

# Power Controlling Through Internet of Things in Mobiles

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**Abstract:** Normally any electronic product states will be changed based on the switch. Every switch will be work on the manually operated. At that time two problems are occurred. Number one is power attacking to human and one more problem is we are not operated from the outside of home. In this paper proposed methodology is by using Internet of Things (IoT) we can control the electronic equipment's. Here we are using arduino chip that will be inserted at the stating of the electronic product power supply. Ardino chip has attaching Ethernet shell is presented. Ethernet shell will be helpful for supporting the Internet. At this time we can operate the electronic products from any place and also no chance for power attacking.

**Index terms-** IoT, smart phone, IP, Ethernet.

## **Introduction:**

Internet of things is an interaction between the things that consists of chips and human. The main concept of the IoT is to allow things to be connected any time, any place with anything and any one, and any network and any service. By developing this we need a common operating platform that is middle ware. The middle ware platform enables chip data collection, processing and analysis. Presently we design and implementation details of our proposed middle-ware solution namely mobile chip data processing engine (MOSDEN).

MOSDEN is designed to support sensing as a service model natively. MOSDEN is a true zero programming

middle ware. That means user do not need to write program code this MOSDEN middle ware is used for push and pull data streaming. For data transaction between android mobile and chips we can develop a special plug-in that is used for the better communication between the chip and human.

## **Basic information about IoT work:**

In this section, we briefly discuss the background and our motivation behind this work. By using IoT we can connect to billions of thing to the Internet. This method is not possible and practical to connect all of them to the Internet directly. This is mainly due to resource constraints (ex. network, communication capabilities and energy limitations) connecting directly to the Internet is expensive in term of computation bandwidth usage and hardware cast point of view. Enabling persistent Internet access is challenging and also negatively impacts on miniaturization and energy consumption of the chip. Due to such difficulties, IoT solution needs to utilize different type of devices with different resource limitation and capability. We believe that an ideal IoT middle ware solution should be able to take advantage and adapt to these different type of devices in order to make the solution more efficient and effective. One of the most critical decision that need to be taken in the domain of IoT is where and when to process the collected data.

### Power controlling without IoT:

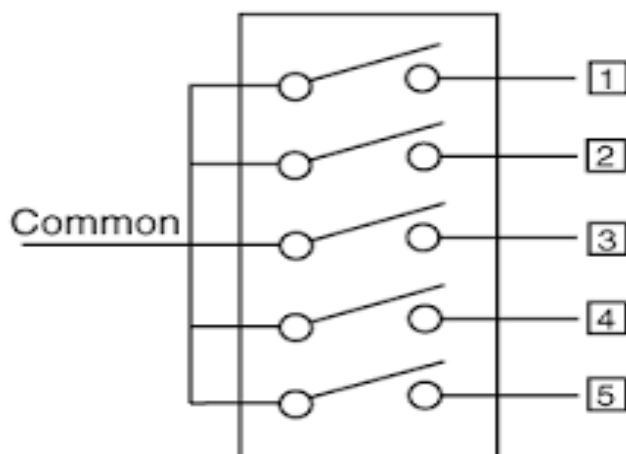


Fig1: power controlling switch's

Presently we are operating the power control in manually. In this reason we are not control the power at busy time. In this case we can wastage the power and also we can play the money for useless power. So in this methodology we can loss the money and power. Otherwise for controlling the power time to time at that time we can spend the more amount of time at that work. So here we can loss the valuable time. And one more problem in the existing methodology is if any problem like short circuit or etc.. at that time we are try to turn off the main switch. That main switch not near to problem occurring area at that time we are run for main switch presented direction. And one more problem is some time power is attracted to switch at that time chance to power attacking to human. And one more problem is we are using the power in the home at that time suddenly power will be gone at little amount of time we are waiting for power after some time for-gated the this work and concentrate some other work after that we can vacate the home at that time we are remembering that work (power uses work) at that time we have no chance for return to home. At that time what we do? .by using the existing methodology we can't do anything just do we can pay the money for useless power. Formers are facing so many problems in existing methodology those are formers will be suffering for motor switch on because reason is chance to power attacking and night time those are going long distance for motor switch on and also night time motor switch on operating is very risk. So hear main problem in existing methodology in there is no chance to

operate the power from other places this is the main problem in the existing methodology.

### Power controlling with IoT:

In this proposed methodology is very useful for the all type of peoples like poor and rich and middle class people. In this proposed methodology main concept is for switch of the button no need to go that power supplying switch. We can operate the entire home or office or some other place from one place on sitting we can do our work very simply and easily hear. No suffering for power attacking tension and also no need to operate power in manually. Very less amount of time is spending for power supply on and off. So no need to spend more amount of time for power controlling so time will be save and also save the power and money because we can very firstly operating the power control. If any problem is attacking in the home regarding to power we can easy and firstly turnoff the main switch using mobile. If suppose we are the for-gated the power switch off and going to some other place in this time by using the Internet of things technology we can easy to operate the power control ether on and off. That means we can operate the power from some other place. In this proposed methodology is very useful for formers because those are very easy to operate the motors from home. Number of formers is died for power attacking hears no chance to power attacking. And also in night times it is very better for the formers.

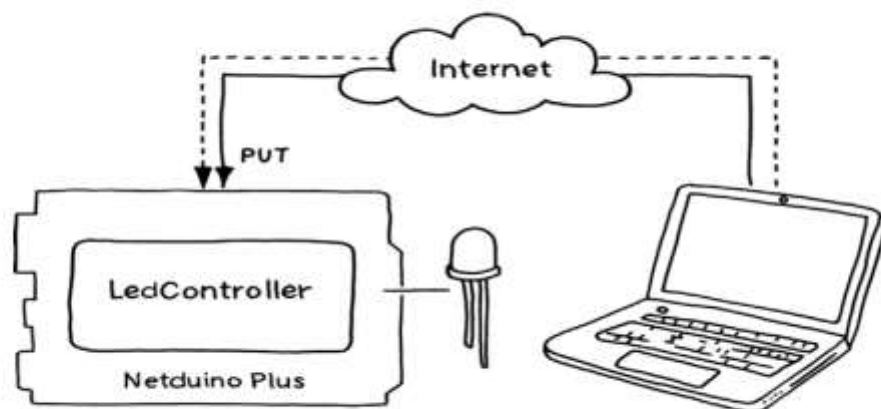


Fig 2: Simple architecture of IoT

### Implementation:

In this paper implementation we are taken the some physical objects that are arduino uno board for receiving the signal and smart phone or android phone for sending signal from human convenience and we can take the one LED bulb and also additionally we can take Ethernet shield. Ethernet shield is helpful at the time of we are presented outside of the home we can easy to operate the power in our home. Now let's start for implementation of this paper firstly we can concentrate on the connection of arduino uno chip and led bulb. Every bulb has two connections one is +ve and other one is -ve. The -ve wire will be attached to the ground in power side ports. Other +ve wire will be connected to the digital side 3<sup>rd</sup> port by using the breadboard we can easily connected Now comes to the programming side implementation. In this paper is implementing on the android platform because this program run on the smart phone. So defiantly we are developing the program in the android platform. In this paper smart phone will be send the signal to the arduino uno chip in this chip in side one web server is presented and it have the capabilities to receive the signals request. the signal has mention the states of bulb. By using the IP

(Internet protocols) address of the chip and Ethernet server functionality programming will be developed. Mobile send the HTTP request in JSON (Java server on net) format signal will be send chip inside server will be receiving that signal and chip server will be work on the given states of bulb. After that for more user convenience we can create one button for changing the states of the bulb. In this button signal will be send on HTTP protocols format and this program will be run on the web server.

### Results and discussions:

In this above figure we can easily analysis what is the process is going on and how it is used total representation in the fig 3. It is also very useful at the time of power control is not visible. it is very easy processing to control the power from near and long distance. Hear no suffering about the power attacking problem because no need to touch the switch by using the smart phone we can easy to control. By using this problem we can save the money and time and power without tension. In this technology is very useful for formers for operating the motor from home.

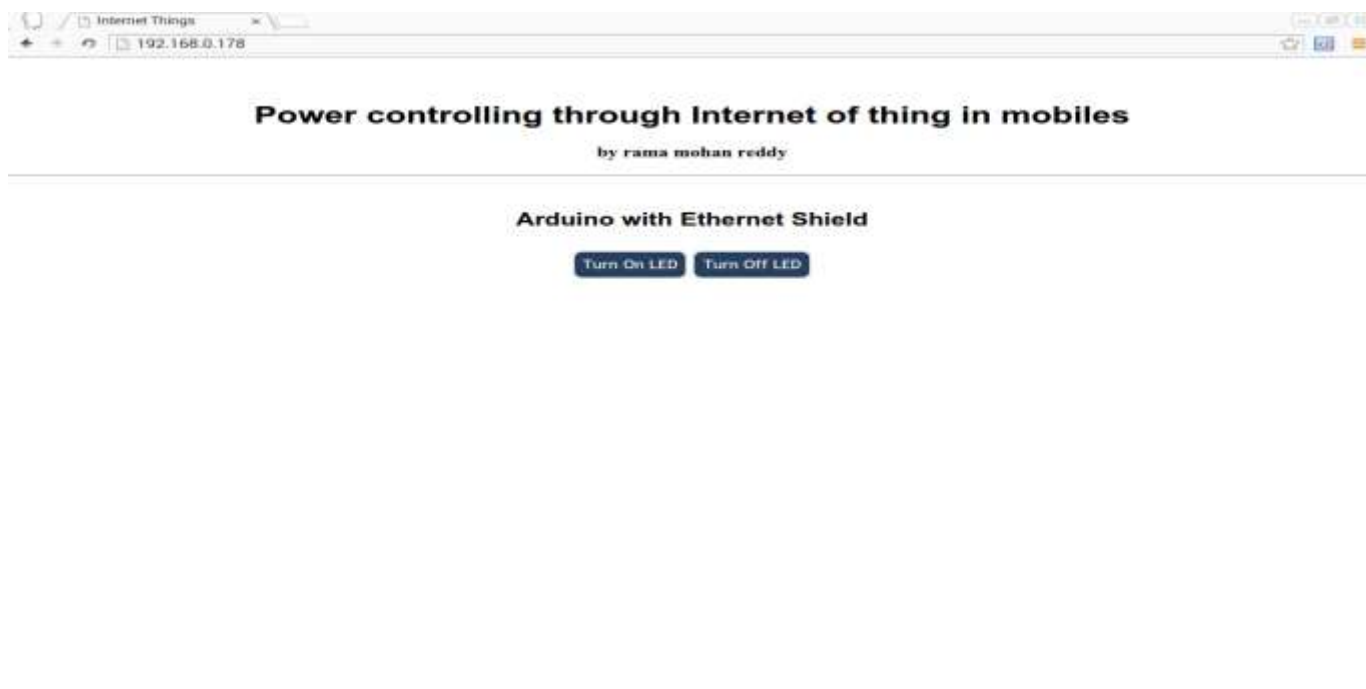


Fig 3: Output representation and interaction between smart phone and chip interaction.

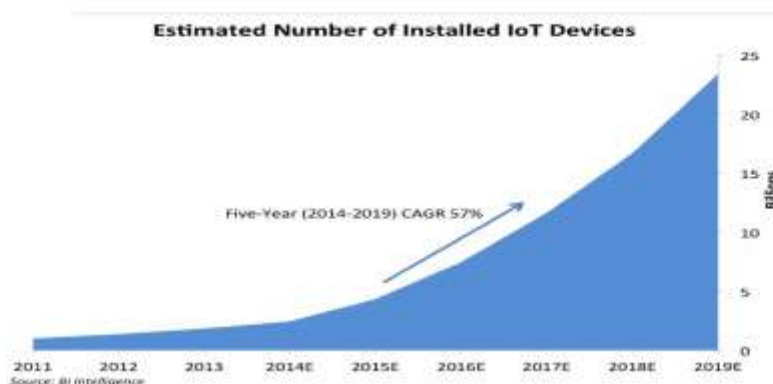


Fig 4: estimated number of installed IoT devices

Our latest forecast of the IoT estimates that the number of active IoT devices will grow by a five-year compound annual growth rate (CAGR) of 57% between 2014 and 2019. At the end of the forecast period, there will be 23.4 billion IoT devices installed, up from 2.5 billion this year. For context, that will be two-times larger than the combined number of active PCs, smart phones, and tablets in that year.

Last October, we forecast that there would be 9 billion installed IoT devices by 2018. We have revised the forecast based on our estimate that there will be 10.3 billion active remotes — smart phones, tablets, etc. — in the world by 2019. We then estimated the average number of IoT things per remote at 2.25 in 2019.

#### Conclusion:

We hope in this proposed methodology is very useful for the all type of peoples like poor and rich and middle class people. In this proposed methodology main concept is for switch of the button no need to go that power supplying switch. We can operate the entire home or office or some other place from one place on sitting we can do our work very simply and easily hear. No suffering for power attacking tension and also no need to operate power in manually. Very less amount of time is spending for power supply on and off. So no need to spend more amount of time for power controlling so time will be save and also save the power and money because we can very firstly operating the power control. If any problem is attacking in the home regarding to power we can easy and firstly turnoff the main switch using mobile. If suppose we are

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