

Intelligent Irrigation Control System Using Wireless Sensors and Android Application

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Abstract : Agriculture is the major occupation in India and forms the backbone of Indian economy in which irrigation plays a crucial role for increasing the quality and quantity of crop yield. In spite of many revolutionary advancements in agriculture, there has not been a dramatic increase in agricultural performance. Lack of irrigation infrastructure and agricultural knowledge are the critical factors influencing agricultural performance. However, by using advanced agricultural equipment, the effect of these factors can be curtailed. The presented system aims at increasing the yield of crops by using an intelligent irrigation controller that makes use of wireless sensors. Sensors are used to monitor primary parameters such as soil moisture, soil pH, temperature and humidity. Irrigation decisions are taken based on the sensed data and the type of crop being grown. The system provides a mobile application in which farmers can remotely monitor and control the irrigation system. Also, the water pump is protected against damages due to voltage variations and dry running.

Keywords : android application, Bluetooth, wireless sensors, irrigation, temperature, soil pH

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