

Highly Resonant Wireless Power Transfer



Is:

Wireless Energy

Safe, Efficient, and over Distance

WiTricity: It started with an



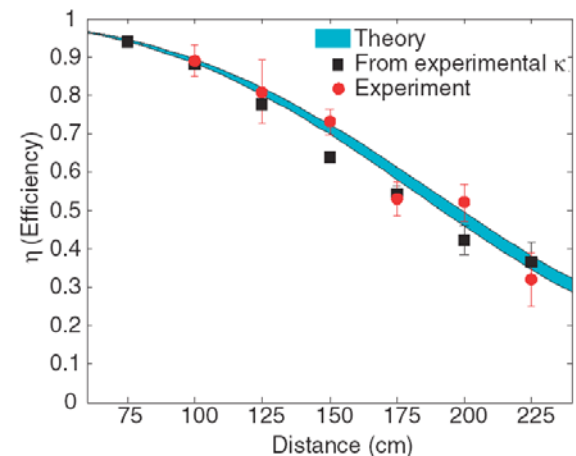
WiTricity founder, Prof. Marin Soljatic, pursued what most thought was impossible

- Original MIT research team powered a 60W light bulb safely and efficiently at a distance of 2m
- The research team is pictured standing between the source and capture coils



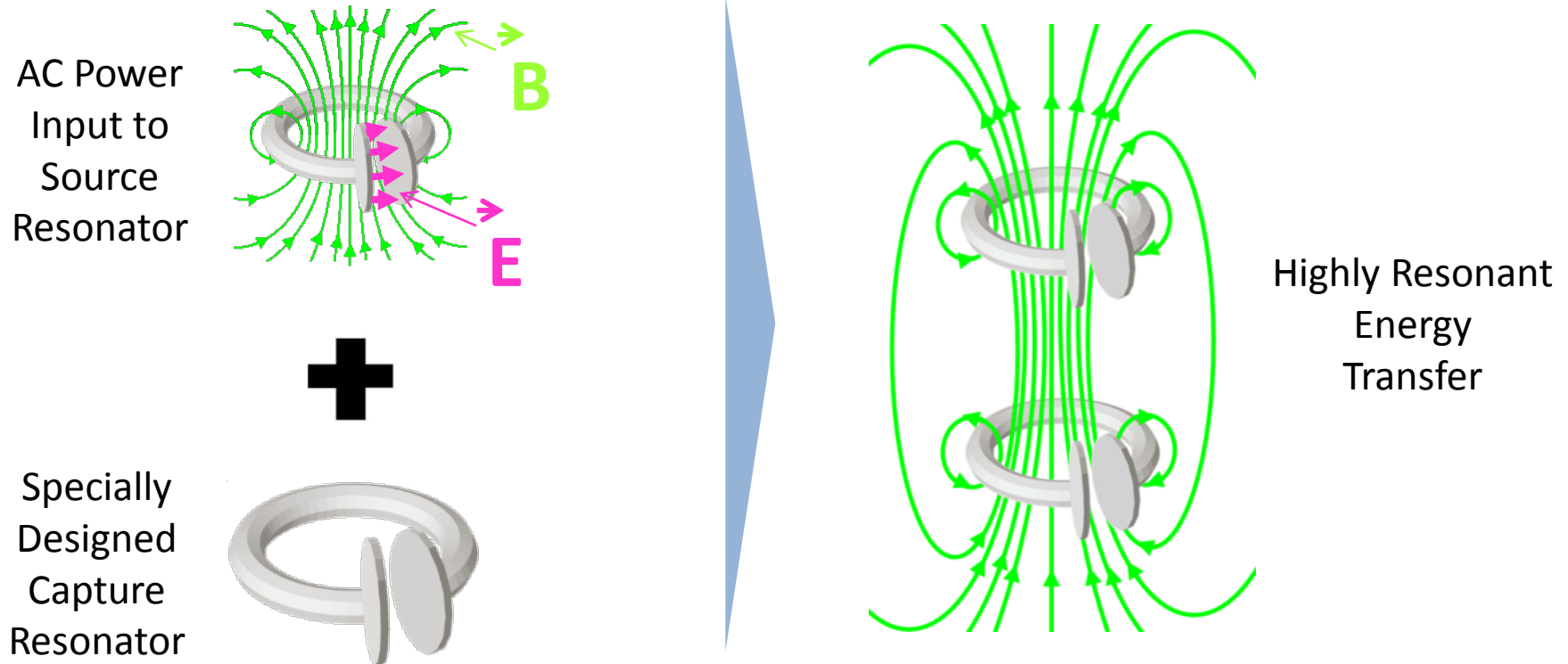
MIT team confirmed the theory with experimental results

- Original experiments showed that theoretical efficiency levels could be achieved in practice
- WiTricity Corp. is the exclusive licensee of the MIT technology



How it works:

Highly resonant devices are tuned to the same frequency and exchange energy via an oscillating magnetic field



Highly resonant devices transfer electrical energy over distance through coupled magnetic field

WiTricity technology is safe, efficient, and works over distance

Safe

- Uses non-radiative magnetic field to transfer energy
- Meets international safety guidelines for human exposure
- Being developed for implanted medical devices



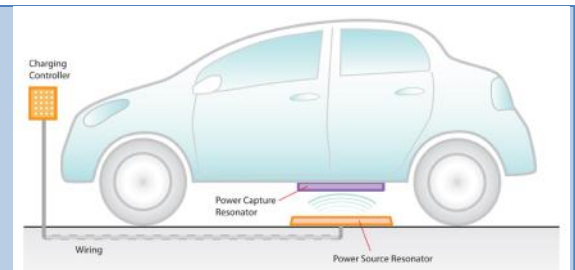
Efficient

- Based on highly resonant magnetic coupling
- Minimal heating and energy transfer losses
- Provides power from milliwatts to kilowatts



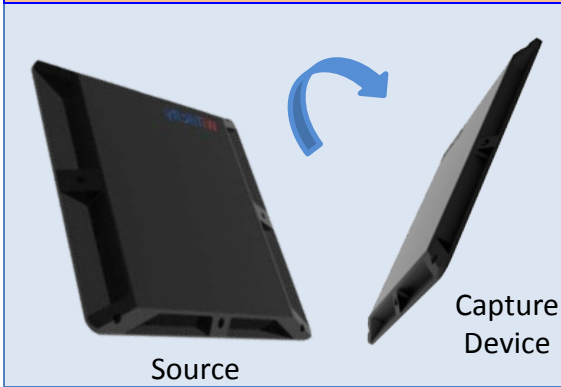
Works Over Distance

- Highly resonant coupling enables charging at a significant distance
- Can transfer energy through concrete, wood, plastic, glass, etc.



WiTricity technology benefits

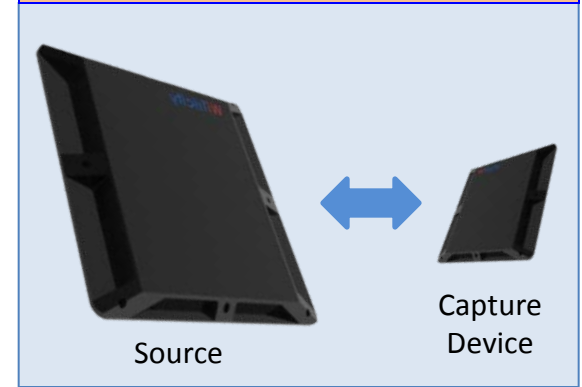
1. **Flexible orientation** between source and capture device



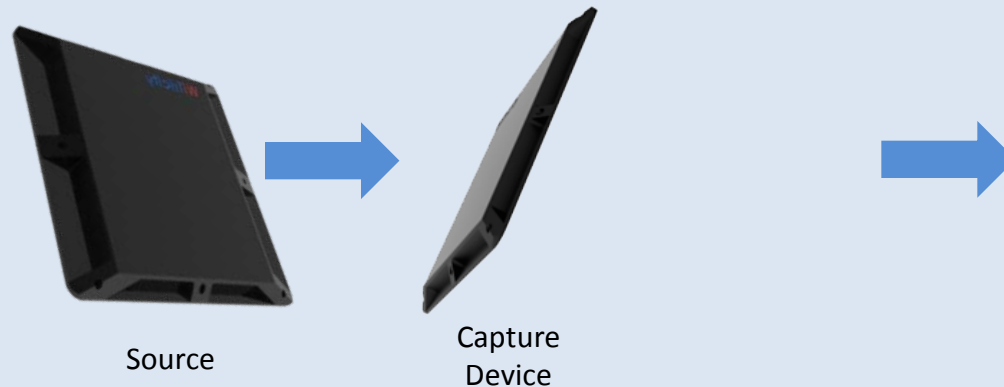
2. **Multiple devices** can couple to a single source



3. **Different sizes** source and capture devices



4. **Extended wireless range** with WiTricity *Resonant Repeaters*



A Multitude of Applications



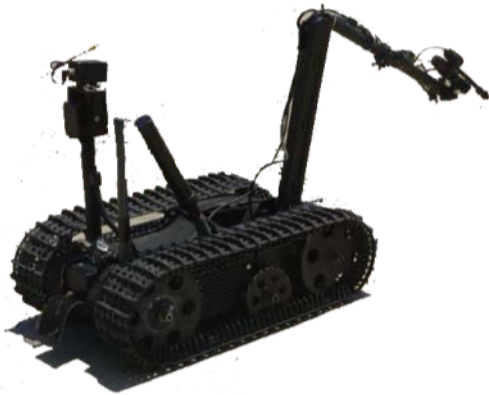
Consumer Electronics



Electric Vehicles



Medical Devices



Robotics



Solar Power



Lighting

New applications are limited only by one's imagination

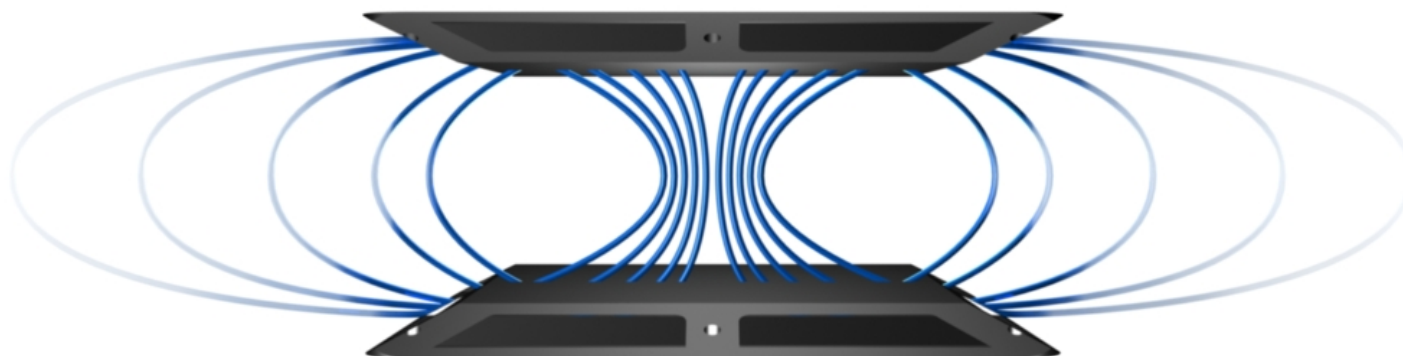
HRWPT in Medical Devices

- Wires are bad...
 - Drivelines cause infection
 - Cables can be difficult to sanitize
 - Power ports make it difficult to hermetically seal devices
 - In ORs power cables are trip hazards
 - Power cables can reduce turnover/cleaning times in ORs

Opportunities for HRWPT in Medical Devices

- Implanted Devices
- Sensors, Monitoring Equipment
- Handheld Tools
- Infrastructure

Thank You!



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