

# **Project proposal**

## **Automatic-mobile charging circuit**



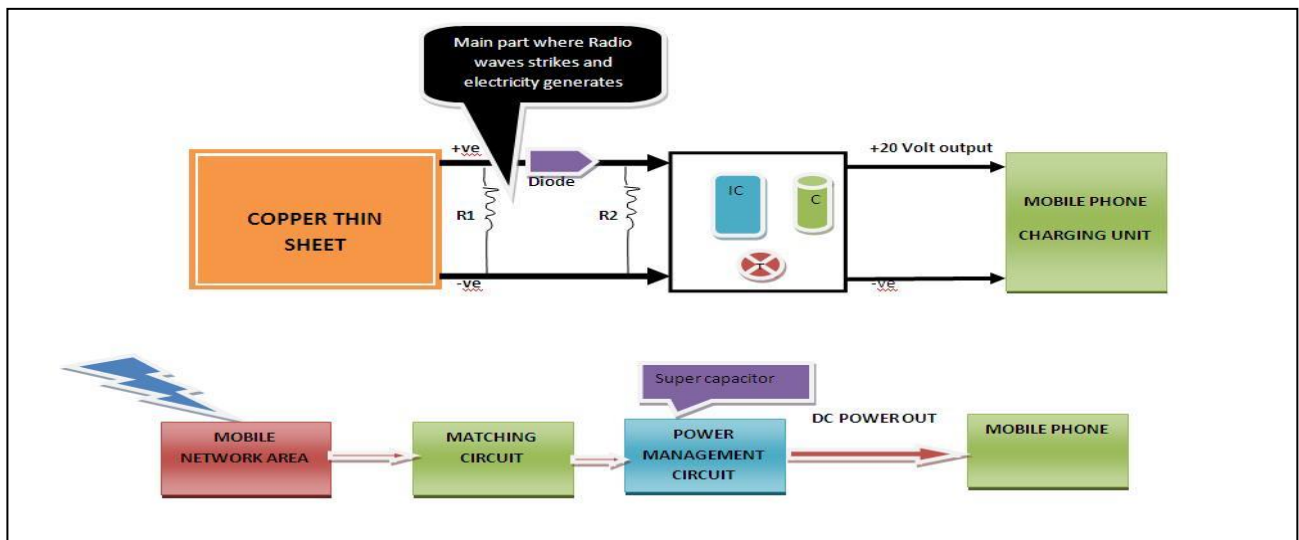
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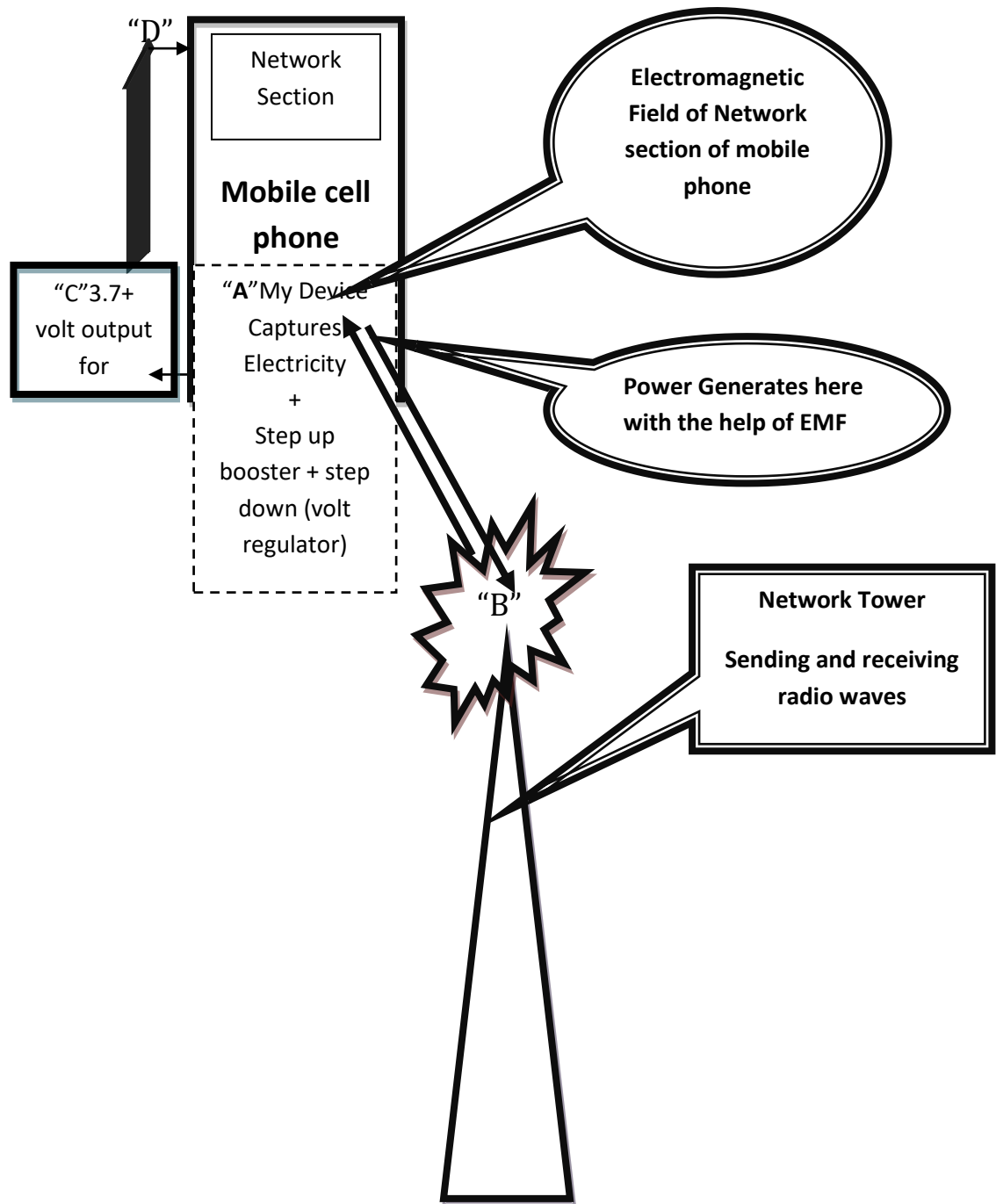
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**Abstract:**

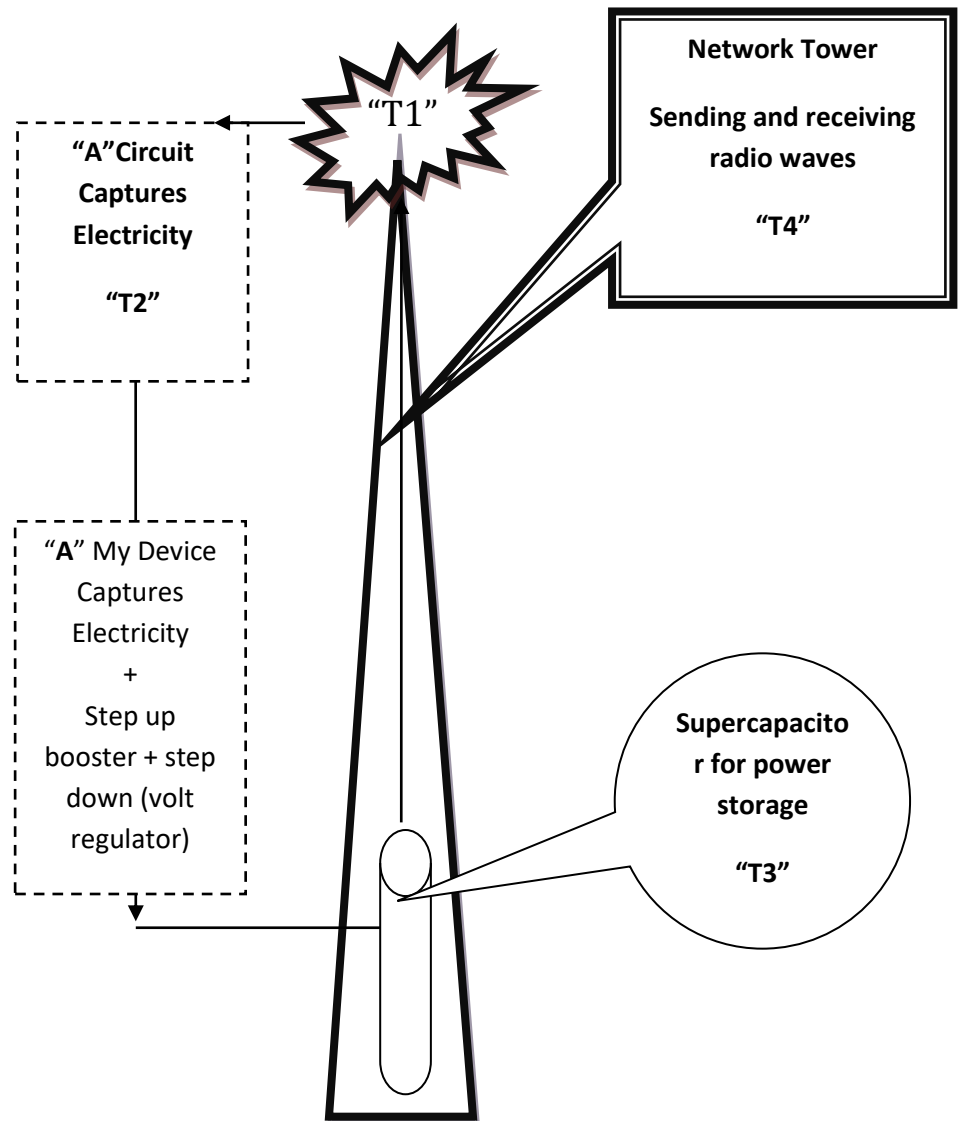
The present invention is focused on hassle free automatic mobile battery charging when active or connected with a mobile networks without using any charging device at any place where any mobile network is available. The self charging mobile battery of the present invention is actually harvesting of electricity through EMF (Radio waves) from space. Such energy harvesting techniques can be easily used by fitting a small circuit made of electronics and some metal inside the mobile for self charging (As shown in the Figure). Furthermore, in todays busy life the present innovation will save time, money and energy while working on phone and charging the mobile battery automatically at the same time.



Figure



**Figure 1.**



**Figure 2.**

## **FIELD OF THE INVENTION**

The invention involves energy harvester i.e EMI (Electromagnetic interference) from Radio Waves of mobile network. This circuit can be used in mobile phone to charge battery automatically. Furthermore, this invention will help in charging laptops, tablets or any type of gadgets at any place where mobile network is available without using any charging device.

## **BACKGROUND OF THE INVENTION**

In today's mobile age, our cell phones keep us connected to everyone 24×7. Without mobiles, we'll all be back to the Stone Age. But irrespective of their class, they all run on a battery which goes down at the end of the day and there is a problem worldwide that we have to charge mobile with a device and we have to wait for a longer time to get it fully charged. The main objective of the invention is to extract electricity from space or harvest wasted Energy/Radiations and to get mobile battery charge when mobile is connected with networks. Many research has been done but the results observed in this invention has not been done so far. The result shows 20 volts (DC) of electricity has been produced by capturing wasted Energy/Radiations present near the mobile phones.

## **SUMMARY OF THE INVENTION**

There is thus on condition that in agreement with an personification of the present discovery a method for electrical energy harvesting, including

harvesting electrical energy from electromagnetic interference, generated by mobile interface when these waves strikes to mobile handset or mobile tower antennas and then back this current can be used for charging the batteries of a mobile or tower batteries for future use or storing the energy.

The voltage coupled with the circuit may be increased or fluctuated and it can be stable using the stable circuits and other semiconductors. The soft and accurate current or energy will be stored in batteries or super capacitors.

### **BRIEF DESCRIPTION OF THE DRAWINGS**

The present invention will be understood and appreciated more fully from the following detailed description, taken in conjunction with the drawing in which:

FIG. 1 is a simplified block diagram of an Energy Harvester, constructed and working in accordance with an incarnation of the present invention.

### **DETAILED DESCRIPTION OF EMBODIMENTS**

The circuit is made up of different semiconductors and some metal. The circuit is not complicated as it is simply fabricated on mobile phones or wireless apparatus and it can also be used in mobile towers. The circuit generates more than 20 volt and 0.600 $\mu$ Amp to 2.5 Amp. One circuit power is sufficient for charging mobile and more than one circuit power can be used for mobile towers which run on heavy generators. The method used is

Electromagnetic Field of mobile network which is very appropriate invention for generating electricity from artificial/ natural power means.

Figure.1, demonstrates an energy harvester receiving antenna of mobile phone/mobile network towers, in agreement with a characterization of the present invention. The invention will first be explained in a very necessary behaviour, and then a more detailed, non-limiting example will be described further here in below.

The energy harvester circuit a receiver (Receiving Antennas) capable of receiving electromagnetic field energy with the semiconductors radiate by electromagnetic interference, which can be generated by EFF of radio waves ("250 MHz to 2500 MHz ") or of different radio waves frequencies by an electrical mobile networks (Mobile, Towers etc.). The receiver converts the electromagnetic field energy to an electrical current for charging a battery or a supercapacitor.

As is well known in the art, EMF strength is the strength of an emitted electromagnetic field at a mobile phone antenna measured in units of volts with a field strength meter. The average field strength of EMI related with "250 Hz" is about 0.3V and '2100 MHz + is about 20 volt plus.

A voltage amplification element (booster), such as but not limited to, it may be in circuit with the output booster for increasing the voltage associated with the electrical current coming from receiver (antennas and circuit). An electrical storage element (battery or Super capacitor) store at least some of the current previous to its being used to charge a device.

The following is a more detailed, non-limiting example of carrying out the invention.

Example:-1 The circuit (A) is suitable for receiving the radiated electromagnetic field energy, (B) is a receiver that includes different semi-conductors. In a research, Two Diodes were fabricated or attached with the Tin sheet used as circuit antenna which will be placed near the mobile phone wherein 250 to 2500 MHz of frequency (EMI) is forays while phone calls or surfing the net (Alternatively, the circuit (A) may include a small circuit board with a tin sheet antenna). A current of 5 V DC was observed coming out of circuit A. The output of circuit A was connected to the step up DC booster (voltage amplification E) which boosts the voltage up to 25 volt DC. The secondary of the step down booster was connected for step down voltage to 3.8 volt DC. The output of 3.8 volt DC through mobile charging connector for charging the mobile.

The above circuit may be used to charge a battery of application (e.g., mobile phones). Now in Figure 2 same circuits is used as energy harvester (T1) is connected to a circuit (T2) for receiving therein a battery/Super capacitor (T3). The electrical current generated by the energy harvester (T2) flows to socket (T5) for charging battery/Super capacitor (T3). In this circuitry there should be 20 circuits (T2) because of need of more power for the mobile towers and there is more EMF of radio waves present.

In this example of voltage amplification element (T6) is an audio transformer that boosts the AC voltage to about 50 volt. The output of the transformer is connected to a diode bridge and is converted to DC. The net



effect is an output of 12 volt of each circuit to charge a battery/Super capacitor. Same process as used in figure 1.

It will be respected by persons able in the art that the present invention is not limited by what has been mainly shown and defined hereinabove. Rather the possibility of the present invention includes both combinations and sub-combinations of the features described hereinabove as well as reforms and differences thereof which would occur to a person of skill in the art upon reading the previous description and which are not in the prior art.

1. A method for electrical energy harvesting, comprising: Harvesting undirected and unwanted electrical energy from electromagnetic interference generated by at least one of electrical wiring and an electrical appliance by receiving electromagnetic field energy radiated by the electromagnetic interference and converting the electromagnetic field energy to an electrical current for powering an electrical device (Mobile phone and Mobile Towers).
2. The method according to claim 1, further comprising increasing a voltage associated with the electrical current in preparation for powering the electrical device.
3. The method according to claim 1, further comprising storing the electrical current in preparation for powering the electrical device.
4. The energy harvester according to claim 3, further comprising a voltage amplification element adapted to increase a voltage associated with said electrical current.
5. The energy harvester according to claim 4, further comprising an electrical storage element adapted to store at least a portion of said electrical current.

6. An electrical apparatus comprising: A battery and a socket for receiving therein said battery, said socket being in electrical communication with an energy harvester that comprises a receiver adapted to receive undirected and unwanted electromagnetic field energy radiated by electromagnetic interference generated by at least one of electrical wiring and an electrical appliance, said receiver being adapted to convert the electromagnetic field energy to an electrical current that flows to said socket for charging the battery.

7. The electrical apparatus according to claim 6, further comprising a voltage amplification element adapted to increase a voltage associated with said electrical current.

8. The electrical apparatus according to claim 7, further comprising an electrical storage element adapted to store at least a portion of said electrical current.