Wireless Charging and a Tale of Two Standards

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Given the constraints inherent in battery technology, a ubiquitous network of wireless charging stations may offer the best hope for avoiding battery anxiety going forward. Wireless charging hasn't quite arrived yet, but the technology does provide a seamlessness that could potentially provide end users with power virtually anywhere. That's the dream anyway.

The current state of affairs in wireless charging has to be taken for what it's worth, as a pilot of sorts to begin messaging the convenience of the technology. The cases and accessories currently needed to enable the technology with the use of specific docking stations are only a half-step away from actually tethering the phone to a wall charger. While a few of the device OEMs are starting to embed chips in their devices, the phone can still only be placed on a compatible charging mat and for the most part that mat can only be found in the user's home.

There are in fact three major standards organizations currently pushing their specs for wireless charging. The Power Matters Alliance (PMA), the Wireless Power Consortium (WPC), and the Alliance for Wireless Power (A4WP). For our purposes here, we're going to take a look at how the PMA and WPC are taking different angles on facilitating adoption of their respective standards.

PMA: From the outside, in

Ron Rabinowitz, CEO of Duracell Powermat, which formed the PMA, said that the real promise of wireless charging lies in true ubiquity.

"The name of the game is not the accessories we're selling and the mats," Rabinowitz said. "Those are very important, but the real game changers are the wireless charging hotspots in public places."

Duracell Powermat was on board with the WPC's Qi standard, but Rabinowitz said that his company preferred a different strategy. While he agrees that a standard is a necessity, Duracell Powermat has found more fruits in working directly with partners that will expand the public infrastructure.

"When you have an organization that is doing a very poor job—I'm talking about the WPC—and that is focusing on the lowest common denominator of just the spec itself, it's good but it's not enough," Rabinowitz said. "We tried to work through

WPC, but we found it much more efficient to work closely with partners like Starbucks, AT&T...now more than 80 companies.”

The PMA has recently garnered some high-profile backers of its standards. AT&T, Delta Airlines and Google have all signed on, as has Starbucks, which is currently testing wireless charging mats in 17 of the company’s stores in Boston. Just last week, DuPont Building said it would begin work on DuPont Corian solid surfaces used in furnishings for the home and public spaces.

Again, Rabinowitz says that enabling phones is the easy part, and he’s willing to put a time line on how much longer users will have to depend on case-based solutions.

"The phone enabling type of thing I think is very clear. You have maybe another one to two years of using cases,” he said.

Rabinowitz says that Duracell’s vision is of the infrastructure to create the big picture, whether that be in an arena—the company has installed 600 wireless charging stations in Madison Square Gardens—or in your car.

"We're working hand in hand with General Motors,” Robinwitz said. “In 2015 is the year where they're going to release their cars with embedded wireless charging. At first, it was supposed to a pilot with the Chevy Volt and to come earlier, now the plan has changed a bit and they're preparing to roll it out across a significant portion of their models in 2015."

WPC: From the inside, out

Menno Treffers, chairman of the WPC, places a premium on actual products. In contrast to the PMA strategy, Treffers argued that wireless power will find its roots in the home and eventually grow from there.

"The embedded furniture market is developing very slowly," Treffers said. "If you look at how adoption of wireless charging is now happening, it primarliy starts with people developing and creating their own private charging infrastructure."

Boasting "tens of millions" of Qi wireless chargers deployed primarily in home and office settings, Treffers said that users who like the convenience of wireless charging usually purchase more than one for different location in their home or office. He says the WPC is also working with automotive companies like Toyota and Chrysler as well.

"What you see is some fragmention in the standards, but very little fragmentation in the product market," Treffers said. "If you look at products, it's just close to 100

percent Qi products. So if you see a wireless charging product right now, it is almost exclusively Qi compatible. The Alliance for Wireless Power has almost no products out. The PMA has just a couple of Powermat products out, with an iPhone sleeve and that's it. So you should look at mobile phones with integrated solutions like Nokia, HTC and LG phones. The Samsung has a backdoor solution, all Qi. So, no fragmentation there. Standards are determined in the market by real products, so that's what we're looking at, and I think things are going very well."

As for any concern about the A4WP getting a jump on the WPC with Intel's recent backing of that standard, Treffers said that WPC has its own chipmakers that are working with its technology.

“Texas Instruments, Freescale, MediaTech…they're all members of the WPC and making an offering with Qi in their chipsets,” Treffers said.

When asked about the potential for a larger infrastructure, Treffers says stresses that it is happening but that it’s a slow climb.

“Public infrastructure is limited to a couple of thousand location in the U.S., and couple thousand in Europe, thirteen thousand in Japan,” he said. “But that is still fairly small compared to the number of people in the locations that you need to really offer a public charging infrastructure.”

Treffers likens the current state of things to the growth of Wi-Fi. “Wi-Fi became used in public places like Starbucks after people started to carry around laptops around that had Wi-Fi. Apple was one of the first to do that with their Macbook. If you now put chargers in public places, the install base is too small to make this into a proper business case…It’s just a little bit too early.”

Can’t have one without the other

While Treffers and Rabinowitz both expressed their intentions to enable devices and bolster those devices with a strong infrastructure, it will be interesting to see where the market ends up. Given that one seems bent on fostering a network of public hotspots and the other is focused on building a legion of devices from the ground up, it’s almost a shame that the two organizations aren’t working together. Regardless of where things ends up, the spoils will indeed go to the winner. According to 6Wresearch, the global wireless charging market is expected to reach $9,94 billion by 2018, growing at a CAGR of 42.6 percent during the period 2013-2018.

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