

# Wireless Power Transmisson (WPT)

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**Abstract-** At present days people need system which can use wireless power transfer transmission(WPT) has been offering a variety of field and also become a highly invent area because of their probable high technology to our daily lives in future wireless transmission is eventual: mobiles, television, computer, portable device which can be charge without plugged wire Electrical Engineering removes use of conventional cable copper and current carrying cable transferring power without using wires i.e. transmitting power from one place to other it reduce the cost of transmission and distribution lossand increase efficiency The concept of wireless power transmission is realized by Nicola Tesla

**Keywords-** Sensing device, Tesla experiment, Ultra wide band, radio frequency

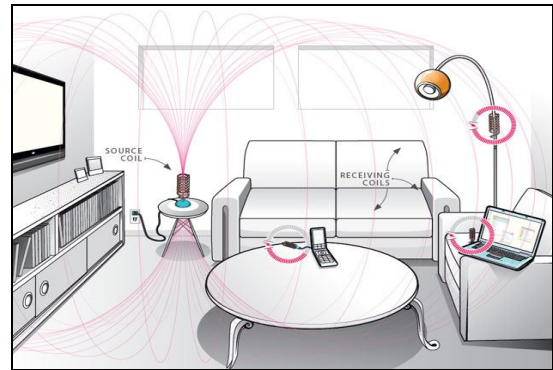
## I. INTRODUCTION

The world is rapidly progressing to a newer convenience because of revolution in technology. Technology is updating very fastly wireless power transmission is the most requirement in world. Wireless power transmission is the example of Bluetooth, Wi-Fi, ultra wide band, radio frequency, GPS

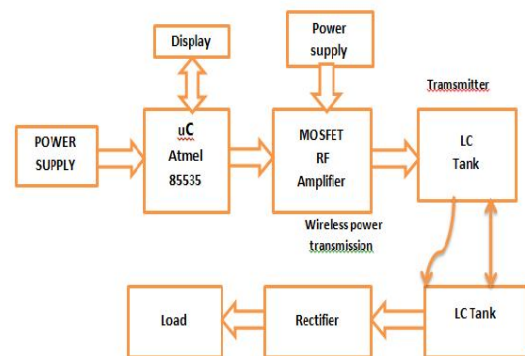
The power cord allows users plug their phones, computers wireless. Power cord provides power to computer pads wirelessly instead of providing power without wires running everywhere

Wireless power transmission is the process that takes place in any system where the energy is transferred from source to load. The power transmission is based upon mutual induction.

The drawback of the wireless power transmission is short range. The transmission of power is to be done by Resonant coupling, inductive coupling. If resonance coupling used where inductors are tuned to mutual frequency so that power transmission is done over a range of many meters.



## II. BLOCK DIAGRAM



## III. DESCRIPTION

Single phase 230v 50 Hz supply given to the primary winding of transformer which converts 230v into 18v, 50Hz. We used Full Wave bridge rectifier which convert into ac supply 18v into 5v Dc

By Using filter remove ripple factor in supply 5v, dc supply given to the drive oscillator circuit give high frequency alternative (10 to KHz) Ac output is give to amplifier convert low power output

10 mA to high level output up to 500 mA alternating output (5v, 500 mA ac 50-75 KHz) is fed to parallel LC

Tank consist air cored inductor with capacitor across it.

Other transformer (12v,1Amp) is connected to controlling circuit on the receiving end we have another LC Tank designed resonance oscillate at the same frequency as transmitter LC tank ie.50-75 KHz. Since there is resonance inductive coupling between Transmitter and receiver Lc tank circuit significant Power gets transferred. High frequency Dc output receiver tank circuit then converted to 5v DC by means of rectifier circuit

#### IV. ADVANTAGES

- Easy to access
- Automatic charging
- More reliable
- Pollution free
- 4.1 Disadvantages
- Some power loss through air medium
- Interference can produce any time
- Interference to security
- Running cost high

#### V. APPLICATION OF WPT

- No fuel required for vehicles fuel free tanks
- Wireless charging for cell phones, cordless easy to replacement parts
- Commercial use
- Industrial

#### VI. FUTURE SCOPE

All types of people carry electronic device in daily basis for e.g. mobiles, laptops, mp3 players and other electronic gadgets that are available easily in market There is one speciality that every device as in common they needed power.

The probability of any device receives power in supplying method will large effect on market

Market scope will spread as wireless energy transmission created. Transmission is worked nearly short distance at low voltage

#### VII. CONCLUSION

WPT creates a freedom in the future customer are looking for easy comparison within the technology because it is easy to create and transmit the power with minimum losses

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