AUTOMATIC AGRICULTURE IRRIGATION WITH PERIODIC CAMERA TRAPPED PICTURES AND LAND MONITORING USING WIRELESS SENSOR NETWORK

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ABSTRACT

In last few decades, remotely monitored embedded system for irrigation purposes have become a new necessity for farmer to save his energy, time and money. This paper is proposing a agricultural solution for the farmer based on Wireless Sensor Networks, zigbee and GSM technology. The data acquired about environmental factors of the land and periodic growth of crops captured via camera traps is transmitted to the farmer enabling him to control the actuators in the field. Zigbee based low power handheld devices are employed to enable cost saving, and the valves and sprinklers are employed to save the water usage for irrigation. The proposed system is simple and easy to implement and the parameters recorded helps a great way to farmer to enable the "Smart farms" theory work for him. The microcontroller is used for controlling the above environment.

KEYWORDS: Climatologically Sensors, Camera Trap, GSM, Irrigation Control, PIC 32, Zigbee