

New technology allows smartphones and wearable devices to share power (w/ Video)

May 20 2016, by Bob Yirka



Credit: University of Bristol

(Tech Xplore)—A team of researchers working at the University of Bristol in the U.K. has developed a new type of technology that could allow smartphones to trade power with wearable and other mobile devices. As [noted](#) in *Livescience*, the development team was one of those presenting their ideas at ACM CHI 2016, in San Jose last week.

The idea behind the [new technology](#) is quite simple—allow the transfer of [electric power](#) between two smartphones, or between a smartphone and another device, by running an app and putting the two devices close to one another. The new [technology](#), which the [team](#) is calling the [PowerShake](#), is based on roughly the same technology that allows a user to charge their phone on a wireless pad—coils inside each device allow for sending and receiving—as current passes through the transmitter coil, an electromagnetic field is generated which is picked up by the coil in the receiver, which then converts it back to electricity. Wireless power transmission is not efficient, the team notes, approximately half the power is lost in any given transmission, which must occur at very close quarters.

The team [explained](#) the steps they took in coming up with their design as they looked for ways to make the coils fit inside small devices and which would also allow for transferring enough power to make it worthwhile. Their product, they claim, is able to transfer about a minute's worth of operating power in just 12 seconds—or if both users concur, one device can give another enough power to run for 4 minutes with a 2 minute charge.

To better understand what sorts of applications users might want to make use of such technology, the researchers conducted a workshop with volunteers—they found that most responded positively to the idea, suggesting that they might use it to share power with friends or family. On the other hand, they also suggested they may not bother with begging for a quick charge in an emergency as it would likely be easier to simply ask to borrow a phone from another person.

The team intends to move forward with their idea, with plans to conduct real-world tests in the near future—both to test how well it works and to find out if people truly would use such a technology if it were available. If all turns out well, phone and wearable users might one day find they

are able to share [power](#) if they so choose.

More information: — Paper: PowerShake: Power Transfer Interactions for Mobile Devices, [PDF](#).

— www.bristol.ac.uk/news/2016/may/acm-chi-2016.html

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