

## Advanced Agriculture with Anti-Theft Technology

Krushna V. Amte<sup>1</sup> Sagar A. Gawade<sup>2</sup> Madankumar S. Kachare<sup>3</sup> Prof. Sharad S. Jagtap<sup>4</sup>

<sup>1,2,3</sup>BE Student <sup>4</sup>Assistant Professor

<sup>1,2,3,4</sup>Department of Electronics and Telecommunication Engineering

<sup>1,2,3,4</sup>Anantrao Pawar College of Engineering and Research, Pune, Maharashtra, India

**Abstract**— Smart agriculture is an emerging concept, because IOT sensors are capable of providing information about agriculture fields and then act upon based on the user input. In this Paper, it is proposed to develop a Smart agriculture System that uses advantages of cutting edge technologies such as Arduino, IOT and Wireless Sensor Network. The paper aims at making use of evolving technology i.e. IOT and smart agriculture using automation. Monitoring environmental conditions is the major factor to improve yield of the efficient crops. The feature of this paper includes development of a system which can monitor temperature, humidity, moisture and even the movement of animals which may destroy the crops in agricultural field through sensors using Arduino board and in case of any discrepancy send a SMS notification as well as a notification on the application developed for the same to the farmer’s smartphone using Wi-Fi. The system has a duplex communication link based on a cellular-Internet interface that allows for data inspection and irrigation scheduling to be programmed through an android application. Because of its energy autonomy and low cost, the system has the potential to be useful in water limited geographically isolated areas.

**Keywords:** Anti-Theft Technology, Smart agriculture

### I. INTRODUCTION

In Technologies globalization, many technologists are trying to update a new development based on automation which works very rigidly, high effectively and within short time period. So we have developing Anti- Theft technique with Advance Agriculture. Precision agriculture is a farming management concept based on observing, measuring and responding to inter and intra-field variability in crops. By collecting real-time data on weather, soil status, crop maturity and other factors, predictive analytics can be used to make better decisions for the future. This project proposes a low power, low cost, robust data collection system to generate and gather data autonomously in isolated or remote areas. The sensor module collects soil moisture and temperature data and air temperature and humidity data that are then gathered periodically by a following system that process the data

### II. LITERATURE SURVEY

- [1] IOT based smart agriculture system can prove to be very helpful for farmers since over as well as less irrigation is not good for agriculture.
- [2] In system for an intelligent farming for an outdoor farming, called IF. To make a decision, the model requires two important information pieces which are the sensed data from the sensors in the plot and the weather condition.
- [3] In IoT based smart farming, a system is built for monitoring the crop feild with the help of sensor and automating the irrigation system.

- [4] This System helps in obtaining the nature of the soil by extracting the behavioral content of the soil by using different sensor.

### III. BLOCK DIAGRAM

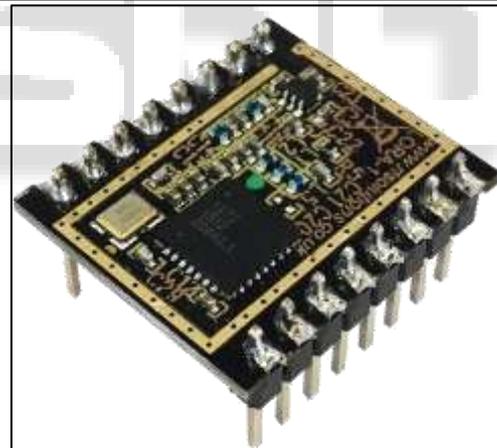
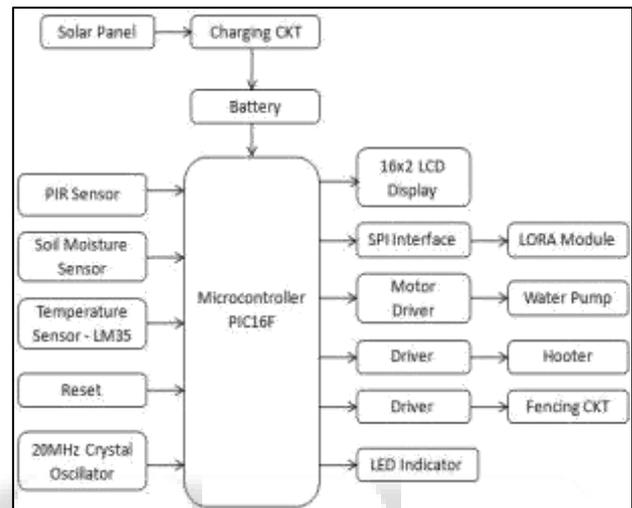


Fig. 1: Transmeter system

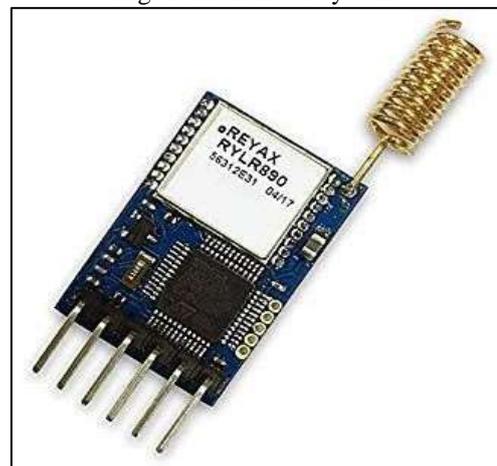


Fig. 2: Receiver System

#### IV. DESCRIPTION

First of all the battery will be charged through the solar panels. Water pumps will work according to the moisture of the soil. This pump can be operated by the owner by sitting at home also.

The owner will also be having the information of the temperature of the atmosphere in the farm. According to the temperature, the water sprinklers will be turned ON. The PIR sensors are used for the detection of the animals & the thieves who are trying to get into the respective farm for the security purpose, after that the buzzer will make noise & the alerts will be sent to the user.

The electric fencing consists of three phases, therefore according to the animal's size and shape, electric shock will pass. But this shock is not totally harmful for the animals & humans. In this System Totally communication will happen through LORA MODULE from TX to RX. With SPI protocol.

#### V. EXISTING SYSTEM

There are many systems which are present in the agriculture such as Automatic Turn Water Pump. But there are no any systems which are present which can try to resist the theft.

#### VI. ADVANTAGES

- 1) Low Cost and User friendly system for Farmers.
- 2) It gives the alerts to the owner if any misoperation is done.

#### VII. PROPOSED SYSTEM

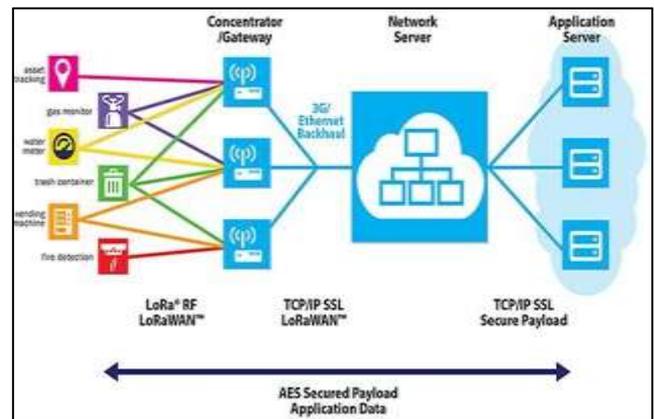
In this system, we are making an Automatic Turn ON Water Pump that depends upon the value of Temperature, Moisture Sensor. Along with that we have used the Electric Fencing that will try to resist the animals who are trying to get into the farm. Along with this, when thieves try to come for theft, buzzers will be turned on and at that time the message will be sent to the owner.

#### VIII. CONCLUSION

To reduce farmers efforts we introduced a system which give protection from theft by providing electric fencing and It will also restrict the animal to enter into the farm. This solution aims to improve the quality of life of farmer who serve as the backbone of our country as well as our economy

#### IX. FUTURE SCOPE

In this project, we are trying to reduce the theft and this project will help the farmer and make farmer's life simple. We are also doing the Agriculture Automation.



#### REFERENCES

- [1] Nikesh Gondchwar, R. S. Kawitkar, "IOT based smart agriculture," International journal Of Advanced research in computer and Communication Engineering (IJARCCE), vol. 5, no. 6, Jun. 2016.
- [2] Narayut Putjaika, Sasimane Phusae, Anupong Chen-Im, Phond Phunchongharn and Khajonpong Akkarajit Sakul, "A control system in intelligent agriculture by using arduino technology," in Fifth ICT International Student Project Conference (ICT- ISPC), 2016.
- [3] Tejas Bangera, Akshar Chauhan, Harsh Dedhia, Ritesh Godambe, Manoj Mishra, "IOT based smart village," International Journal of Engineering Trends and Technology (IJETT), vol. 32, no. 6, Feb. 2016, ISSN: 2231- 5381.
- [4] Abdullah Na, William Isaac, "Developing a human-centric agricultural model in the IOT environment," in 2016 International Conference on Internet of Things and Applications (IOTA) Maharashtra Institute of Technology, Pune, India 22 Jan - 24 Jan, 2016, 978-1-5090-0044-9/16, 2016 IEEE.