

HOME TECHNOLOGY

## High-wired homes

### Tackle chores, boost comfort, even cook dinner with technology

By [Dan Zehr](#)

AMERICAN-STATESMAN STAFF

Sunday, September 24, 2006

It all started when the refrigerator's icemaker broke.

David Burch went back to ice-cube trays for a while, but soon enough he and his wife figured it was time for a new fridge anyway. And if you're adding a new refrigerator, well, you might as well just do the whole kitchen.

And if you're doing the kitchen . . .

The extensive remodeling borne of the broken icemaker seeped into the walls, where Burch updated the home's nervous system: its wiring. Using a system from Austin-based Cortexa Technology Inc., he now can control the lighting, audio, security — even the sprinkler system — from the Internet, anywhere in the world.

"If you have access to the Net," Burch said, "you have access to your house."

Burch is one of a growing number of homeowners who are updating their wiring and other systems for the 21st century.

At the high end, so-called "smart homes" have elaborate integrated electronics systems, with touch-screen control panels for security, lighting, climate control, home-computer networks and entertainment systems, the swimming pool and more.

Homeowners have found inventive ways to use the technology.

In Northwest Austin, Randy Russell has linked his rooftop weather station to his Cortexa system, which activates the sprinklers when conditions dictate. He controls his entire house from a simple touchscreen.

Depending on how many bells and whistles homeowners want, the systems often can be installed without ripping up the walls. But the price can be high: \$40,000 and up for a system loaded with features.

Complete Cortexa systems cost as little as \$4,000.



*From any computer, Randy Russell can change the temperature in his Northwest Austin house with his Cortexa Technology system.*

And wireless technology has put the systems within the reach of many homeowners. Control4, based in Salt Lake City, offers a startup package for \$595.

For as little as a few hundred dollars, homeowners can start with multiroom home audio systems or individual devices, such as thermostats, that can be controlled remotely.

"It certainly has been in the higher-end market; there's no question," said Bill Skaer, president of Eric Grundelman's Cool AV in Mesquite and a founder of the Custom Electronic Design & Installation Association. "That's where the money was."

## **Spend a little or a lot**

The industry is "beginning to look at a world where it's not just the top of the top anymore," Skaer said. "There's a place where people would love to have some control over lighting, music around the house, maybe a digital media server."

Increasingly, new homes are incorporating the technology. More than a third of builders offer high-tech wiring packages as standard or optional features, according to the National Association of Home Builders.

Two factors drive up the costs of wired home systems, said Rod Mueller, head of Texas Integrated Systems in Austin.

The first is quality. For example, audiophiles might want a home-theater system that includes \$10,000 speakers.

The second is choice: You'll spend considerably less for a sound system that plays the same song in each room than for one that plays different songs.

"You can get some consumer home audio systems for \$300," said Kyle Griffith, a certified electronics designer at Mueller's firm.

Texas Integrated Systems designs and installs systems in higher-end homes, and about 20 percent of its projects involve putting systems in existing homes. While the homes and jobs vary, outfitting a 4,000-square-foot home with all the bells and whistles would start at around \$80,000, Mueller said.

## **Get wired . . . or not**

Many customers don't have that kind of money to spend. And with the advent of some newer wireless technologies, some of the higher end perks are becoming available at lower prices. For example, mesh networks use a wireless technology called ZigBee, which relays information from device to device around the home. The systems work well for functions such as lighting or temperature control.

Wi-Fi has made wireless data networks much easier to establish throughout the home, too. But wireless systems can raise security and bandwidth issues, installers say.

Typically, a well-designed wireless system will thwart hackers who want to turn on your sprinkler system. But having all the different wireless systems can interfere with and slow down other functions.

Most installers encourage customers to use wired systems as much as possible, because it's faster, more secure and more reliable.

Coaxial cable provides massive amounts of bandwidth, Griffith said, so it should be installed wherever you pull video into the home. And because high-bandwidth "Cat-5" wiring can carry digital and analog signals for just about any device, he said, it's best to run it throughout the house.

But whether wired or wireless, once the systems are in place, homeowners can start thinking about the possibilities.

At IBM Corp.'s labs in Austin, designers are developing systems that let users program their oven from home and check the contents of their refrigerators.

One oven that IBM jointly designed with Whirlpool keeps food cold until a preset cooking time kicks it on. If the cook and his or her diners aren't going to be home until later, they can reset the whole program from a computer or handheld device.

And a new refrigerator equipped with radio frequency identification tags can let you know what food you have at home before you leave the grocery store. If you're already home, it will offer you a few recipes that work with the ingredients on hand.

Presumably, the refrigerator will come with a working ice maker.

[dzehr@statesman.com](mailto:dzehr@statesman.com); 912-5932