**517/E1**

## Development of a server room environment monitoring and alarming system based on global system for mobile communication (GSM)

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This work presents the design and construction details of a standalone device based on a microcontroller for server room environment monitoring (and warning) system, which is a crucial requirement for the server rooms. The developed system is capable of sensing temperature, relative humidity and flooding inside a server room and in a critical situation the system produced audio-visual alerts to the surrounding and short messaging service (SMS) and ring alerts to the server administrators' mobile phones. The system is double password (master and user) protected and an authorized user can alter both the critical weather parameter levels and server administrators' phone numbers. User settings are stored in a non-volatile memory and the system is battery backed up. The backbone of the system is a microcontroller and all the sensors, i.e. the user interactive unit (keypad and display unit), the audio-visual alert system and the global system for mobile communication (GSM) modem, are controlled by the microcontroller. The system is designed in such a way that it operates with a minimum amount of power and although it needs GSM coverage; the system does not require any other infrastructure.