

Article Abstract

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| Title: | Development of a data acquisition and greenhouse control system based on GSM |
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| Abstract: | This paper explains the design and implementation of electronic system based on GSM (Global System for Mobile communication) for controlling the climate parameters-by SMS (Short Message Service) in greenhouse. The main purpose of this system conception is the remote control of the climatic parameters that influence the production in greenhouse (Temperature, relative humidity of air and soil moisture). Several sensors and actuators are installed and connected to a management and acquisition card. These sensors provide relevant information that is used to control ventilation, heating and pump by SMS. The procedure used in our system provides the owner with a remote control avoiding the needed to perform the control actions on site. The developed system in this paper is ideally suited for agricultural greenhouses in Morocco. It is simple to be installed and used by farmers who do not have knowledge in computer skills. Besides, most people use their cell phones to communicate and send messages. Thus, in our system, with a simple message, all farmers can control their greenhouses from a distance. They can know the status of their greenhouse climate at any time (temperature, humidity...) and can control actuators to adjust these parameters (fan, heater, vent, drip irrigation...). Thus, we have developed a graphical interface using LabVIEW software for the local acquisition, monitoring with PC and storage of all data through the card PCL812PG. |
| Keywords: | Sensors, Greenhouse, Microcontroller, GSM, Control, Monitoring. |