

By Julie Lawson

Keeping Up With the Jetsons

The home of the future is here, with automated lighting, high-tech security, and killer entertainment systems

With the tap of a computer touchscreen, the owner of a 12,000-square-foot home in Clifton, Virginia, sets all the lights for the perfect dinner-party ambience. Using the same screen, he turns on the lights in his two pools and activates the waterfalls and streams between them. He also uses it to play a mix of his favorite songs through speakers around the house.

The self-described techie, one of the original engineers at AOL, wanted total control of his environment when building the French-country Romanesque home in 2002. First on his list was lighting control. "I didn't want to spend half an hour turning off lights" each night, he says. He also wanted security features, automated temperature settings, a digital audio-and-video collection—and the ability to control it all from his PDA.

Home automation came in the early 1980s, first embraced by techies. Taking a cue from the temperature and lighting systems of museums and office buildings, they set up computers to control lighting, heating and air conditioning, and stereo equipment.

The technology didn't catch on, says Tom Wells, president of Integrated Media Systems in Sterling. It was time-consuming to set up and maintain, and systems weren't integrated—the one for, say, lighting didn't always work with the one for music. "Whether it really helped anybody manage their lives or not," Wells says, "I just don't know."

With the Internet and advances in technology, things changed. Home automation is now de rigueur in high-end home construction and renovations, says Josh Baker, president of Bowa Builders in McLean. "The technology has become more user-friendly. It's easy to install, readily available, and the prices have come down."

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In a "smart home," touchscreens control everything from lights to million-dollar media rooms.

The high-tech home of the recent past had living rooms dominated by a huge wall unit that held a television, cable or satellite receiver, DVD player, VCR, stereo, speakers, and so on. Never mind the many remote controls and tangle of wires in the back.

With the introduction of slim plasma TVs, people wanted a more spare look, hanging the television like artwork. And the equipment? It's relegated to a dedicated closet. Because equipment is integrated, the plasma screen can be used for television and movies, Internet and e-mail, and scrolling through a music collection. Invisible speakers mount to the wall's frame and lie flush with the drywall.

A recent product from Kaleidescape, a California company, acts as a video concierge. Homeowners load their DVDs onto a system that creates a digital entertainment library. Using a touchscreen or remote control, they can scroll through the

collection and sort films by actor, director, genre, rating, and other criteria. The system will recommend movies based on past selections, and a movie can be viewed from any wired TV in the house. Similar technology from Request Multimedia allows homeowners to create and store digital-music playlists from their CD collections, for broadcast all over the house.

Lighting control allows you to set the mood throughout the house, dimming lamps for TV watching, turning them up for reading, and adding atmosphere for entertaining. No more fumbling in the dark for a light switch, says the Clifton homeowner. Some systems come with motion detectors; walk into a room or approach a flight of stairs and you trigger a chain reaction of lights turning on.

"You never come home to a dark house," says Femi Ekisola, owner of Laurel-based Total Home Systems Control.

Controlled lighting also serves as a security tool. A system from Lutron Homeworks can store light settings for ten days. When the homeowner goes on vacation, the system replays the lighting scenes and gives the illusion that the house is occupied.

Managing the home remotely is the feature that attracts most automation buyers, says Patty Sharkey of Cain Security Systems in Alexandria. Systems can be programmed so homeowners can call from a touch-tone phone and change lighting, temperature, and alarm settings. With interior security cameras, you can go online at work and check in on the nanny.

Environmental controls offer savings and comfort. Heating and air conditioning can be programmed to shut off during the day if your home is empty and turn on before the family returns. The water heater can be scheduled so it's not running—and wasting energy—all day when no one's home.

Sensors record temperatures around the house and alert homeowners to changes. In a climate-controlled wine cellar, the system can send an e-mail to the homeowner if temperatures vary from the ideal range.

New smoke and gas detectors aim to be preventive, not reactive. Standard smoke detectors pick up on particulates in the air and sound an alarm. New models note increases in temperature around appliances like the hot-water heater and alert the homeowner to make repairs before damage is done.

The centerpiece of the automated home is the control panel. Deluxe systems have color touchscreens that flip from lighting controls to security to television and music. The screens are connected to the

home's Internet broadband service, allowing access to weather and traffic reports.

The brains of the systems, the computers, are installed in the basement. Wires run from each component through the walls to the appropriate rooms, with security and telephone lines running beneath the house to prevent them from being cut.

Because of the extensive wiring, most integration systems are installed during construction or large-scale remodeling. Older homes present some challenges and can be expensive to retrofit. Particularly in older homes such as DC townhouses, plaster walls make wiring nearly impossible. Companies currently offer wireless audio and lighting systems, but look for offerings to expand. Home automation eventually will be wireless.

The prices of home-automation systems are determined by the whims—and budgets—of homeowners. You can spend millions for a Jetsons-like smart home, or you can spend several thousand on a single system for lighting or climate.

Wells of Integrated Media says most of his company's total-home automation projects (including lighting control, climate control, audio and video integration, and security) range from \$150,000 to \$250,000.

Systems also can be bought separately. Ekisola of Total Home Systems Control says prices for a lighting system in an 8,000-to-10,000-square-foot home start at about \$12,000. An integrated security and climate-control system in the same house starts at \$9,000.

The number and type of control panels also determine price. Wireless color screens start at \$4,500 each, increasing to \$10,000 and higher with the size and sophistication of the panel. Simple keypads can cost less than \$500. Most homeowners want one or more touchscreens in frequently used rooms and keypads in other spaces.

Though companies typically program systems to homeowners' specifications, they realize that many people like to play with them and change settings. The Clifton homeowner still fiddles with his systems three years later. "I know I can do more than what the house can do now," he says.

His wife and daughters struggled at first with the new systems. "They're technology consumers, not technology builders," he says. "They just want it to work."

But the convenience won them over. The one function he still wants: automated electromechanical locks. Door manufacturers aren't making them for homes yet. "So," he laments, "I still have to check the doors." 