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INTRODUCTION OF SMART HOME TECHNOLOGIES IN RESIDENTIAL BUILDINGS OF UZBEKISTAN

Annotation: *This article is about the concept of "smart home", its history and the use of smart home technology in residential buildings in Uzbekistan.*

Keywords: *automation, device, technology, convenience, security, economy, video surveillance.*

Introduction. It is impossible to imagine a modern house or apartment without automated devices, air conditioning and ventilation systems aimed at achieving comfort and coziness are the simplest examples of this. Technological progress does not stand still - today convenience and, most importantly, home security is a "smart home" smart systems of a new generation called.

The relevance of the "smart home" research topic is due to its high development potential and the lack of uniform standards for devices included in these systems [1].

A smart home is a smart system that allows you to bring lifestyle efficiency to a new level of well-being, consisting of systems integrated into a new information space, in order to reduce the cost of operating services and operating costs. In other words, "smart home" smart systems are the digitization of home appliances, combining them into a single network that is able to automatically maintain optimal parameters and change with a remote control command [2,3].

The concept of “smart home” emerged in the United States in the 1970s, with a sophisticated system with a single control panel serving as the key concept. The modern concept of a “smart home” is defined as a set of management systems that respond to human and environmental availability.

If a home has a lighting control system, then it already has the right to be called a “smart” home[4,5].

Smart homes control the uninterrupted operation of heating, water supply, electricity, air conditioning and ventilation systems, as well as security systems, and all engineering systems can be controlled from a single control console[6,7,8]. Some smart homes are equipped with audio and video systems that can be easily controlled over the phone or the Internet. Imagine, the simplest manipulations (for example, with the click of a button) at any time you can see what is happening in your home from almost anywhere in the world.

A smart home system can manage and monitor the following.

- lighting systems;
- electrical systems;
- ventilation systems;
- climate control;
- video surveillance systems;
- fire alarm;
- security alarm;
- access control systems (recognizes owners);
- cargo and emergency monitoring.

Why was the smart home created?

The independent operation of a “smart home” does not require constant human effort. Just one effort is enough to set all the necessary parameters and the smart system will start working[9-14]. The control system works according to individual scenarios set by the “smart home” owner. The "morning" scenario (lighting the kettle, music, raising the curtains on the windows, etc.), "relaxation"

(dim light, soft music, soft light from the fireplace) - these and other entertainments are for your intellectual can be set.

However, the main goal of a “smart home” is home security. The lighting control effect allows you to simulate the presence of the owners, thereby reducing the likelihood of strangers entering the house. If they suddenly try to break into your home, the system will of course notify the security agencies assigned to the home and the owners, as well as turn on video surveillance and recording.

The “smart home” always monitors the devices, never forgets to water the flowers, and of course shuts off electrical appliances in the absence of the owners.

Now you don’t have to look for the key in the dark - with a motion sensor, the smart system automatically turns on the light.

The "smart home" is able to maintain an optimal microclimate - creates the right temperature and humidity in the rooms, opens and closes the windows even in the absence of the owners… and many other features. It is worth noting that the automation of buildings in Europe is primarily aimed at saving energy, and only then to ensure the well-being of the population[11,12]. The situation in Russia is quite the opposite - the main task is to increase convenience and create an image, and only then security, alarm and economy.

The Cabinet of Ministers approved the Concept of Introduction of Smart City Technologies in the Republic of Uzbekistan and the Practical Action Plan for the Implementation of the Concept of Introduction of Smart City Technologies in the Republic of Uzbekistan in 2019-2021. The main directions of the "Smart City" technology implementation projects are:

1. Smart transportation
2. Smart education
3. Smart medicine
4. Smart energy
5. Smart water supply and wastewater
6. Smart Housing and Communal Services
7. Smart construction

8. Smart home

9. Smart power

10. Smart neighborhood

For example, the introduction of "Smart Home" technological solutions provides the following:

- fire and security alarm;

- free access control system;

- control of accidents (water leakage, gas leakage, accidents in the electrical system);

- control of indoor and outdoor lighting;

-control of energy consumption, limiting large voltages and voltage distribution to the phases of the consumer network;

-manage of backup power supply sources using energy-saving devices;

-manage and remote monitoring of all home systems via the Internet;

- Delivery of information on the operation of the home water supply system to the consumer's smart device via GSM-module;

-intelligent sensor system for monitoring heat consumption, air conditioning and optimal heat dissipation;

- Remote control of the design process of construction of facilities in real time.

Conclusion. In short, a smart home is a real savings. It will save you both time and money. It will cost a lot of money, but there is a solution. We can start by replacing the simple key first. The most important advantage of a smart home system is the more efficient use of energy carriers - heat, electricity and water. This means that the rest will benefit.

References

1. Oparina L.A. Ivanovo viloyatida "aqlli uy" kontseptsiyasini ishlab chiqish uchun tashkiliy-iqtisodiy mexanizmni ishlab chiqish // Rossiyada bozor iqtisodiyoti sub'ektlarining iqtisodiy va ijtimoiy muammolari Genezisi. - 2015. № IX. S. 90-92;

2. Polychuk E.I. YAKKA YASHASH UY UCHUN "SMART HOUSE" TEXNOLOGIYALARI // "Talabalar ilmiy forumi" XI Xalqaro talabalar ilmiy konferentsiyasining materiallari URL: https://scienceforum.ru/2019/article/2018015646 (kirish sanasi: 17.03.2019).

3. Akhunova N. K. K. Possibilities of using virtual reality technologies in education //Asian Journal of Multidimensional Research (AJMR). – 2021. – T. 10. – №. 3. – C. 549-555.

4. Abdalimovich A. B. APPLICATION OF PLASTIC PRODUCTS IN CONSTRUCTION AND DESIGN //Web of Scientist: International Scientific Research Journal. – 2021. – T. 2. – №. 07. – C. 126-130.

5. Akhunova N. K. K. Possibilities of using virtual reality technologies in education //Asian Journal of Multidimensional Research (AJMR). – 2021. – T. 10. – №. 3. – C. 549-555.

6. Badirovna I. M. The specificities of creating and developing modern campuses. – 2021.

7. Mannopova N., Mannapov A. Influence of “Thematic Parks” to the development of tourism in Uzbekistan //ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH. – 2021. – T. 10. – №. 4. – C. 696-704.

8. Mannopova N. R., Kamolkhodjaeva M. B. Features of designing interiors of restaurant establishments //ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH. – 2021. – T. 10. – №. 4. – C. 711-715.

9. Marufovich M. Y. Some Features Of The Connection Between The Interior And The Environment //International Journal of Progressive Sciences and Technologies. – 2021. – T. 26. – №. 1. – C. 97-101.

10. Makhmudova M. T. Features of a country house in hot countries //ACADEMICIA: An International Multidisciplinary Research Journal. – 2021. – T. 11. – №. 3. – C. 2167-2173.

11. Tursunova S. F. Light in the modern world //ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH. – 2021. – T. 10. – №. 4. – C. 750-756.

12. Nazokatkhon A. INNOVATIVE TECHNOLOGIES TO REDUCE CLIMATIC EFFECTS IN HOT AND DRY CLIMATIC TERRITORIES //Архитектурада инновациялар журнали. – 2020. – Т. 1. – №. 1.

13. Isakova M. B., Olimova F. J. Principles of formation of children's rehabilitation centers in Uzbekistan //ASIAN JOURNAL OF MULTIDIMENSIONAL RESEARCH. – 2021. – Т. 10. – №. 5. – С. 620-626.

14. Исакова М. Б. ФОРМИРОВАНИЕ ПРИНЦИПОВ ЦВЕТОВОГО РЕШЕНИЯ ИНТЕРЬЕРОВ ГОСТИНИЧНО-МУЗЕЙНЫХ КОМПЛЕКСОВ //Архитектура и архитектурная среда: вопросы исторического и современного развития. – 2020. – С. 209-212.