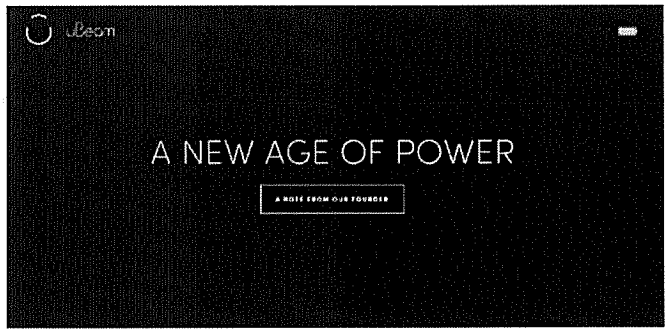
95

The uBeam vision: Lift phone in the air to charge it

10 November 2015, by Nancy Owano



Filed under Digital Disruptors by the BBC: Could we soon charge our phones through the air? Meredith Perry, CEO of uBeam, spoke about her vision: no more wires, no more international adapters every time you cross borders and no more electrical outlets—"you will not need electrical outlets."

In *IEEE Spectrum*, she said her no-outlets solution was helpful in health care, because bacteria can spread via electrical outlets; hospitals using uBeam "will be cleaner and safer for patients."

In a video interview posted on the BBC, she said, "Our vision with uBeam is to make wireless power as ubiquitous as WiFi. So that the second you wake up in the morning your devices are already charging. You walk down the street, and on the lamppost there will be Ubeam transmitters."

In her vision, she sees it in homes and offices and also in movie theatres, airports, restaurants, "inside of cars, you name it."

The BBC traces how uBeam's CEO attracted earlier attention by winning an invention competition with a prototype to beam ultrasound waves through the air to create an electric charge.

Analysts say wireless charging concepts are going to be very much talked about in a new environment but not all observers are confident about the uBeam concept.

Perry understands. Perry said, people are not afraid of sound; they are afraid of energy. Even though they are actually one and the same, it's just a matter of thinking of it differently. If we are at a concert, she continued, we're not afraid that sound is all around us. Even as I speak to you now, she told her interviewer, "I am beaming power at you." She said, if we talk about it in the context of energy, that scares people.

What kind of product will it be? What will it look like? The BBC reporter said she showed a sleek mobile phone case mock-up. "Initially, customers would need to buy the phone cases and the system for their homes. But eventually, she says, uBeam transmitters will be installed in street lamps, and inside gyms, movie theatres, offices, hotels and restaurants."

Josh Constine in *TechCrunch* talked about how the tech works: He said, "essentially, transmitters on a room's walls track devices with uBeam receivers and send inaudibly high-pitched ultrasound beams at them. The receiver converts the vibrations of the sound into electricity, which charges a connected device."

The company stated: "Ultrasonic energy (energy from ultrasound) is the only type of energy that can safely and reliably transmit energy wirelessly; thus it's the only type of energy that can be used for over-distance wireless power transmission. With the invention of a novel ultrasonic transducer and the most complex acoustic phased array transmitter ever built, uBeam has developed the world's most powerful, safe, and intelligent true over-distance commercial wireless power system for consumer electronics."

The BBC article had pointed out that CEO Meredith Perry had not yet demonstrated the product publicly. According to Constine, "uBeam promises it will be showing demos to people outside of its team, investors, and partners next year."

Perry commented in *TechCrunch* that "We're building something real. We're building something that's insanely difficult. So difficult people think that we're frauds."

TechCrunch provided a detailed look at what to expect. Some of the highlights: uBeam has developed a high-powered air-coupled ultrasonic transducer to transmit and receive sound waves at a single frequency within the range of 45kHz to 75kHz with an output of 145dB to 155dB (or 316 W/m2 – 3kW/m2). uBeam can charge multiple devices simultaneously within a range of up to a 4 meter radius from a single transmitter.

A CrunchBase comment: " Our engineering team is comprised of world-class multidisciplinary inventors, where the word 'impossible' is not part of our lexicon."

More information: