

Wireless charging soon available for devices smaller than mobile phones

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In future, small devices can be placed on a laptop PC that operates as a NFC-compatible charging plate.

Wireless charging will soon be available for more and more mobile phones. VTT Technical Research Centre of Finland is working with the industry's leading technological companies and standardisation bodies to expand the scope of application of wireless charging technology to other, smaller portable devices, such as mobile phone accessories, wrist devices, wireless mice and sensors. This can be done by combining wireless power transmission with NFC connectivity technology, which enables cost-effective and compact design.

Consumer need to recharge the batteries of various kinds of portable devices, whenever and wherever, continues to grow. Over the next five years, wireless charging will be available for more and more [mobile devices](#). The first mobile phones with wireless charging capability are already on the market. Examples include recent smartphone releases by leading mobile phone manufacturers, many of which have wireless charging either built in or available through a special cover accessory charging case.

The increase of features in mobile devices has caused cost pressures, increased [power consumption](#), and created new challenges for keeping devices sufficiently compact. Combining wireless charging with NFC (Near Field Communication) technology makes it possible to design increasingly compact and cost-effective wireless charging circuits, which is essential especially for small devices. In the near future, NFC devices will be able to receive electrical power wirelessly, as well as acting as charging platforms capable of transmitting wireless [electrical power](#).

The challenges include, among others, current NFC antenna circuits which have not been optimised for efficient, wireless [energy transfer](#). In addition to technological development, introducing NFC-based charging to commercial products requires amendments to the NFC standards so that they also support the design of open interfaces, both in the device to be charged and the wireless charger devices. This work is under way at the NFC Forum.

Provided by VTT Technical Research Centre of Finland

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