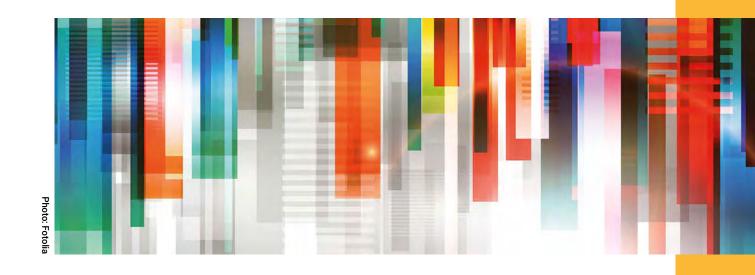text: Katarzyna Stołpiec

A SMART RESIDENCE

OR A SMART RESIDENT?

Remote lighting, a heating system, or a refrigerator providing information that we have run out of butter are just a few examples of smart technologies that are increasingly present in modern homes. Is the smart home, i.e. an apartment equipped with devices connected to the network and directed by smartphones, able to meet the expectations of users? And what is the next surprise being prepared for us by its creators?

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NO limits

Smart technology, also known as intelligent technology, is increasingly used in various aspects of our lives. Instead of a traditional timetable at bus stops we come across boards informing us what time the next bus arrives. Parking barriers lifting automatically without the need for the driver to collect a ticket. Real-time information about traffic jams or monitoring systems recording images from almost all city streets and squares. All of this contributes to an increase of safety and comfort in our everyday lives.

The creators of new tablet and smartphone models as well as application developers introduce many innovations so that their solutions never go out of fashion and constantly remain attractive products for their owners. The never-ending flow of novelty leads to a constant hunger for new technology. We constantly want more, easier, faster, and more attractive solutions. Companies producing such devices are competing at high speeds to create increasingly interesting and fancy devices or technological innovations. "Smart" household appliances, washing machines enabling us to weigh the laundry and choose the optimal amount of water and, on top of that, run by Wi-Fi as well as heating or lighting controlled electronically. Some of them are very practical, others not so much…

One of the interesting gadgets we can equip our homes with is a closet which irons and folds clothes. Gal Rozov, an Israeli software engineer and founder of the company FoldiMate, spent two years working on a robot that would take over the chores of ironing and folding. In 2018, FoldiMate, together with the German company BSH Hausgeräte, presented a prototype of a device slightly larger in size than a washing machine which can fold t-shirts, blouses, sweatshirts without hoods, pants, dresses as well as blankets and towels. The owner is only responsible for washing and drying the laundry. The rest is done by the machine.

Another device that has enjoyed considerable and long-term popularity is the coffee maker. The latest coffee machines feature the option "create a drink playlist" thanks to which you can enjoy and serve your guests their favorite types of coffee. The intelligent coffee maker is able to heat cups, brew the beverages one by one (cups must be changed manually), send notifications about a possible lack of water, coffee beans, or milk, and reminds its owners to put the milk container in the fridge if it has been inside the machine for too long.

Warming drawers are becoming an increasingly popular kitchen appliance. Siemens offers its customers drawers which warm tableware before serving a meal. In these drawers plates with dishes or glasses containing drinks are kept at a temperature of 30°C to 80°C.

Around 2011, the company LG produced TVs with a so-called *magic remote* and a speech recognition module enabling the user to change channels using human speech. The device was very popular around the world, although in Poland it did not cause such enthusiasm – probably because the commands and orders initially had to be uttered in a foreign language. To meet the expectations of its customers, LG decided to implement artificial intelligence executing Polish commands. In addition to this ability, the AI adapts to the user's habits and not only responds to their style of uttering commands, but also analyzes their cinema tastes to accordingly select the repertoire. Natural Language Processing (NLP) is a novel technology which reacts to a person's individual way of speaking, including their pronunciation, talking pace, and tone of voice. As a result, clear pronunciation is not necessary, since the TV, thanks to the constant updates made possible by a permanent Internet connection, has adapted to its owner's speaking style. In order to send voice commands, the user has to press the button with the microphone icon on the remote and utter a command. Thanks to the DeepThinQ platform, the TV instantly adapts to the user. The microphone option on the remote limits the hardware's capabilities. Without microphone activation, the TV does not respond to spoken words, and residents' conversations are not recorded anywhere.

The company LG announced that in the near future, TVs with built-in AI will become the center for supervising home electronics. With the use of Wi-Fi or Bluetooth, it will be possible to even more conveniently control home theater speakers or a music device, automatic vacuum cleaners, or air conditioners.

However, the possibilities offered by Smart Home are not limited to individual appliances. Entire rooms, such as the bathroom, can be technologically integrated. Using a tablet PC, smartphone, or other Android or iOS device, the user can remotely fill the bathtub with water at the desired temperature. It also features a schedule that programs the bath for specific days and times. To make a relaxing bath even more enjoyable, the multi-room system allows the owner to play their favorite music in the room. At the same time, the light becomes dim, and the bath water is illuminated in the color of the user's choice. After pre-setting, the underfloor heating is activated so that the surface before the bathtub becomes warm. In addition, the underfloor heating dries the splashed floor, which significantly reduces the risk of slipping and falling. Such a bathroom, apparently subjected to technological innovations to the smallest details, is equipped with the necessary ecological equipment. The taps are equipped with water consumption meters, water-saving faucet aerators (fine mesh nets mounted on the ends of the tap, thanks to which the flowing water is aerated, and its consumption can be reduced by up to 60%), and flooding sensors.

Smart technology offers us a luxurious future, although modern construction, especially of single-family homes, is already equipped with many of these amenities. The pace of technological development is so dizzying that it is hard to imagine what else the future will surprise us with.