

SMART NUMBERS

\$33 BILLION

Revenues from Smart Home services in 2013

\$71 BILLION

Revenues from Smart Home services expected in 2018

80 PERCENT

of Smart Home services revenue expected from entertainment services by 2018

Source: Juniper Research



 HOT SPOT LEGEND

Lighting, Floor vacuum, Window shades, Thermostat, Kitchen appliances, Door locks, Doorbell, Video, Audio

ILLUSTRATION: Kim McDonald

N The Nest thermostat brought a modern sense of style to Smart Homes. With a mobile app, ease of use and its ability to learn the inhabitants' ideal temperature, it brought in customers—and Google, which is buying Nest for \$3.2 billion. +nest.com

C Control4 and Savant Systems are among traditional whole-home automation companies adopting mobile apps, smartphones and iPads. +control4.com • +savantsystems.com

AS WI-FI, BLUETOOTH AND MOBILE DEVICES CONTINUE TO EVOLVE, IT IS EASIER AND MORE AFFORDABLE THAN EVER TO RAISE YOUR HOME'S IQ.

SIMPLY SMART.

WORDS: Tamara Chuang



ON the first Saturday in April four years ago, Travis Leo did something he never thought he would do. He woke up early and drove to the Apple Store at Aspen Grove. The telecom executive, who didn't even own an iPhone, became sixth in line for one of the world's first iPads.



"I realized this was an industry disrupter the minute the price point was announced," said Leo, who today is chief executive of Residential Systems Inc., a Smart Home company in Lakewood. "I didn't realize how much it would revolutionize our industry."

Today, \$399 iPads have replaced the pricey \$1,000-plus touchpad controllers Residential Systems once left with customers. And the industry known for targeting million-dollar

estates and installing high-end home theaters is transitioning to a world where all sorts of new smartness is available at all income levels. Thanks to the proliferation of smartphones, apps and growing consumer comfort, a Smart House isn't just for hobbyists or the wealthy.

"Automation used to be about power, control and elegance," Leo said. "Now it's about simplicity and convenience."

A Smart House responds to our needs and learns how to take care of us. A door that says, "Welcome home!" and unlocks as you approach. Lights that turn on as you enter the house. A floor that sweeps up any dirt you just tracked in and offers to air out your shoes. A house that knew you were on the way home so it adjusted the temperature, set the table and has dinner waiting.

We are not quite there yet. But we are closer than you think (well, maybe not the shoe part).

Take thermostats, for example. There have been programmable thermostats for years. Then Nest debuted in November 2011. Manually nudge the dial warmer or colder for the first week and it figures out your preferences. Sensors determine when no one is home to minimize heat or cooling use. Access to local weather data feeds Nest's self-regulating system. Combining learning, an app and minimalist design, Nest gained oodles of admirers, including Google, which is in the process of buying Nest for \$3.2 billion.

By hiding the complexity and relying on tools like the now-common smartphone, the Smart House is one doorstep closer to reality.

"The reason why it's making sense now is that the ubiquity of the smartphone is making all of this possible," said Mike Soucie, a



co-founder of Revolv, a Boulder company hoping to streamline the process of controlling all your smart devices. "Smartphones are now hitting mainstream. This computer we carry on our person in our day-to-day lives is the very thing that is controlling our digital life. And now, it's transitioning to our physical life."

aware of it. With the numerous à la carte products now available or coming soon, companies like Revolv aim to simplify the process.

"The problem with the industry is there is no standard protocol out there. There is no single language out there," Soucie said. "I bought a Nest thermostat and was looking for Wi-Fi locks. But I realized there weren't any. I found ZigBee and Z-Wave locks but I had never heard of that so I said, 'I'm not buying that.' There's a level of complexity for the consumer and they're not really willing to take a leap."



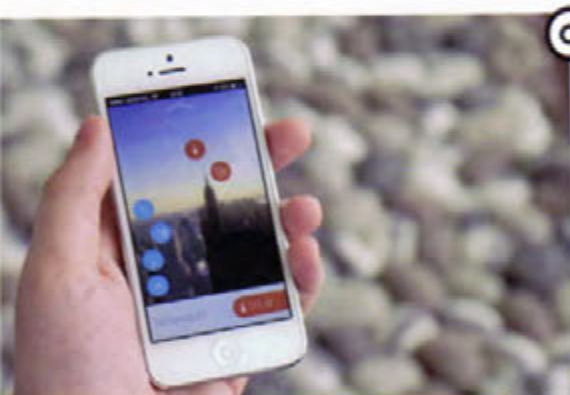
Today's Smart House is open to more people and offers features that weren't possible before. Technology advances, like Bluetooth Smart, use minimal battery power to help add smartness to dumb devices, like doorbells and keys. Geolocation helps the house determine when you and your smartphone are near and triggers a series of events. Traditional Smart House chores, like operating motorized window shades and security systems, are no longer limited to a control panel stuck on the wall.

With all the smart products available today, you'll need to use a half-dozen apps just to turn on the lights, unlock the door, set the music, control the temperature and adjust the humidity. Revolv unites all those disparate products with one device and one app.

R Revolv's hub controls most app-ready home-automation gadgets with a single app. Available: Now. +revolv.com

But with advances comes confusion. And the industry is well

inside the Revolv Hub, there are seven wireless radios. Three are currently



C Palm-sized CubeSensors cubes tell you how healthy your house is by answering questions like, Is it too warm? Is the air stale? What are you breathing? Shake the cube to find out if anything is wrong and get the details on your smartphone. Availability: Spring 2014. +cubesensors.com

I Instead of crazy, confusing knobs and nozzles, Denver's Iro by Rachio hides the sprinkler controller's brains inside a simple case and mobile app, making drag-and-drop programming oh so much easier. Iro also takes current weather information, regional terrain and water restrictions into account to help automate watering the yard. Available: Spring 2014. +rach.io



turned on: Wi-Fi, Z-Wave and Insteon. The rest—ZigBee and three running 900 MHz and 400 MHz—can be turned on by a software update when Revolv begins supporting related products.

"Between the seven radios, we figure they'll cover 90 percent of the market," said Soucie, adding that the hub unofficially supports devices like Nest.

There's no doubt that awareness is growing. Retailers like Staples and Lowes are jumping in themselves and offering their own app-controlled, home-automation products.

Some custom installers feel threatened. According to research by CEDIA, the association for custom installers, a majority of members surveyed agreed that app-based systems and new competition will impact business, be it positive or negative.

"While enjoying the growth, installation company owners are still cautiously optimistic," Erica Shonkwiler, CEDIA senior director of research, said in a statement.

P Peek inside your home while you're away, thanks to Piper's inconspicuous panoramic video camera. If it detects strange noises, movements or unusual temperatures, it sends an alert and, if configured, sounds the siren. Piper can also control Z-Wave products. Available: April 2014. [+getpiper.com](http://getpiper.com)



OPEN SESAME. Smart door locks unlock the front door as the user and approved smartphone user approaches. No more searching for lost house keys! Features like a mobile app and "virtual keys" keep track of who is entering or trying to and software tracks everything. While the locks don't require electricity or Wi-Fi, they do need batteries. Should you lose your phone or the battery dies, these locks defer to a traditional key. Keep in mind, compatibility requires a newer phone with Bluetooth Smart technology inside.

Goji Smart Lock

Neat feature: A built-in camera shows you who is at the door.

Compatibility: iPhone, Android

Available: March 2014 /

Price for one: \$278 /

+gojiaccess.com

Kwikset Kevo

Neat feature: Dubbed "intelligent positioning," Kevo knows when the authorized user is inside or outside before granting access to visitors. Backed by lock company Kwikset, Kevo is formerly UniKey.

Downside: Limited "eKeys" are available for \$1.99 to share with friends.

Compatibility: iPhone

Available: Now, at Amazon,

Home Depot / Price for one:

\$219 /

+kwikset.com/kevo

August Smart Lock

Neat feature: Designed by Yves Béhar, of Jawbone and Source SodaStream fame, August sets very specific limits on guests' virtual keys. A feature dubbed "EverLock" automatically locks the door after you shuf it.

Compatibility: iPhone, Android (BlackBerry and Windows Phone 8 planned)

Available: Spring 2014 /

Price for one: \$199 / +august.com

Lockitron

Neat feature: Smartphone friendly, but also works via text messages for older phones. Appeals to renters since it fits over existing deadbolts.

Compatibility: iPhone, Android

Available: Delayed yet again, as

of January 2014 /

Price for one: \$179 / +lockitron.com

How safe?

Whenever a smartphone "talks" to one of these smart locks, conversations are wrapped in the same high-security blanket that banks use when you're accessing your account online. That means powerful 128- and 256-bit encryption, which makes it a pain for strangers to hack. The various locks may differ on their use of security, but they offer details on their sites.

But still hackable? Yes, for those willing to invest the time and effort. Security experts say that such efforts are probably considered a waste of time for most hackers.



G In the world of app-controlled light bulbs, **Goldee** offers the modern-day light switch. It'll control all those smart bulbs—from Hue, LIFX and iLum—by brightening up a room in the morning to adjusting the mood for date night. When not at home, security mode kicks in and pretends you're still there. Availability: Summer 2014. +getgoldee.com



C While a smart slow cooker seems nonsensical today, the **Belkin Crock-Pot by WeMo** version for Jarden adds the utility of adjusting temperatures, extending cook times and getting reminders on your smartphone. In the future, you could conceivably set it to turn on an hour after the smart coffee pot is empty and the smart door lock has locked everyone out. Availability: Spring 2014. +Belkin.com/wemo

"...Company owners expect these trends will increase consumer awareness of the industry, but many are still unsure which trends will have a net positive impact on their company."

Residential Systems, founded in 1985, felt the pain of the recent housing slowdown. It embraced the future and welcomed iPads and new technology, though it still offers traditional home-automation systems like Control4 and Savant Systems.

"Automation still requires programming. People still need help setting it up" Leo says. "Once you have that automation and integration, it's very powerful. Just set it and forget. Comfort is very important to clients."

The company has evolved by emphasizing service and becoming a "trusted advisor to customers," he said. Residential Systems will help clients who want to smarten up the whole house or just a room. And sometimes, Leo will even advise against the latest technology. One client, for example, wanted a Nest thermostat in his second home in the mountains. Leo said that didn't make sense.

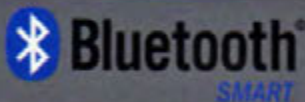
"The whole point of Nest is that it learns how you live with it. But you can't do that if it's a second home," he said.

He advised a different system that could still be controlled remotely so the clients could turn on the heat in their mountain house before they left their main residence in Texas.

"Don't get wowed with technology for the sake of technology," he said. "Do automation that makes sense for your house."



K Consider **Keecker** the robotic creature to be a Smart Home's resident entertainer. It comes when beckoned and will project video (to play video games, watch a movie, surf the web) on any blank wall and offers 360-degree sound. Availability: Winter 2014. +keecker.com



BLUETOOTH. Long a staple of mobile phones, Bluetooth enabled wireless headsets and car speakers to link with mobile phones for hands-free conversations. The personal network, however, only works if devices are physically nearby—within 30 feet, in theory. The problem was Bluetooth's need for power. It didn't require as much as Wi-Fi, but Bluetooth use still drained batteries.

The latest version (now at 4.1) uses less energy. Officially, it's called Bluetooth Smart because its low-energy feature has smartened up a

plethora of dumb devices, from forks (to keep track of what you're eating) to basketball shoes (to track how high you jump). The tiny chip now requires a tinier battery - and many smart-device makers claim batteries now last a year or so.

Expect to see more Bluetooth Smart devices launch as the transfer of information wirelessly is what makes devices smarter.

COFFEE TALK. Joke if you must, but today, you can now control the coffee pot with an iPhone. But, seriously, have you seen Scanomat's TopBrewer? This svelte faucet with under-cabinet machinery makes a barista-worthy cup of espresso, cappuccino, macchiato or cold chocolate milk. It grinds beans, froths milk and mixes the ingredients with the touch of a smartphone button. Plus, it cleans itself up after every serving. The luxurious device, with its \$10,000 price tag, is perfect for home or office. See it on display only at Kitchen Distributors and dispense with the K-Cups.

+kitchendistributors.com



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