PSRR COLLEGE OF ENGINEERING

IBM PROJECT-LITERATURE SURVEY

BACHELOR OF ENGINEERING

IN ECE

PROJECT NAME: IOT BASED CROP PROTECTION

SYSTEMS FOR AGRICULTURE

ABSTRACT

The main aim of our project is to protect the crops from damage caused by animal as well as divert the animal without any harm. Crops in farms are many times ravaged by local animals like buffaloes, cows, goats, birds etc. This leads to huge losses for the farmers. It is not possible for farmers to barricade entire fields or stay on field 24 hours and guard it. So here we propose automatic crop protection system from animals. Animal detection system is designed to detect the presence of animal and offer a warning. In this project we used PIR and ultrasonic sensors to detect the movement of the animal and send signal to the controller. It diverts the animal by producing sound and signal further, this signal is transmitted to GSM and which gives an alert to farmers and forest department immediately.

Wildlife tracking involves acquiring information about the behavior of animals in their natural habitat. This information is used both for scientific and conservation purposes. The primary form of information that needs to be obtained is the location of the animal at certain points in time and this is generally referred to as tracking or radio–tracking. However, due to the similarities in obtaining the information, the terms are frequently used interchangeably. There are remote methods that can be used to track and identify animals visually and through acoustic signals. It is meaningful to design a strategy to roughly localize mobile phones without a GPS by exploiting existing conditions and devices especially in environments without GPS availability. The availability of Bluetooth devices for most phones and the existence of a number of GPS equipped phones in a crowd of phone users enable us to design a Bluetooth aided mobile phone localization strategy. With the position of GPS equipped phones as beacons, and with the Bluetooth connection between neighbor phones as proximity constraints, we formulate the problem into an inequality problem defined on the Bluetooth network. The convergence of the neural network and the solution feasibility to the defined problem are both

theoretically proven. The hardware implementation architecture of the proposed neural network is also given in this article. As applications, rough localizations of drivers in a tunnel and localization of customers in a supermarket are explored and simulated. Simulations demonstrate the effectiveness of the proposed method.

Boundary walls and solar fences around the sensitive areas are built to prevent the wild animal attacks. But this system doesn't allow the animals to have a large living range and in-dependence of movement. Overhead or underground structures as in are built to divert the wild animals into a different path not interfering with vehicle traffic. But this system takes longer duration, labor and moreover not economical and satisfactory some devices of information technology, viz., radio collars with very high frequency, global positioning system and satellite uplink facilities, are being used by the research institutions to monitor the movement of lions, tigers, elephants, olive riley turtles, and other wild animals to understand their movements and their use pattern of the habitat. But installation of the system becomes difficult and is not always possible.