ABSTRACT

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Topic

Design of a Prototype Local Smart Weather Station Based on Wifi

Weather status measurements and predictions have become an important part of human life because of its many applications such as industrial and military applications. The conventional weather stations need the employment of expert workers to operate them, which leads to the increased costs of such stations. In this paper, a dedicated wireless local weather station has been designed and implemented based on a microcontroller for the measurement of temperature, rainfall, humidity, wind speed, and wind direction. These measured parameters are sent to the web server, which in turn broadcasts the weather status over the wireless local area network (wifi) to the clients as a webpage. The obtained results for a week period are found to agree well in comparison to those recorded from a conventional weather station over the same period.