POULTRY FARMING MONITORING AND FEEDING SYSTEM

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Abstract - *Most of the businessmen and farmers use traditional poultry farming methods. The traditional poultry farms lack proper and effective management to maintain health and growth of chicken. All the poultry activities like filling the water tank, monitoring temperature, time to time feeding of chicken, cleaning the chicken waste and light control in the farm are done manually, Hence a large manpower is required.*

So without automation it requires manual work to take care of poultry (chickens) and what if the care taker/owner is not present in farm and due to some environmental conditions, the poultry birds get harms or may die, that may affect the business.

To reduce or to eradicate the death rate of poultry birds, some system is needed and automation is the only best solution. To design a remote controlled automatic poultry feeding system and temperature- humidity control system.

To implement an interface this will control the feeding and water supply and also collect the data of analog sensors to control the temperature and humidity of the poultry farm.
To share the data over internet using IOT which allows the owner to access the devices from anywhere across the globe.

*Key Words***: Internet of Things (IOT), temperature controller, automatic feeder, wireless sensor network.**

1. INTRODUCTION

The Poultry Culture in India has increased to leaps and bounds in the past few years or decades. The country contributes majorly in the export of the poultry products. Due to this, the awareness for the health of poultry birds as well as the quality of products has also increased.

Many problems arise while taking good care of the poultry birds as it is a very tedious and intricate task which demands lot of alertness and minimum errors. These sensitive creatures are prone to lot of diseases which might be a hindrance in the business.

Also, the manpower required to do the job takes a lot of time and the cost is high. Introducing Automation in Poultry Industry has brought about enormous change in terms of observation and the need to stay aware of the recent condition of the farm.

Where a lot of manpower was required for constant needs of the birds, this technology has helped in reducing manual work and given ease of operation to the workers as well as owners.

IOT has made the operation of farm easy and very on the go. Due to this technology, the concerned person can get real time data whenever required through cloud and can make use of it to make any necessary changes to the current conditions.

As the world trending into new technologies and implementation of IOT, research in agriculture field also take the IOT benefits in producing the best livestock. Most of the projects in this field manifest the use of a wireless sensor network (WSN) in collecting data from different sensors deployed at various nodes. The collected data contain information about the environmental state.

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2. LITERATURE SURVEY

"Chakchai So-In","Sarayut Poolsanguan" and "Kanokmon Rujirakul"
[1] Have developed the global architecture of hybrid systems for mobile and wireless network management systems for intelligent poultry sensors. One of the ideas is to distinguish the electronic and mechanical parts of the farm in terms of mobility and flexibility. Take into account EVAP systems in general once.

Managers and farmers have established farms, in addition to the selection of food and animal heritage, other important factors such as temperature, humidity, light and population density are also necessary for the controller can adjust the environmental conditions correctly.

"In Hironao Okada", "Koutarou Suzuki", "Tsukamoto Kenji" and "In Toshihiro Itoh"

 [2] Is explicitly explained by the bird flu virus in skin cancer, but also by the behavior of the sensor. List puts the strain in the field or use of body temperature in lifetime acceleration data. Surveillance data detected on unusual media, automatically reported by users of internet services, as well as historical information, terms and conditions of sale accepted by the media, sensitive individuals.

Chicken growth will decrease if the presence of dust and ammonia in the air is excessive. To avoid a low growth rate, moisture should be kept below 50% if the temperature is above 27 degrees.

3. METHODOLOGY

There are various techniques to control motors and devices such as IOT based automation over the cloud, automation under Wi-Fi through android apps from any smart phone, Node MCU (ESP 8266) based automation, automation by android application based remote control, etc.

The android OS provides the flexibility of using the open source. The inbuilt sensors can be accessed easily. Android Phone acts as a client and data are sent via server.

The objective of this project is to build a smart system with internet using Node MCU ESP8266 for poultry feeding and water supply and temperature- humidity detection based on Internet of Things (IOT) with microcontroller. Here, Node MCU communicates with IOT server through internet. The final outcome of project is to control the switches and actuators through internet using IOT server and send data to the user.
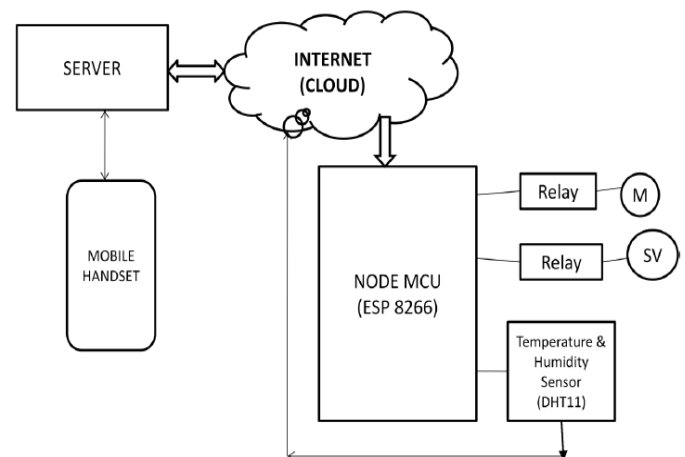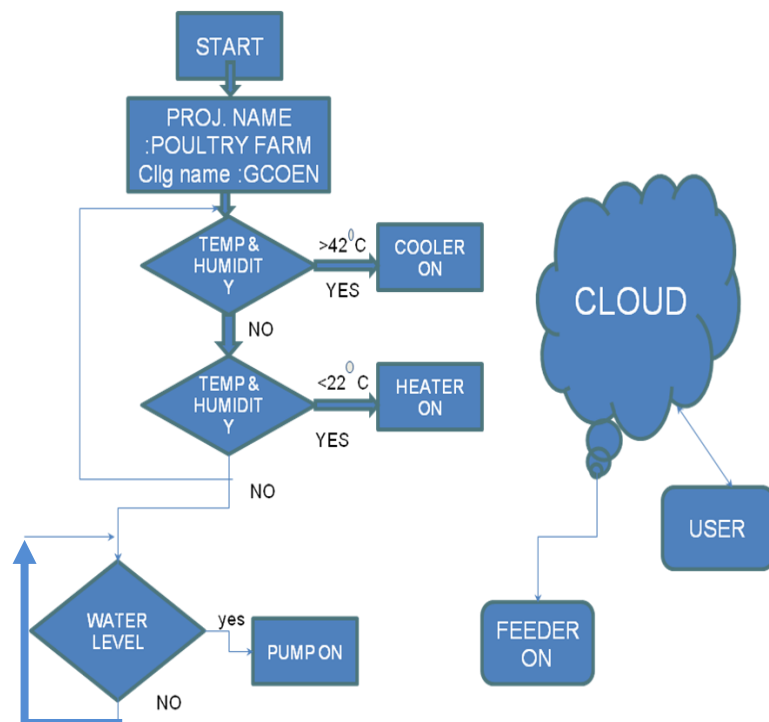

Fig -1: Block Diagram

Fig -2: Flow Chart

4. CONCLUSIONS

This paper proposes an efficient automatic poultry farming monitoring and also feeding system. Another advantage of the proposed system is that it helps in reducing the manpower required to do the work in the farm as in the form of feeding. As compared to the traditional method, the proposed system requires less cost to maintain the health of the farm.

We have successfully achieved the aim and objectives that were in our minds during the early stages of project. We have used DHT11 sensor and able to detect the temperature and humidity of the farm. Finally, we have created a cloud platform on Ubidots for collecting data of the farm to the registered number. The proposed system will significantly reduce number of death of poultry birds due to the real time monitoring of the farm, so that owner or user can alter the temperature of the farm which is suitable for the poultry birds.

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