

BIOMETRIC IDENTIFICATION SYSTEM BASED ON EYE BLINKING



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ABSTRACT

The Optics and Vision Sciences research group at the University of Alicante has developed a method for biometric authentication by recognizing the blinking of a subject.

The method consists of studying and characterizing the changes in the intensity of diffused light during the blinking process. Those changes are used to classify the blinks using different algorithms. A subject can then be identified according to the parameters recorded.

This method allows the authentication of subjects by means of a non-contact procedure, and even unconsciously. Commercial or built-in on mobile devices video cameras or webcams can be used for its application provided that the video is recorded at rates higher than 150 frames per second (fps).

We are looking for companies interested in the commercial exploitation of this technology as well as in adapting it for the development of related projects.

ADVANTAGES AND INNOVATIVE ASPECTS

ADVANTAGES OF THE TECHNOLOGY

- Non-contact authentication method, (short or medium distances).
- It can be applied unconsciously on a subject.
- Low Cost: Very affordable cameras and devices can be used.
- Possibility of use in portable electronic devices.
- Computational cost similar to that of other authentication techniques (voice, etc.)

INNOVATION HIGHLIGHTS

- Dynamic characterization from subject blinking.

MARKET APPLICATIONS

The technology can be applied in all activities related to the Biometric Industry, for example:

- ICTs

- Electronics
 - Safety and Security
 - Military
 - Tourism
 - Health
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COLLABORATION SOUGHT

Companies interested in acquiring this technology are sought for commercial exploitation through:

- Patent licensing agreements.
 - R&D projects to adapt technology to the needs of the company.
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