

Bluetooth may be the key to your future smart home

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If you've ever considered trying to turn your house into a smart home, you've likely found the prospect expensive or technologically intimidating. That situation could soon change, thanks in part to an old technology learning some new tricks.

A growing number of companies are rolling out [home automation](#) products that tap into new capabilities for Bluetooth, the same wireless technology that you use to link your phone with your headset or other hands-free devices. Because those new [smart home](#) products - such as automated lights and remotely controlled door locks - are based on a widely used technology, they have the potential to be cheaper and easier to set up and use than previous home automation gadgets.

Although we've been talking about home automation since "The Jetsons" aired more than 50 years ago, previous technologies haven't made that vision a reality for most Americans, noted Jonathan Gaw, an analyst who focuses on connected consumer technologies for tech research firm IDC.

"Let's face it: His boy Elroy is a grandfather right now. That's how long we've been talking about this," Gaw said.

But he added that Bluetooth could change that situation.

"Its position in our phones and our tablets and our PCs helps it a lot," he said. "It has tremendous potential."

The version of Bluetooth powering these new smart home products is Bluetooth Smart, which was designed to consume little power, an important consideration for devices such as door locks or portable light switches that might not have ready access to a power outlet. Some of the companies utilizing it, such as Zuli and Avi-on, are adding the ability to form "mesh" networks, which extend the relatively short range of Bluetooth signals so that a user can communicate with devices in another room or section of their house.

Backers of the new products argue that Bluetooth has some big advantages over the wireless technologies it is potentially displacing, including Z-Wave and ZigBee.

Perhaps most important, Bluetooth is already in millions of products. The Bluetooth SIG, the industry trade group that promotes the technology, estimates that some 3 billion products will ship this year with Bluetooth radios. While nearly every new smartphone and tablet has Bluetooth, almost none have Z-Wave or ZigBee.

That ubiquity means consumers can control Bluetooth-based smart home devices directly with their phones or tablets, rather than having to go through a so-called bridge. In order to interact with non-Bluetooth home automation devices, users typically need a gadget that can translate between them. That bridge, or hub, makes ZigBee and Z-Wave devices more expensive and complicated than Bluetooth products, analysts say.

Thanks in part to such issues, only about 16 percent of U.S. homes with broadband have some kind of smart home product, noted Tom Kerber, a smart home analyst at research firm Parks Associates.

"It's an obstacle to buying these devices and using them in the way that people want to use them," Kerber said.

Because they don't need such a hub, Bluetooth devices can be simpler and, perhaps, more accessible to consumers. San Francisco-based startup Seed Labs, which has developed smart-home software for use in Bluetooth-powered devices, is initially aiming to have such gadgets replace relatively simple remote controls, such as those used for garage door openers.

"We're really focusing on what people are doing today and what they understand and what they can apply without any learning curve," said Szymon Slupik, the company's founder and chief technology officer.

But Bluetooth has some other advantages. Bluetooth radios are also significantly cheaper than comparable ones from Z-Wave and ZigBee, analysts and industry sources say. That difference can mean that Avi-on can offer a wireless light switch for \$5 less than a comparable one with a Z-Wave and ZigBee radio, company CEO Eric Miller said.

Backers also say that Bluetooth just works faster in practice than other technologies, because it doesn't have to go through a hub. Lights dim in real time as you turn a virtual dial on your phone, without any kind of lag.

"We're able to get wired performance without the wires," Avi-On Avi-on co-founder Dana Kunz said.

Bluetooth does have its shortcomings. Some of its new capabilities, such

as meshing, aren't yet standardized, so some Bluetooth smart home devices won't necessarily work with others. And in order to control their Bluetooth-linked devices from outside their homes, users will still need to have some kind of bridge to connect them to their Wi-Fi router and the Internet.

But if its backers are right, Bluetooth could be the key that finally turns your house into a smart home.

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