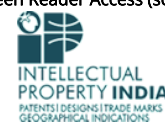


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Patent Search

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Abstract:

The proposed system is modeling a system of reading, monitoring and controlling pollution parameters and informing pollution control authorities when any one of those factors goes higher than industry standards. The proposed robot is implemented to assist farmers in their agricultural field. The robotic system can perform pest management by making use of sensors and camera. The controlling technology of the entire system is Raspberry Pi and a camera module is also provided in order to identify the type of plant. The proposed robot is composed of Four DC motors are attached to the wheels on either side such that each side is driven by two motors each. A 12V battery supply is fed for the operation of wheels. The movement of the robot is guided by line follower robotic system using IR sensor that is fixed on the robot's body. Using the camera module fixed on board the raspberry pi which controls the whole robotic system identifies the plant and sprays adequate pesticide.

Complete Specification

Claims:• Robotic system can perform pest management using sensors and camera.

- Raspberry Pi is used to control the operation efficiently.
- , Description:3. DETAILED DESCRIPTION OF THE INVENTION
3.1 BLOCK DIAGRAM

Fig.1 Pollution Monitoring Using Raspberry Pi

3.2 METHODOLOGY

Raspberry Pi is the heart of the system. In this project, webcam is interfaced to Raspberry Pi via Wi- Fi module. The Raspberry Pi Model B+ incorporates a number of enhancements and new features. Enhanced features are improved power consumption, increased connectivity and greater IO which made this powerful, small and lightweight ARM based computer. The Raspberry Pi cannot directly drive the relay. It has only zero volts or 3.3 V. It needs 12V to drive electromechanical relay. In that case it uses a driver circuit which provides 12V amplitude to drive the relay. Sensors connected to the Raspberry Pi board give a resistance variation at the output. This signal is applied to the comparator and signal conditioning circuit which has potentiometer to decide the moisture level above which the output of comparator goes high. This output signal is given to the Raspberry Pi board. If the soil moisture value is above the moisture level then the 3 phase induction motor will be OFF, whereas if the moisture level is low motor will be ON through the relay. For monitoring the farm at night LDR is used which controls the light automatically.

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