

# Android Application for Motor Controlling at Remote Location

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## Abstract -

*This project is about controlling the motor from remote location, controlling means ON, OFF the motor.*

*Also provide the facility of Scheduling that is we provide the scheduler for controlling the motor that means add the schedule of day and automatically at that day & time motor is ON there is no effort to farmer to remember this things.*

*There are 50 commands are used to develop this application. Also provide the facility of Dry Run Condition, that means if the water is not present in damp then after some time the motor will be automatically switch OFF.*

*Every time the motor will get feedback to user, that is motor is ON, motor is OFF also motor is previously on at this time etc.*

*This is the very good Example of Embedded system which is interacted with Android Application.*

**Key Words:** IVR, DTMF, GSM, MODEM, FEEDBACK SMS, THREE PHASE MOTOR, CONTROL SIGNAL

## 1.1 Introduction:-

This Project is a very good example of embedded system. The aim of this project is to control i.e. to ON/OFF control of different motors from location.

We provide facility of Scheduling that is we provide the scheduler for controlling the motor that means add the schedule of day and automatically at that day & time motor is ON there is no effort to farmer to remember this things.

We designed the project to work with Quectel M95 GSM modem.

starter works with a mobile device. In this system a mobile works as a signal transmitter and other mobile is signal receiver. The mobile transmitter calls to receiver mobile. The call is automatically received by receiving mobile. When a numeric button is pressed during this time the transmitter mobile send a DTMF signals, this signals is received by receiving mobile and motor get started. And to stop the motor other specified button is pressed and motor get stopped. This starter has a controlling circuit that enables switching ON and OFF of Trics. It can be used to switch motor from any distance. This circuit is

based on the DTMF controller circuit. DTMF means "Dual tone multiple frequency". The DTMF signals on mobile are used as control signals. Limitation Motor is started and stopped only in the presence of mobile network. It takes few seconds to operate the motor. Because of these limitations, this product is not efficient & also it is not fulfilling the all requirement of farmers. so we are trying to make our project more efficient & user friendly

## 1.2 Literature Survey:-

We did survey of farms We ask the farmers their problem which they faced while working in farm. The main problem of the farmer are proper operating of motor.

-The motor can damage by over/under voltage & current.

-If the dry sensing condition is not sense then also the motor can damage.

-load shedding

-Distance between farm & farmer's house.

According to these conditions we search a solution of this problem. All induction motors require a starter to start the motor. Wireless three phase induction motor device can start the motor from long distance without using wire. This. Our project is about make this control system efficient and dynamic. As the name suggested the automatic control is for controlling the motor from remote place, look over its operating conditions; get feedback from the motor itself.

## 2. Existing system:

Existing system is send text message from your mobile device. SMS is synced with your phone. OR you directly call the motor number which already registered to starter. but the disadvantage of that is the farmer need to remember this all syntax of the message format every time.

**3. Proposed System:-** Text from your on your smartphone! sms is synced with your phone and uses your current Android phone number.

After installing Application on Android phone you can Perform Operation Like Motor

ON/OFF ,Voltage HIGH/LOW, To Set Motor Current, To Change Password, To Get Motor Status on Site, To Load Factory Setting.

#### 4.Implementation Details:-

##### What is android ?

Android is basically an operating system for smartphones. But we find now integrated into PDAs,touch pads or televisions, even cars (trip computer) or netbooks. The OS was created by the start-up of the same name, which is owned by Google since 2005 .

##### Why Android is better ?

###### • **Applications** - google applications

Android includes most of the time many Google applications like Gmail, YouTube or Maps.

These applications are delivered with the machine most

of the time, except in certain cases, such as some phones running android on which the provider has replaced Google applications by its own applications.

-widgets:-With android, it is possible to use widgets which are small tools that can most often get information. These widgets are directly visible on the main window.

-Android Market:- This is an online software store to buy applications. Developers who created applications can add them into the store, and these applications can be downloaded by users, they can be both free and paid.

• **Multitasking**:- Android allows multitasking in the sense that multiple applications can run simultaneously.

With Task Manager it is possible view all running tasks and to switch from one to another easily.

###### • **SDK**

A development kit has been put at disposal of everybody. Accordingly, any developer can

create their own applications, or change the android platform. This kit contains a set of libraries, powerful

tools for debugging and development, a phone emulator, thorough documentation, FAQs and tutorials.

###### • **Modifiability**:

This allows everyone to use, improve or transform the functions of Android for example transform

the interface in function of uses , to transform the platform in a real system embedded Linux.

#### 5. Modules of System

1. User-specific topic modeling
2. Send a Text Message
3. Receive a Text Message

#### 6.Algorithm:-

- 1) Start
- 2) Initialize
- 3) GSM Modem ,Timer , Interrupt ,Fault LED's, Relay
- 4) Wait for 30 sec for GSM modem Initialize
- 5) Power LED Blink for 30 sec
- 6) All Falut LED's OFF , Relay OFF
- 7) Check Command
- 8) Wait for GSM command
- 9) GSM commands are executed by operating the Application on demand
- 10) Return the feedback from GSM Microcontroller to the farmer on Application
- 11)Operation Successfully Perform
- 12) Stop

#### 7.Results:-



## 8. CONCLUSION:-

Design such a project and implement it, we gather great practical experience. We tried to implement our theoretical knowledge successfully. This course teaches us about the far difference between theoretical and practical knowledge. This project increases our ability to work as a group and it helps us in future life. But we face several problems because of unavailability of quality goods, technical support and inexperience. Despite that we enjoyed our work very much and successfully finished that work in perfection. In this dynamic world motor is the most convenient and useful tool in industry. Large rated motor required flexible control and protection. We hope our project can bring dynamic change in our industrial level motor controlling system.

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