

**Final qualifying work topic:** «System of distance monitoring and vehicle access management in a protected territory (by the case of enterprise LLC «SARDIS»).

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**Contracting authority:** LLC «SARDIS»

**Research topic relevance:** The relevance of the research topic is to use an integrated approach to protecting confidential information and delimiting access to various objects, arrays of files, sectors of information resources, including those stored in the database.

**Purpose of the work:** the purpose of the final qualifying work is to analyze the functioning of the existing system of differentiation of access of personal and business vehicles to the protected area of the enterprise and methods for protecting confidential information in the enterprise.

**Tasks:**

- get acquainted with the nature of the enterprise's security system, and the reliability of mutual remote authentication procedures using open communication channels;
- to study the applied systems of protection of confidential information transmitted via communication channels
- get acquainted with the main characteristics of software and hardware protection of information in the enterprise;
- study the family of probabilistic models used to protect information in unprotected communication channels;
- develop proposals for improving information and communication and technical support for information security in the enterprise;

- make a statement of the problem and develop appropriate algorithms to improve the remote authentication model of interacting objects for unprotected communication channels.

**The theoretical** significance of this scientific study lies in:

- analyzed laws and regulatory documents in the field of information security;
- special literature and the market for hardware and software products in this area has been studied;
- studied the existing measures and means of information protection in the enterprise "Sardis".

**The practical** significance of the results lies in:

an algorithm for remote control and access control, built on the basis of a hybrid probabilistic model of cryptographic transformations, was developed and investigated.

**Study results:**

- structure and subject area of the enterprise LLC «SARDIS» were analyzed;
- an assessment of the material and technical support of this enterprise was given;
- the quality of engineering and software protection was assessed;
- formulation of the problem was formulated and algorithms were developed for improving the universal system of access control based on a hybrid probable model of cryptographic transformations;
- substantiation of the possibility of using VPN-technologies and probabilistic cryptographic transformation systems at this enterprise was made.

**Recommendations:**

- recommended to use the probabilistic hybrid model of cryptographic transformations, which reliably protect the remote-control system from external illegal influence from intruders, as the basic model of the system of remote control and management of vehicle access to the protected area.