

## DEVELOPMENT OF INFORMATION PROTECTION METHODS IN OPTICAL TEXT RECOGNITION SYSTEMS

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The development of innovative information processing methods, based on the use of artificial intelligence systems and deep learning neural networks, has significantly influenced both the emergence of the latest purely scientific approaches and algorithms, and the growth of practical applications in various fields of activity. In the task of image recognition, this, in particular, led to the introduction of algorithms and programs for optical text recognition (OCR). However, modern systems have a number of significant drawbacks. First of all, it is the scarcity of 100% guarantee of correct text recognition and the impact of the source data quality on the results of the program (for example, different lighting conditions when photographing documents, geometric distortion of images, noise effects, etc)[1]. But the key disadvantage is the complete or partial absence of measures to protect the recognized text information, in the case of sharing ones confidential data via open communication channels.

The objective of this research is to develop a combined method of information security in optical text recognition systems using QR codes and further masking the fact of data transmission via open communication channels using various methods of LSB steganography [2].

This research report presents the results of studies to assess the practical effectiveness of the proposed method both in terms of the reliability of transmitted data encoding/decoding and in terms of the information transmission secrecy [3]. The data show that the methods of encoding and hidden transmission of text information using QR codes and LSB steganography are universal and can be used to build new and to modernize existing optical text recognition systems.

### References

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