**Android Bluetooth Digital Power Meter**

**Introduction:**

As world goes on due to globalization energy usage has been a basic need for every human being. ‘Energy’ the word also acquired a significant attention in this globalization era. But most people never realize how much energy they waste to accomplish their basic needs in their day to day life. So if people don’t try to use energy in a sustainable manner it will be a real crisis for future righteous existence of every human being. So it is better if we try to save energy now. We can start this from our homes. If we can check how much power our home appliances use we can get a rough idea about, how we are going to reduce our daily or monthly power consumption.

**Aim and Objectives**

The target is to design a digital power meter that connects via Bluetooth to a mobile phone device that the engineer would likely already own. This power meter will be designed to be inexpensive and small enough to fit in the user’s pocket.

* To build a portable device that fits to the user’s pocket.
* To measure voltage, current and directly displays the power. (we don’t want to calculate the power manually)
* To display measured values and save them in the mobile phone.

**Methodology**

The project is divided into two parts called hardware part and the software part. Hardware development of the Bluetooth power meter device will be done in the hardware part. The circuitry designing, simulation using breadboards, basic casings designing for the finale device will be done in here. In the software part, Android application development and the program code for the microcontroller will be done. Both hardware part and the software part will be simultaneously in order to achieve a better, successful outcome. After both parts complete correctly with no issues they will be combined together to get final output.

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**Block diagram**

**Time frame**



**Outcome**

I wish implement this power meter in my company (Sri Lanka Telecom) Datacenter servers power measurement with the permission of authority. It **could help to save money**by having an idea of which servers use the most energy.

**Validation**

As some advanced digital power meters have microprocessors for store the readings for further processing, I will use android phone to display measured values and save. In addition to display shows how much energy you’re using at any one time. It will give information on how much energy you used in a previous period. So you can keep track of your energy usage and budget more easily.

# **Supervisor’s Certification**

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**Signature:**

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