

ABSTRACT

MINIMIZATION OF APPARATUS FOR IRIS SCANNING

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Number of tables – 28

Number of applications – 0

Number of references – 17

Topic relevance. Currently there are various methods and tools for biometric authentication. One of the reliable methods is to scan the image of the iris of the eye. However, existing hardware is quite large and requires a relatively large working distance, which should be at least tens of mm. In addition, they do not provide a large frequency of reading procedures.

Therefore, it is important to minimize the scanning hardware, which will ensure reading with a high frequency and at a minimum distance from the eye.

Research goal is to find new engineering solutions for miniaturizing the iris scanners

Research objectives:

1. Analyze the well-known implementations of the iris scanners, identify their advantages and disadvantages.

2. Synthesize minimized iris scanner systems and choose the best option.

Object of research is the design process of optical systems in a direction to minimize them.

Subject of research is the method of automated design of optical systems of iris scanners.

Keywords: *scanner, eye iris, optical system, lens, aspherical surface, image quality, global optimization*

