**WITRICITY**

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**WITRICITY**

**INTRODUCTION –**

**WiTricity** is one [portmanteau word](http://www.multilingualarchive.com/ma/frwiki/en/Mot-valise) for [electricity](http://www.multilingualarchive.com/ma/frwiki/en/%C3%89lectricit%C3%A9) without wire (**Wi**reless Electricity), invented by Dave Gerding in 2005 and used by the team of research of [Massachusetts Institute of Technology](http://www.multilingualarchive.com/ma/frwiki/en/Massachusetts_Institute_of_Technology) (MIT), directed by the professor [Soljačić sailor](http://www.multilingualarchive.com/ma/frwiki/en/Marin_Solja%C4%8Di%C4%87) in 2007 to describe the capacity to provide electricity without wire to distant objects or [electric transmission of power without wire](http://www.multilingualarchive.com/ma/frwiki/en/Transmission_d'%C3%A9nergie_sans_fil).

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**DESCRIPTION-**

WiTricity is founded on a system which consists of a transmitter and a receiver containing of the antennas with [buckle magnetic](http://www.multilingualarchive.com/ma/frwiki/en/Champ_magn%C3%A9tique) synchronized at the same frequency. As electricity functions in one [electromagnetic field](http://www.multilingualarchive.com/ma/frwiki/en/Champ_%C3%A9lectromagn%C3%A9tique) brought closer, the devices of reception must be at a distance of a few meters of the transmitter. The system uses a relatively low frequency (a few MHz). The team of MIT also simulated in a resonator [dielectric](http://www.multilingualarchive.com/ma/frwiki/en/Di%C3%A9lectrique) in GHz.

The concept of WiTricity is basically identical to the magnetic field of [wind Tesla](http://www.multilingualarchive.com/ma/frwiki/en/Bobine_Tesla), but by using an energy considerably lower and sedentary. The technology of the brought closer fields gives a good capacity of transmission if the receivers and the transmitter are close, but with the technology of the fields moved away, the source always transmits in all the direction, provocative thus a considerable loss of energy.

**HISTORY-**

The technique of transmission of electricity without wire is not a new concept. As of 19E century, of the teams of physicists tried the first transmission of electricity without wire. But the problem of omnidirectional diffusion of electricity made take delay with the development of this technology and experiments. The resurgence of interest must mainly with the era of cellular, portable, readers mp3 and other apparatuses portable.

**IN PRACTICE-**

The researchers of MIT showed successfully the capacity to light a bulb of 60 Watts, since an electric source located approximately two away meters, with an effectiveness of 40%. By using two copper reels 60 centimetres in diameter with a resonance of 10 MHz, one connected on the bulb and the other on the electric source, they could supply the bulb even if the two objects were not in the line of the sight.

The researchers plan to miniaturize the system for a regular commercial practice from here three to five years. They suggest that the density of radiation energy can be under the bar of the requirements of the authorities of the group of communications.

One can however wonder whether WiTricity is not likely to add an additional source of [electromagnetic pollution](http://www.multilingualarchive.com/ma/frwiki/en/Pollution_%C3%A9lectromagn%C3%A9tique), the long-term effects on the alive beings still are not seriously examined.

**FUTURE OF WITRICITY-**

MIT's WiTricity is only 40 to 45% efficient and according to Soljacic, they have to be twice as efficient to compete with the traditional chemical batteries. The team's next aim is to get a robotic vacuum or a laptop working, charging devices placed anywhere in the room and even robots on factory floors. The researchers are also currently working on the health issues related to this concept and have said that in another three to five years time, they will come up with a WiTricity system for commercial use.   
WiTricity, if successful will definitely change the way we live. Imagine cell phones, laptops, digital camera's getting self charged! Wow! Let's hope the researchers will be able to come up with the commercial system soon. Till then, we wait in anticipation!