

HOME TECH

The Off Switch Always in Reach

Automation, once for the well-to-do, is now making its way to everyone else.

By FARHAD MANJOO

I SUSPECT that our species has been longing for “smart homes” since prehistoric times. John Q. Caveman is in one corner of his cave, about to retire after a long day of gathering (he’s never been the hunting type), and suddenly, a needling worry becomes lodged in his mind: Did he put out the fire in front of the cave? He vaguely remembers doing so, but what if he’s thinking of last night, not tonight?

Millennia later, we are caught in the same fix. Do you drag yourself out of bed and down two flights of stairs to check if you turned off the space heater in the basement?

Home automation was supposed to have solved this. For decades, technology companies and futurist magazines have teased us with visions of houses in which the lighting, temperature, TV and audio system could be controlled from a central unit. You are supposed to be able to check on that basement heater while staying snug under the blanket.

But while much of the necessary technology exists, easy-to-use smart-home systems have always been the province of the ultra-wealthy. Economical D.I.Y. alternatives for the rest of us, including partial home-automation devices like universal remotes for entertainment systems and devices that control appliances remotely, have largely fallen short of the home-automation dream.

The good news is that the prices on that other route to a smart home, customized systems installed by professionals, are slowly starting to fall. Some upper-middle-class people may already be able to afford a professionally designed setup that controls at least a complete entertainment system, or maybe one that controls a few items, like the TV, the lights, the thermostat, the door locks and, say, the coffee maker, while others may be able to afford them soon.

Randy Stearns, the president of Engineered Environments, a Bay Area company that sells professionally designed automation systems, showed me one of his smaller projects, the automation of an entertainment system for Bill Weeks, a retired real estate executive who lives near San Francisco.

Mr. Weeks’s wall-mounted TV was connected to a rack of other audiovisual equipment in a nook carved out of a nearby stairwell. There were no visible wires; all the connections were hidden behind a wall panel. Mr. Weeks could control his entire system with a single remote that had been configured to his specifications by one of Mr. Stearns’s technicians.

When I have tested store-bought universal re-

mote controls, they typically get out of sync with the equipment, or lack certain crucial buttons, and inevitably I needed to reach for the original remotes to get everything under control.

But the remote that Mr. Stearns’s firm provided as part of Mr. Weeks’s system (URC’s MX-980, a complex device usually sold to and configured by professional installers) did not suffer from those flaws. Its buttons and on-screen panel could be endlessly programmed to do exactly what a user wanted. When Mr. Weeks pressed “Watch DVD,” for instance, his TV and his DVD player sprang into action. It was easy to use, too. Mr. Weeks said he had never had to explain how to use the TV, not even to baby sitters or grandparents.

“We wanted to make it obvious for everyone who came by,” he said.

He had to pay for that simplicity, though. The total cost of Mr. Weeks’s configuration, including equipment and installation, was \$4,600, in addition to the television, which he bought separately.

Mr. Weeks’s bill is representative of current prices; professionally installed smart-home systems run from a few thousand to tens or even hundreds of thousands of dollars, depending on the scope of the job. But Dave Pedigo, senior director of technology for the Custom Electronic Design and Installation Association, a trade group of home theater and home automation installers, said prices for custom automation kept falling, and that one major reason was the advent of touch-screen devices like the iPhone and iPad.

“The onslaught of Apple and Google devices has really been changing this market,” Mr. Pedigo said.

To illustrate Mr. Pedigo’s point, and to give me a taste of what less-affluent homeowners might be able to enjoy in coming years, Mr. Stearns took me to a sprawling house in the Bay Area suburb of Atherton, where his firm had installed an extensive home-automation system.

It included more than a dozen televisions, among them a 103-inch screen in a dedicated home cinema, as well as a whole-home audio system, with speakers mounted invisibly in the ceiling. There was also an integrated lighting and climate-control system, so that the family could, say, keep tabs on the temperature in the wine cellar while working out in the home gym, on the other side of the property.

Here is where the story gets back to the rest of us: This family commands its princely system, which cost \$400,000 to design and install, from

something as simple as an iPad (or, in this case, any of the seven iPads conveniently located in various parts of the house). Before the advent of touch-screen phones and tablets, Mr. Stearns said, he would have used custom-made controllers for



this automated system — and those devices cost several thousand dollars each. But the iPad controller costs \$499, a big savings. And because the iPad can be customized with different apps, it can be made to control lots of companies' systems.

In this way, as prices fall at the high end, they become more approachable for the rest of us. Consider a very basic security and home-automation service offered by a company called Vivint. The professionally installed package carries a base price of \$200, and a monthly service fee of about \$70, including security monitoring.

To be sure, Vivint's system lacks the refinements of a higher-priced custom system installed by a dealer affiliated with Mr. Pedigo's association; Vivint's system does not plug into a home-entertainment center, for example. But for many people a simple system can be very helpful. Vivint's includes a video surveillance camera, an automatic door lock, a remote-controlled smart thermostat and a module to control one appliance. (Extra modules cost a one-time fee of \$39 each.)

"We think that the reason these technologies haven't been adopted is because it's been very complicated and expensive to have them," said Alex Dunn, the company's chief operating officer, "and we felt we could change that by changing the business model."

Jake Zalewski, a San Franciscan who manages a network of college bookstores and travels frequently on business, said his Vivint system has

freed him from worrying about all the little things everyone thinks about after leaving the house. Did he remember to lock the door, turn off the lights, set the air-conditioner, turn on the alarm? He can quell all those concerns with Vivint's app on his iPhone, from anywhere he has an Internet connection.

"It just makes it so convenient," Mr. Zalewski said. He is planning to install a second system at his house in Lake Tahoe, and is looking forward to one feature in particular: turning on his hot tub when he leaves San Francisco, so it's ready to be jumped into when he arrives a few hours later.

As technology prices fall, low-cost systems like Vivint's could gain many capabilities while keeping prices level. In addition to controlling your lighting, appliances and thermostat, for example, you might also be able to adjust your sprinklers and be alerted when there are water leaks.

Recently, Sigma Designs, a company that makes a home-automation technology linking many gadgets, announced that it had made its systems compatible with "smart meters" that utilities country-wide are rolling out to customers. This development may enable you to program your appliances to turn on and off according to the price of electricity. Your dishwasher, for instance, could turn on when it notices electrical rates have dropped.

Such advances are likely to be installed in the fanciest homes first. But as prices fall, it might not be too long before, finally, we are all in control of every corner of our caves.

At Your Fingertips

Home-automation systems can be used to control locks, lights and many other devices, and they can now do so either from a central panel, or from an iPad or iPhone app, like Vivint's below. Here is a sampling of the functions that an automation-minded homeowner might consider.

