WIRELESS CHARGING

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Abstract

*Wireless charging has until now been limited to smartphones. Smaller, low-powered devices –earbuds, watches, fitness trackers, hearing aids, stylus pens, remotes, medical monitors, IoT sensors and many more – still need to be regularly plugged in to be charged. Many users will carry several of these at the same time and they are proliferating so rapidly that cable charging is becoming inconvenient and unsustainable. Solution: Metaboards, which does away with this multiplicity of charge leads, sockets and plugs. A platform able to charge several devices   wirelessly, all at the same time.  The Metaboards system will seek out rechargeable devices that are simply placed on its surface, connect and charge them all, with no need for alignment. Result: a seamless charging experience from a single power source. Standard Stuff. Metaboards operates on the NFC standard, as used by billions of handheld devices for access or payments. The* [***NFC Forum***](https://nfc-forum.org/nfc-forum-releases-wireless-charging-specification-2-0/) *has now approved it for low-power charging (100mW to 1W) allowing an NFC-enabled device to handle both communications and charging simultaneously. Metaboards is the first wireless charging company to demonstrate this facility. The alternative Qi standard is for smartphones, which require higher power (15W+). Qi allows only one device per charger and needs precise alignment to function. Technology and IP. The platform, protected by a host of patents (12 granted, 33 pending) and proprietary tools exploits the phenomenon of metamaterials: composite structures comprising multiple elements which support magneto-inductive waves. The charger runs an algorithm to identify the location and number of devices. Once the devices are found the charger determines the best way to deliver power fairly and efficiently to each device. It’s deep tech, now at the demonstrator stage, able to prove the effectiveness of this ground-breaking technology.*

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