

Cognimatics AB
Ole Römers väg 12
223 70 Lund, Sweden
Office: +46 46 286 31 20
Fax: +46 46 286 85 07
E-mail: info@cognimatics.com
Web: www.cognimatics.com

Cognimatics, the leader in Cognitive Vision, is dedicated to providing efficient and innovative products within its two business segments - Mobile Communications and Intelligent Surveillance.



Cognimatics RedEye™ 1.0

Product Overview
Cognimatics Personal applications

Cognimatics RedEye™ Automatic and accurate redeye removal



Many people taking pictures with flash sometimes experience getting pictures with persons having red glowing eyes. This disturbing effect comes from the fact that flash light entering the iris reflects the red color from the blood vessels in the interior of the eye. One common approach to solve the problem is to reduce the effect by letting the camera's flash-light lit up before taking the picture, making a so called pre-flash. The iris then contracts and less light enters the eye, which reduces the effect. The result is:

- The red eye effect is only reduced and often it does not work good on for example children.
- The pre-flash consumes valuable battery power.
- The pre-flash can be disturbing.

Cognimatics RedEye™ is a unique software product for digital camera manufacturers that provides easy-to-use and accurate red eye removal. Based on Cognimatics' leading patent pending technology for Cognitive Vision, Cognimatics RedEye™ offers an automatic and resource efficient red eye removal, with a superior accuracy. This is why Cognimatics RedEye™ is the right choice for you. The result is:

- The red eye effect is removed.
- Pre-flash is not needed.

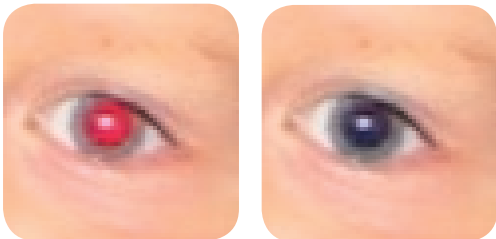
Natural Looking Result

Using Cognimatics RedEye™ the red eye color is digitally corrected without any manual interaction needed. The eyes in the picture are pinpointed automatically by the software using patent pending intelligent image processing software. After detecting the eyes, the red eye effect is removed, giving a result with an unbeaten natural appearance leaving no sharp edges or artifacts in the picture, which is otherwise common.

The software can also be used in semi automatic mode by allowing the user to mark the approximate position of eyes. This is useful for pictures taken under difficult lighting conditions or other conditions that may obstruct the software.



Result after fully automatic processing of the picture by Cognimatics RedEye™.



Close up of baby's left eye before and after red eye removal.

Features

- Superior accuracy for eye detection.
- Leading technology for removing the red eye effect giving a very natural looking result.
- Fully automatic or semi automatic

Specifications

- Fixed point arithmetic and standard C code making it ideal for constrained platforms.
- Memory requirements: ~100 KB ROM.
- Platform: ARM 9, 200 MIPS or higher.
- API is provided for easy integration.
- Suitable for mega pixel images.
- Based on patent pending technology.

CONTACT INFORMATION

Cognimatics AB
Phone: +46 46 286 31 20
Fax: +46 46 286 86 03
info@cognimatics.com
www.cognimatics.com

ABOUT COGNIMATICS

Cognimatics, the leader in Cognitive Vision, has its roots at the Mathematical Department at Lund University, Sweden. Having a team of senior researchers with more than a decade of experience from Cognitive Vision, Cognimatics' technology is built on a solid and sound scientific foundation.

COMPANY MISSION

Cognimatics works in close cooperation with the university to take new results from research to the market efficiently.

COGNITIVE VISION

Cognitive vision is a field of research, where the aim is to teach computers to interpret images intelligently like humans do. It involves detecting people in pictures, finding objects in pictures, tracking objects and detecting events in video streams. Cognimatics, the leader in Cognitive Vision, is dedicated to providing efficient and innovative products within its two business segments - Mobile Communications and Intelligent Surveillance.

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