

ABASH - ANDROID BASED SMART HOME MONITORING USING WIRELESS SENSORS

ABSTRACT

Common electrical hazards that occur at home are usually associated with the usage of faulty home appliances and electrical distribution. Also, increasing usage of appliances demands higher electrical power and can cause overloading.

The normal protection for residential homes when an over loading happens is that the circuit breaker gets tripped. The best method to improve this situation is to monitor continuously the usage characteristics of electrical power at every power point in real time. Presently, monitoring technologies are available based on wireless sensor network (WSN) because of its capability in identifying remotely the problems in the environment.

One most common application of WSN is in home monitoring which helps to optimally manage the `well-being' of power distribution in home in order to minimize hazards caused by electrical faults. It may also be mentioned that this technique incidentally helps controlling the tariff by maintaining the power usage optimally. It has also been found that not much study has yet been made towards the use of WSN for monitoring electrical power and the consequent hazards with a view to ensure the welfare of residents at home. Based on this idea, we have developed a real time power monitoring system that uses android mobile application and wireless sensor network.

EXISTING SYSTEM

The existing electrical house distribution system does not normally offer enough protection and also does not provide adequate warning.

DISADVANTAGE

- Power loss
- Equipment damaged
- High cost

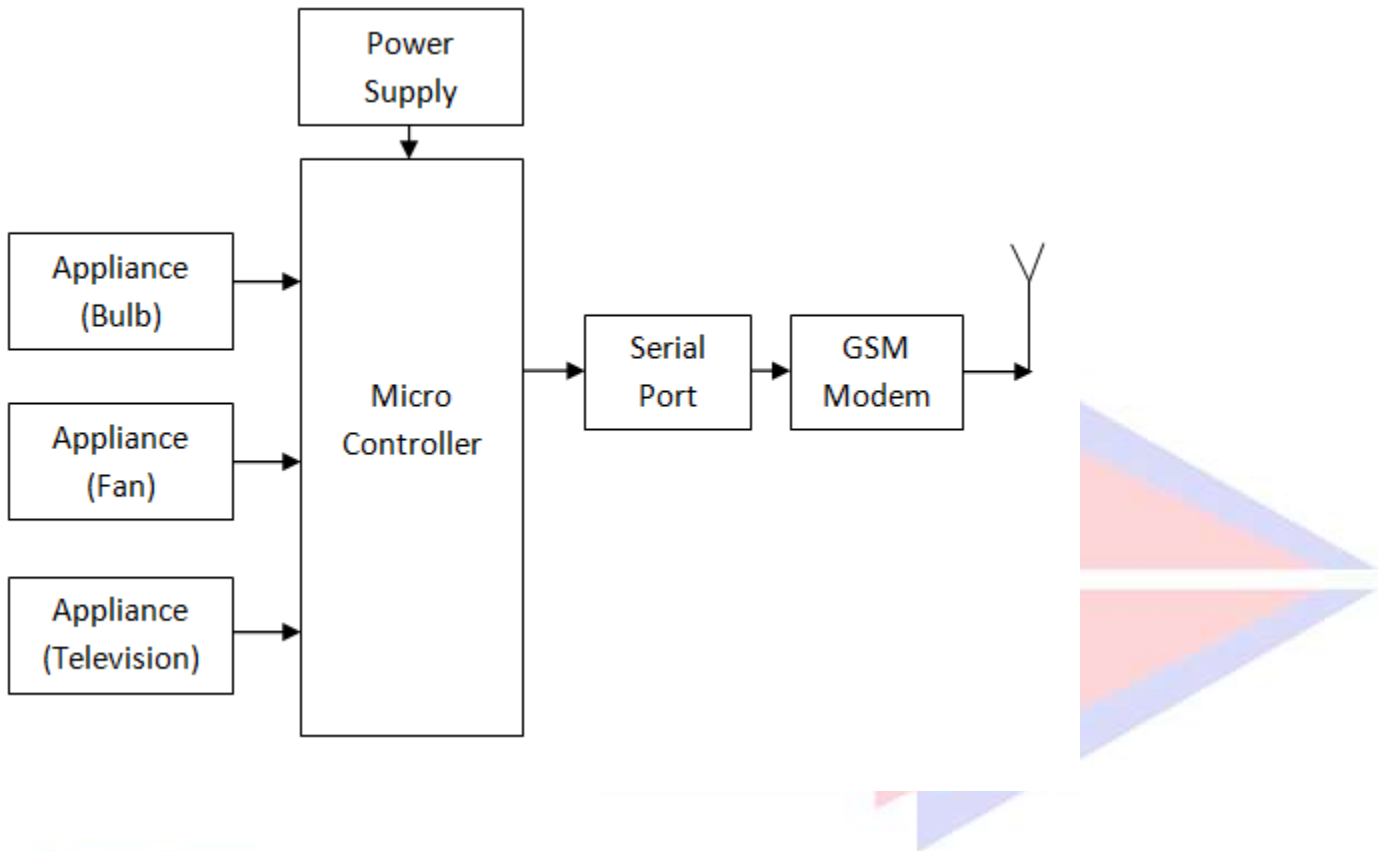
PROPOSED SYSTEM

The android based smart home monitoring (ABASH) system that detects the threshold violation in power usage and produces an appropriate alert signal for homeowners to enable them to take proper remedial actions depending on the situation, much before the circuit breaker operates..

ADVANTAGE

- We can control device from a long distance, thus it gives ease of access.
- Faster operation and efficient.
- No need to carry separate remote or any other controlling unit.

BLOCK DIAGRAM



HARDWARE REQUIREMENTS

- Power Supply
- Bluetooth device
- Relay
- Micro Controller
- Decoder
- Home Appliances like Lights, Fans, etc
- Android mobile

SOFTWARE REQUIREMENTS

- Microcontroller COMPILER
- PROTEUS SOFTWARE

Microcontroller May be ATMEGA, 8051 OR PIC