

ABSTRACT

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Actuality. Computer steganography develops quite intensively, known and developed new methods of steganography, based on various fields of science. The steganographic systems are moving into a new phase of their development, today their large part in concealing the information takes into account the characteristics and nature of the stacking containers that store the data.

Computer steganography has found its application in many areas of human activity:

- secret transmission of confidential information in multimedia files;
- copyright protection of audio and video materials in electronic form;
- creation of secret archives;
- overcoming of monitoring and management systems of network resources;
- camouflage of the software;
- maintenance of political, technical, military and other types of intelligence.

When sending a confidential message embedded in an audio container, it is necessary to minimize the distortion of the container, for the safety of this transmission. Thus, the development of effective methods for the protection of digital information, in particular the methods of computer steganography and steganoanalysis, interspersed in a variety of containers, are relevant and important.

Connection with academic papers, plans, themes. The work was performed at the department of the automated systems of information processing and management at the Institute of Cybernetics named after. VM Glushkov of the National Academy of Sciences of Ukraine within the framework of the research theme "To develop algorithms optimal for accuracy and speed of solving problems: integration of fast-sensing functions, digital processing of signals and images, remote monitoring of objects, information security" (state registration: 0114U000357).

The goal of the research is to develop a modification of an algorithm, based on existing, in order to minimize significant changes in input objects.

To achieve the goal, you must accomplish the following **tasks**:

- characterize the existing methods of steganography of audio containers;
- identify and analyze the disadvantages of existing methods;
- to modify existing algorithms;
- to offer a modification of an existing method with a higher quadraticity of the system;
- determine the effectiveness of the solution.

The object of the research - the process of protecting information, embedded in the audio container, minimizing its noticeable changes.

Subject of the research - methods and algorithms of computer steganography and steganoanalysis for audio containers.

The research methods used in this paper are based on the methods of computer steganography.

The scientific novelty of the obtained results is to use existing effective steganographic algorithms with comparison of results, in terms of quilting resistance. Proposals to improve the queuing performance of these algorithms.

Publications. The materials of the work were presented in two scientific articles at the international conferences ISCIENCE 2017 and ISCIENCE 2018, PereyaslavKhmelnitsky, Ukraine.

PROTECTION OF INFORMATION, STEGANOGRAPHY,
STEGANOANALYZE, STEGANOCONTREASER, AUDIO CONTAINER,
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