

SUMMARY OF EXHAUST QUALIFICATION WORK

Theme of the final qualifying work: "Algorithm for remote control of a drone by wireless communication channel in the process of delivery of funds to an ATM using the example of a Russian savings bank"

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Information about the contracting authority:

Relevance of the research topic: Reliability of remote control by a dronesman over a wireless unprotected communication channel during the delivery of funds to ATMs is one of the most topical tasks in conditions of high traffic of city roads and streets during peak hours.

The degree of reliability of the delivery of funds to ATMs, in turn, directly depends on the reliability of remote control of an unmanned aircraft over an unprotected communication channel.

That is why the problem of developing special cryptographic systems and algorithms aimed at improving the reliability of remote control of an object via wireless communication channels is topical.

Objective: development and investigation of an effective remote control algorithm for an object based on a hybrid probabilistic cryptographic model and a system for remote mutual authentication of a control system with a controlled object.

Tasks:

- modeling and development of interactive remote control systems based on probabilistic models of symmetric and asymmetric cryptographic transformations;
- Analysis of the reliability of existing and development of radically new remote authentication systems;
- generalization of theoretical material and development on its basis of practical applications.

The empirical base of the VKR is:

- scientific works of Vladimir Kotelnikov, Claude Shannon, and Bruce Schneier;
- modern scientific and scientific and technical literature: monographs, scientific articles, teaching aids, etc;
- Internet sources.

Theoretical and practical significance of the research

The theoretical significance of this research is the analysis and generalization of the experience in solving practical problems and applications of probability models, hybrid cryptographic systems in automated systems for remote control of unmanned aerial objects to deliver money to remote ATMs.

The practical significance of the study is the development of a special application for remote authentication and remote object management systems, for the financial institution "Russian Savings Bank" in the city of Essentuki".

Results of the research: development of automated remote control system for unmanned aerial vehicles providing delivery of money to remote

Recommendations: the research conducted within the framework of the WRC is aimed at developing an effective remote control algorithm for UAVs over unprotected communication channels for the financial institution "Russian Savings Bank" in Yessentuki".