

## SMART HOUSE

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***Анотація** У статті досліджено актуальність використання розумного будинку. Проаналізовано особливості та плюси використання новітніх технологій в будинку для покращення життя.*

**Ключові слова:** розумний дім, новітні технології, переваги і недоліки, комфортність.

***Abstract** The article examines the relevance of using a smart house. The functions and advantages of using the latest technologies in the house to improve life are analyzed.*

**Keywords:** smart house, the latest technology, advantages and disadvantages, comfort.

### Introduction

We say “Smart House” and we mean the accommodation with all contemporary appliances and conveniences. Hi-tech electronic gadgets can also be added to this definition. Only a couple of centuries ago people could not even imagine what would houses be like today. They did not have electricity, heating, fire alarms, air conditioners, heaters, etc. All they had included candles, sometimes kerosene lamps and wooden logs to keep the fire burning in the house to keep warm. They had to create their clothes out of natural sources and only with their own hands.

Today we have thousands of factories that specialize in creating clothes, household appliances, objects of decor and other things. Nearly every house or flat has central heating, hot water, electricity, an air conditioner, security system, a vacuum cleaner, a washing machine, a computer station. That is not all that industrial progress can offer. A lot of houses are supplied by various sensors. Huge corporations build newer “smart” skyscrapers, which contain tennis courts, swimming pools, gardens, beauty labs and many other conveniences just in one place. Most importantly, people do not stop dreaming and inventing newer technology tools.

There are a lot of instant messengers, chat rooms with cameras, and smartphones that allow people to communicate even when they are far from each other. Smart houses provide all that and even more. In my opinion, future generation will have even more ready-to-use robots than we do [1].

### Interaction with the “smart” house

In the past, science fiction writers have repeatedly described houses with which you can communicate directly by voice. The fact is that until recently it was just a dream, now no one is surprised. After all, we are able to communicate with our iPhone using the Siri system. And what prevents the use of the same new technology to manage the whole house? However, the level of development of voice control systems is still low; they are often wrong and require clear correct pronunciation. With the support of different languages, it is still too tight. Nevertheless, work in this direction is ongoing; hundreds of engineers around the world are working on the development of such systems. In addition, interaction with the house will be possible with any “smart” device. Commands from other devices can be sent from a computer or TV. However, real control centers will be smartphones. After all, these devices are mobile and always at hand for the user and can always be connected to the Internet. Imagine this situation: you are at work and receive a message on your smartphone that the refrigerator has run out of milk. The house asks you if you need to order more. All you need to do is confirm or deny this action. Alternatively, instruct to order some beer instead of milk.

The main elements of Smart Home are:

- climate control - management of underfloor heating, lighting, heating;
- security - alarms, motion and opening sensors, video surveillance systems that transmit what is happening to the smartphone;
- lighting - turn on / off the light, change the brightness and color of the lighting depending on the user's wishes;
- multimedia control system - turn off the TV at a set time, switch songs on the audio player with the help of a voice assistant;
- smart management of household appliances - to program washing for a certain time, turn on the coffee

machine at 10 am, etc.

An important feature of “smart” homes is the ability to manage via the Internet. Through the web interface, you can not only receive information about all the events that took place, but also manage various equipment, as well as view what is happening in the rooms with the help of webcams [2].

#### **Advantages of technology**

A smart home optimizes, simplifies and automates human life. Among the main advantages of the system should be noted:

- Possibility of remote off/on of the equipment. Manufacturers of smart technology create special programs that need to be installed on your smartphone to work with a smart device, wherever you are.
- Voice control. You do not even have to get up from the couch to turn off the lights, make coffee or turn off the multicooker.
- Automatic update. Smart devices have a Wi-Fi module, so they can be updated automatically without the intervention of owners.
- Emergency prevention. In the event of a gas, water or fire leak, the system responds quickly and sends a message to the phone.

#### **Disadvantages of the system**

The main disadvantage of the “smart home” system is the high cost of equipment and all sorts of sensors, and it is especially unpleasant when expensive equipment fails and needs to be repaired.

Another disadvantage is the complexity of installation. Without the necessary experience, electricians and technicians can often do things, so choose a repairperson who has already worked with the installation of a smart home system and knows exactly how to do it. Smart Home must work smoothly and clearly because all the elements in such a system are interconnected and you cannot make even the slightest mistakes during installation.

Some elements of a smart home need to be installed at the design or installation stage of the apartment. This applies to the laying of communication cables, the installation of smart lighting and climate control.

It is predicted that in a few decades, smart homes will account for 50% creating entire smart cities. However, if you do not want to wait, but want to feel the effects of progressive innovations in your home now, look in the catalog of the online store “Stylus” where you can buy useful smart gadgets [3].

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