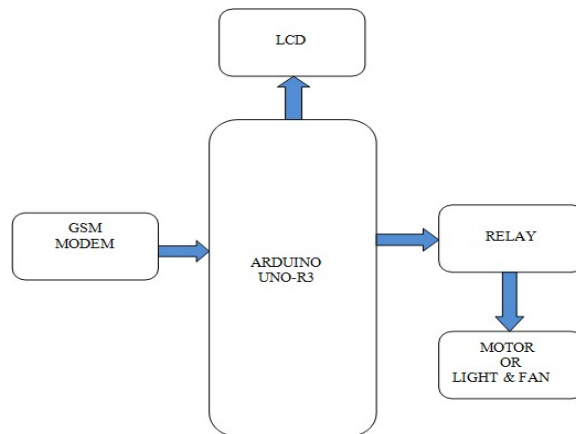


Fig.1. Block Diagram
III.SIMULATION

[A] MODE 1 [SIMULATION DIAGRAM OF PROPOSEDSYSTEM]

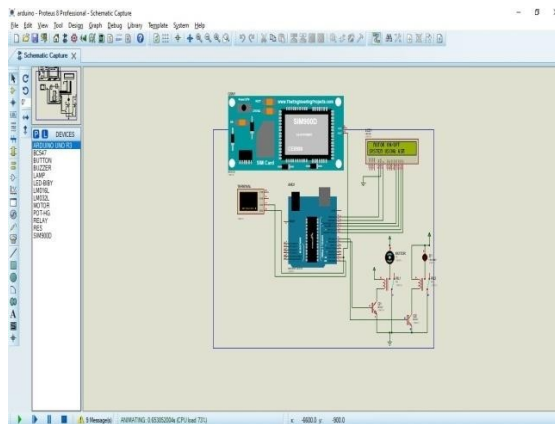


Fig.2. Mode 1 Simulation Diagram

Now run the Proteus Simulation, and if everything goes fine, to press run button and the proteus software running .We have to run the aurdino by using Digital (PWM) and next we have to click the virtual terminal.

[B] MODE 2 [SIMULATION OF LOAD 1 ON AND LOAD 2 OFF]

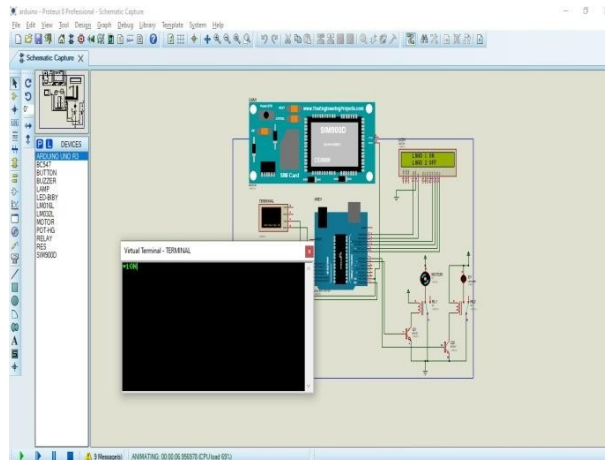


Fig.3. Mode 2 Simulation Diagram



Fig.4. Hardware Implementation

V.CONCLUSION

The project in science & technology is a non-stop process. New things and new technology are being invented. As the technology grows day by day, we can imagine about the future in which thing we may occupy every place. The proposed system based on Atmel microcontroller is found to be more compact, user friendly and less complex, which can readily be used in order to perform several tedious and repetitive tasks. Though it is designed keeping in mind about the need for industry, it can be extended for other purposes such as commercial &

research applications. Due to the probability of high technology (Atmel microcontroller) used “GSM BASED AGRICULTURAL MOTOR CONTROL” is fully software controlled with less hardware circuit. The feature makes this system is the base for future systems.

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