Wireless Power Transmission



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**ABSTRACT**

 **Wireless Energy Transfer: The Future of Power Distribution**

Portable electronics, wireless networks, and Bluetooth devices have all revolutionized our day-to-day activities by freeing us from the confines of space and allowing a degree of portability never before experienced. Contemporary consumer electronics companies such as Sony, Apple, and Research In Motion (the Canadian company behind the BlackBerry) have all proudly released products which require fewer and fewer wires to function and operate; however, behind every beautiful Sony plasma television or attached to every charging laptop or cell phone is a plethora of ugly wires all tangling their way towards a power supply. No matter how sophisticated and robust wireless technology becomes, there appears to be no way of cutting the power cord. However, this is beginning to change. The aim of this paper is to introduce a new system of transmitting the power which is called wireless electricity or witricity. **Witricity** is based upon to transfer electrical energy without wires. The system consists of a **Witricity transmitter (any power source likely to be from a sun to any other minor sources)**, and devices which act as receivers (electrical load) It is based on the principle of resonant coupling and microwave energy transfers. The action of an electrical transformer is the simplest instance of wireless energy transfer. There are mainly two types of transfers

i.e. short range and long range transmission. The short range are of 2-3metres where as the long range are of few kilometers. We investigate whether, and to what extent, the physical phenomenon of long-lifetime

resonant electromagnetic states with localized slowly-evanescent field patterns can be used to transfer energy efficiently over non-negligible distances, even in the presence of extraneous environmental objects. It is known that electromagnetic energy also associated with the propagation of the electromagnetic waves. We can use theoretically all electromagnetic waves for a wireless power transmission (WPT). Scientific minds have been questioning some of the fundamental laws of physics which has driven WiTricity since the early 19th century. Space Solar Power (SSP), combined with Wireless Power Transmission (WPT), offers the far-term potential to solve major energy problems on Earth. Wireless transmission is ideal in cases where instantaneous or continuous energy transfer is needed, but interconnecting wires are inconvenient, hazardous, or impossible. The tangle of cables and plugs needed to recharge today's electronic gadgets could soon be a thing of the past. The concept exploits century-old physics and could work over distances of many metres. Consumers desire a simple universal solution that frees them from the hassles of plug-in chargers and adaptors. "Wireless power technology has the potential to deliver on all of these needs." However, transferring the power is the important part of the solution.