



Baby Boomers Automate for Retirement

Smart home technology combines with accessible construction to create a house where its owners can age comfortably in place.

BY LISA MONTGOMERY

PHOTOGRAPHY BY STEVE BUCHANAN PHOTOGRAPHY

HEADING INTO RETIREMENT, Stan and Suzanne, of Landenberg, Penn., had some very specific requirements of the new house they were about to build. It had to be energy efficient. It had to be comfortable. And it had to be designed with an abundance of smart home technologies and features that would allow them to easily manage living in the house as they grew older. “We wanted to have a house that we could stay in for as long as we possibly could,” says Stan of their mission to age in place.

For starters, the homeowners requested that their architect, Townsend C. Moore, of Kirkwood, Penn., and builder, Hugh J. Lofting Construction Management Services, of West Grove, Penn., contain all 2,700 square feet of living space to a single level. Wider than normal pocket doors instead of hinged doors were used, barrier-free showers were installed to facilitate wheelchair access should the need ever arise, and the detached garage

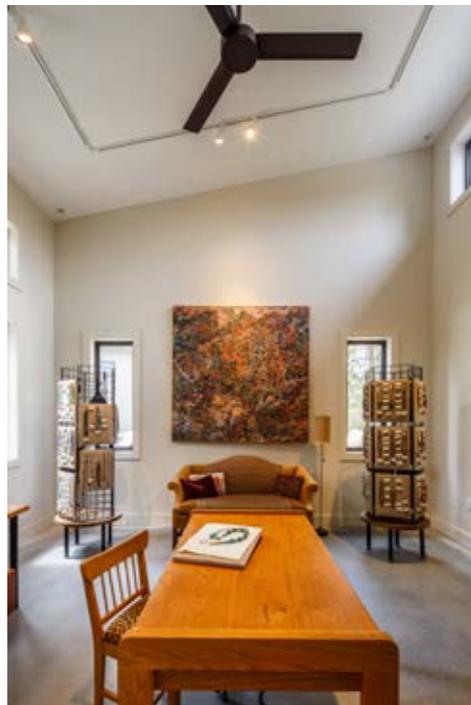
SMART HOME GALLERY

was designed so that it could be easily converted into a caregiver's cottage if and when the homeowners require assistance. Even though Stan and Suzanne need none of these amenities now, by applying these and other universal design principles, they'll be well prepared for anything.

What they do need and fully utilize now, however, is plenty of smart home technology, says Stan. "From a technology standpoint, we wanted to be able to have products and systems that would enable us to easily manage our household, and that's something that we can appreciate today, as well as later on." For Stan and Suzanne, easy home management meant being able to access and control the lights, thermostats, A/V equipment, security system, and more from a single app on a smartphone or tablet. To get the high-tech ball rolling, they hired Manny Alvarez and his home systems integration crew at Electronic Home Solutions (EHS), of Hockessin, Del., to design and install the electronic systems that would facilitate this mobile mode of home management.

The homeowners already owned and were comfortable using Samsung Galaxy tablets and Android smartphones, so this part of the home control equation was in the bag through a Vantage Equinox app that

EHS loaded onto their mobile devices. The other part of the equation, a Vantage Infusion system, would function as the home control "hub," responsible for communicating information about and passing commands to and from the tablets and smartphones to a wide variety of electronic products and systems. The InFusion system, per



requests from Stan, would also be programmed by EHS to automate certain functions of the home, providing the ultimate in easy living.

Together, the InFusion system and Equinox app grant Stan and Suzanne a bird's eye view and global control of all of the systems in the home. Guided by the app, they can monitor and modify the status of the DSC security system, check the current temperature in all six heating and cooling zones, view the surveillance cameras, peruse a library of music available on a Sonos system and direct their music choices to play through in-ceiling Episode and Revel speakers in six independent listening areas, choose video from a rack of equipment in a custom-designed utility room to distribute to TVs in the media room and master bedroom, and turn on and off any and all LED light fixtures and ceiling fans. (The audio and video equipment in the main media room is managed by a single RTI remote and processor.) In seconds, the homeowners can do what would have otherwise taken them much longer to accomplish. And they don't even have to be home to do it. "The Vantage InFusion gives us complete access to and control of everything, even while we are traveling," says Stan. "As long as we have our smartphones with us, we can do anything from the road that we can do from home." Real-time video from a pair of Wirepath surveillance cameras is never more than a finger tap away, nor is the ability to open and close the motorized gate that stands at the entrance to the property.

Adjusting the settings of each system individually from the Equinox app is a lot more efficient than doing so manually, but to streamline the process further, Alvarez created scenes so that one command from the app

TAMING UNRULY ACOUSTICS

The concrete floor of Stan and Suzanne's house could have been an acoustical nightmare, particularly in the media room where they planned to enjoy a 7.2 surround-sound system comprised of Revel speakers and Emotiva surround-sound processors and amplifiers. "We wanted to minimize sound reflections off the hard floor surface, so we asked our builder to build acoustical frames for the room," says Stan. Unlike most acoustical panels that mount to the surface of the walls, these custom-made, framed 11-by-14-foot white fabric panels with four inches of acoustical insulation are attached to the ceiling. Track lighting was integrated into each of the two panels for a decorative twist. "The panels do their job and add an interesting architectural element to the room," Suzanne says.

AIRTIGHT FOR AMAZING EFFICIENCY

In addition to being able to accommodate Stan and Suzanne's changing needs as they age, the technologies implemented into their home are also enabling the couple to use energy more efficiently, for a possible 80 to 90 percent savings on their utility bills, says home-builder Hugh Lofting, owner of Hugh Lofting Construction Management Services, of West Grove, Penn. "We used passive house construction techniques, which create an air barrier around the house," he explains. "It creates an envelope that's extremely airtight so that none of the heated or cooled air escapes for maximum energy efficiency." (The homeowners use water from a 2-acre pond on their property for geothermal heating and cooling.) The house is equipped with a smart meter from the local utility, has a backup generator, and is prepped for future rooftop solar panels.

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would control several systems all at the same time. For example, “When it’s time to retire for the evening, I can touch one button—either on my smartphone or on any of 10 Vantage EasyTouch II keypads installed throughout the house—to turn off most lights and every A/V component that’s still on,” Suzanne says of one of her favorite features. If the garage doors are still open, they automatically close as part of this “good night” scene.

There are a handful of other scenes, as well, some of which Stan created himself. This process couldn’t be simpler: Stan uses a special app to adjust the lighting levels of fixtures in a particular room to his liking and then presses another button on the screen to assign those settings to a scene. In seconds, the InFusion system has learned a new scene, which the homeowners can engage from the app or a button on one of the EasyTouch II keypads.

Because they’re still experimenting with how they’d like the lighting scenes to look, the homeowners are holding off on having the keypads labeled with custom engraved buttons. No matter how the InFusion system is set up now, it will always be able to adapt to the Stan and Suzanne’s needs—just like the home’s high-speed network of wiring is designed to do. Stan envisions a day when robots will help seniors live independently in their own homes, so he requested that EHS pull in lots of wiring to a “robot charging station” in the utility room. Plenty of high-speed cabling also terminates in what is now Suzanne’s office. Today, it handles her office equipment; tomorrow, it could support telemedicine applications like Internet-connected blood pressure monitors, and other medical sensors. “We also made sure that all of our TVs have Skype capability, in case we ever need to communicate with doctors,” Stan says. By planning for the future, Stan and Suzanne have created an environment that’s efficient, comfortable, and easy to manage no matter how long they live in their home. **EH**

THE PLAYERS

Systems Design & Installation Electronic Home Solutions, Inc. (EHS), Hockessin, Del, ehs-inc.biz

Architect Townsend C. Moore, Kirkwood, Penn.

Builder Hugh J. Lofting Construction Management Services, LLC, West Grove, Penn., hjlcms.com

EQUIPMENT

Home Automation Vantage, RTI

Lighting Control Vantage

Multi-room Audio/Video System RTI, Sonos

Home Theater Equipment Emotiva, Furman, Oppo, Samsung

Loudspeakers Episode (exterior), Revel (interior)

Security System DSC

Surveillance Cameras Wirepath

Heating and Cooling Control Tekma

THE SCOREBOARD

Innovation ★★★★★

Aesthetics ★★★★★

Customization ★★★★★

Cool Factor ★★★★★

Affordability ★★★★★