

ABSTRACT

Most of the energy used by humans is electrical energy. In general, the transfer of electrical energy we use is using an intermediary in the form of copper cabling media. Copper is used as a medium for transfer of power since the material is composed of many electrons can move freely. So when connected to a power source then the flow of electrons can move freely in the material. When this has been developed in addition to the transfer of electrical energy through the cable medium. Wireless power transfer is an alternative distribution of electrical energy using the medium of air. Delivery of electrical energy without wires is a system that has a process whereby electrical energy is transmitted from a source to power to the load without a cable. Receiver circuit in the electrical energy transmission system is based on the principle of magnetic resonance induction.

At the end of the project will be discussed on the design and realization of a prototype for mobile phone charging without direct physical connection by cable. The power source is connected to the circuit elektronika equipped with copper that has been established as an "antenna" for the transmitter. At the receiver block of copper which has been established as an "antenna" for the receiver and then distribute electrical energy to the cell phone battery.

At a distance of a primary coil to the secondary coil voltage value 0V as far as 10cm, but at a distance of 0-2cm has a maximum value of the output voltage is 5V. It is proved that the distance affects the value of the voltage. Based on test results, the value of the voltage with non metal barrier between the primary coil and secondary coil than without the barrier has the same voltage value. It shows that the non-metallic barrier does not affect the value of the voltage. However, the lower barrier metal even eliminate the value of the output voltage.

Keywords: Induction, Resonance, Electromagnetic, Wireless power transfer