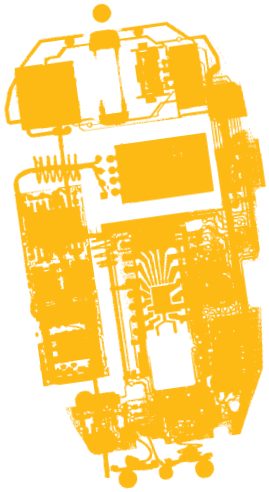
TRANSPARENT TECHNOLOGY

SecureCAM



This software, written for a Windows platform, enables the creation of a simple, cheap videosurveillance system without the use of dedicated hardware and proprietary solutions.
Securecam is highly configurable and designed to recognise movement and/or the entrance of people inside the visual field of the webcam itself.
When the system detects an event, it performs one of the following actions:

- records the event in a log file (which can be consulted subsequently);
- sends an email to an address to be configured;
- the message is sent with an attachment containing the image captured at the time of the event;
- starts up recording to file; the recorded files can be visualised at a later date using a normal multimedia player.

WHAT IT DOES

The main characteristics of SecureCAM are:

- the use of a common video camera, therefore not equipped with specific hardware functions related to video surveillance;
- the use of open-source software tools for both the user interface and the recognition algorithms;
- a modular platform which means that both the recognition functions and the range of possible actions can be extended;
- both local and IP webcams supported;
- ability to recognise movement or the presence of faces on the scene;
- the system offers a standard mode and a client/server mode;
- in this case SecureCAM delegates the recognition functions to the server while the client is used to configure the system and visualise the log files, recordings and photos taken.

The low cost of the hardware required and the choice of open source libraries make SecureCAM a video surveillance tool suitable for both personal and professional use.

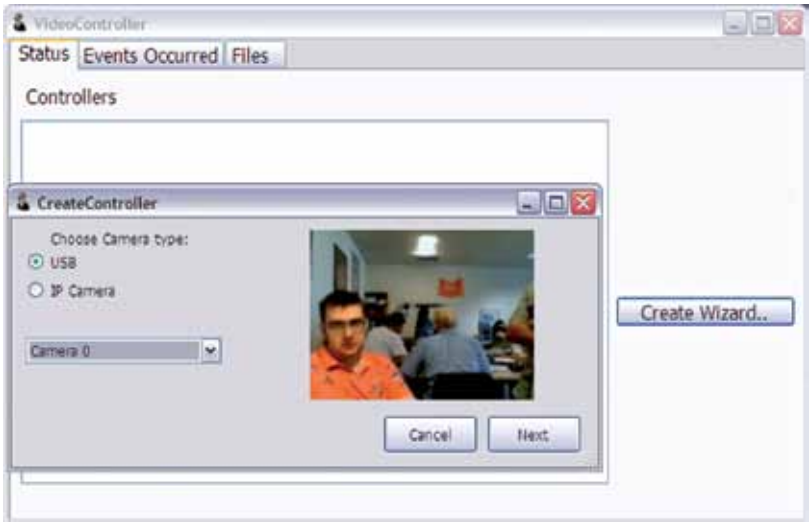
HOW IT WORKS

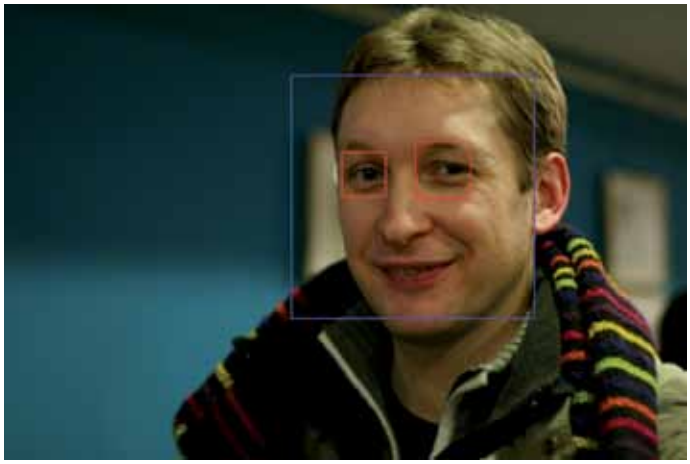
SecureCAM is based on software that is divided into three different modules:

- the acquisition system, which receives the images from the videocameras and is able to read both videocameras installed locally (typically via USB) and cameras connected via web;
- the event recognition system: this is based on OpenCV libraries produced by Intel that provide low-level algorithms to process the images and recognise certain events. The recognition functions performed by SecureCAM are movement recognition and face recognition;
- the action system: SecureCAM is able to perform a specific action in response to a recognised event.

To be compatible with SecureCAM, the IP videocameras used must deliver a streaming flow using a protocol and codec supported by the open source player VideoLAN. The local videocameras must be compatible with the Microsoft DirectShow framework.

Fig. 1 e 2 The management interface with the visual field of the webcam and face identification





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