

“Monitoring and controlling of Agricultural Farms & Forests via GSM”

Degree Project Report



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CERTIFICATE

We accept the work contained in the degree project report titled “Monitoring and controlling of Agricultural Farms & Forests via GSM” as a confirmation to the required standard for the partial fulfillment the degree of BEE.

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Acknowledgement

We would like to extend our thanks to all the people who helped and supported us during this project.

We would like to express our sincere gratitude to our supervisor Mr. Imtiaz Ali Khan for his patience, enthusiasm and immense knowledge. He has taken all the pain to go through the project and make necessary changes as and when needed.

We also thank all the staff who supported us in the lab work and make it very convenient for us to work in a friendly and accommodating environment.

We pay homage to the Government of Azad Kashmir for realizing the spark in our idea and supporting us to accomplish this project.

We humbly pay thanks to our parents for supporting us spiritually throughout our life.

Dedication

This project and all its work is dedicated to the people of Islamic Republic of Pakistan who are starving to hunger due to lack of opportunities and flaws in policies set for them. We have taken a step to ensure a positive impact of our telecommunication industry on agriculture and forests, so that we may inspire and motivate the new comers to work for their own people.

Abstract

One of the greatest concerns facing the agriculture and forests today is damages done by animals and other living creatures. An efficient system is designed comprising of a laser fence to control the security breach. The fence is surrounding the experimented area in all dimensions and when the connection between the laser light and the light dependent resistor is disconnected a message is received on mobile via GSM module indicating the interruption of an intruder. Water level monitoring is introduced for the regular supply of water. Humidity and temperature are also monitored to control the dryness in the fields that may also affect the yield. Using Interactive Voice Response (IVR) various operations can be performed to cater and control this security breach.

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Abbreviations

AT commands: Attention Commands

CDMA: Code Division Multiple Access Network

CMOS: Complementary Metal–Oxide–Semiconductor

EPROM: Erasable Programmable Read Only Memory

EEPROM: Electrically Erasable Programmable Read Only Memory

ETSI: European Telecommunications Standards Institute

GSM: Global Systems for Mobile Communication

HLR: Home Location Register

IMSI: Internet Mobile Subscriber Identity

LEDs: Light-Emitting-Diode

PDU : Protocol Data Unit

PLMN: Public Land Mobile Network

RAM: Radom Access Memory

ROM: Read Only Memory

SIM: Subscriber Identity Module

SMS: Short Messaging Services

TDMA: Time Division Multiple Access

TTL: Transistor Transistor Logic

UART: Universal Asynchronous Receiver Transmitter