WIRELESS CHARGING OF MOBILE PHONES USING MICROWAVES

Abstract:

In today's era mobile phones became a basic part of life, the recharging of mobile phone batteries has always been a problem. The mobile phones vary in their talk time and battery stand by according to their manufacturer and batteries. All these phones irrespective of their manufacturer and batteries have to be put to recharge after the battery has drained out. The main objective of this current proposal is to make there charging of the mobile phones independent of their manufacturer and battery make. In this paper a new proposal has been made so as to make the recharging of the mobile phones is done automatically as you talk in your mobile phone. This is done by use of microwaves. The microwave signal is transmitted from the transmitter along with the message signal using special kind of antennas called slotted wave guide antenna at a frequency is 2.45 GHz. Wireless Power Transfer (WPT) is the transmission of electrical power from a power source to a consuming device without using solid wires or conductors. In simple terms, the electrical power will be transmitted to the target device using electromagnetic waves such as microwaves. There are minimal additions, which have to be made in the mobile handsets, which are the addition of a sensor, a Rectenna, and a filter. With the above setup, the need for separate chargers for mobile phones is eliminated and makes charging universal. Thus the more you talk, the more is your mobile phone charged. The advantage of this technology is that it can wirelessly charge up the battery which can save time, electricity and money in a long run for the general public. It is prototype device that converts microwave signals to DC power. With this proposal the manufacturers would be able to remove the talk time and battery stand by from their phone specifications.

Keywords: Rectenna, slotted wave guide antenna, sensor and magnetron

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