

ABSTRACT

Volume of work - 108 pages;

Number of illustrations - 39;

Number of tables - 47;

Number of sources at the link - 31;

The master's dissertation is devoted to the implementation of an advanced information system with a hybrid method of communication lines. The main attention is paid to the choice of modern components and technologies for the automated system with data collection channels of subsystems and interface control of the functional. The implementation of the construction of the system, consisting of separate subsystems integrated into one network, shows the measurement of temperature, measurement of movement [IR + sound] and control of glass breakage, as well as the main issues of uninterruptible power supply.

The aim of the study is: to create an advanced hybrid home automation system that can ensure the implementation of security and control functions, as well as self-diagnosis of devices and the system itself.

Objectives of the study:

- study of the peculiarities of building a hybrid system "smart home";
- comparative analysis of modern methods of building hybrid home automation systems;
- construction of data collection channels from sensors;
- analysis of the information system model;
- optimization of the subsystem of data collection channels;
- ensuring energy efficiency of the subsystem

The object of research is: modern computer complex home automation.

The subject of research is: the choice of modern means of optimizing a complex information hybrid system (construction of subsystems).

Publications:

1. Markin NR, "DEVELOPMENT OF A SMART HOME IN UKRAINE" UDC 339.17, Proceedings of the XV All-Ukrainian scientific-practical conference of students, graduate students and young scientists "EFFICIENCY OF ENGINEERING SOLUTIONS IN INSTRUMENT MANUFACTURING", December 10-11, 2019. K. : PBF, KPI. Igor Sikorsky, Center for Educational Literature. - 2019. - 546 p.
2. Markin NR, Andreeva OV, "TRENDS IN THE DEVELOPMENT OF WIRELESS COMMUNICATION PROTOCOLS" UDC 339.17, Proceedings of the XVII All-Ukrainian scientific-practical conference of students, graduate students and young scientists in the field of automation December 07-08, 2021 K. : PBF, KPI. Igor Sikorsky. - 2021. - 364 p.

Keywords: hybrid intelligent systems, digital home, communication lines, wireless communication, wireless communication technology.