RECVIS

FACE DETECTION AND IDENTIFICATION

Inria development team: LEAR

Descriptors

Characteristic points

Classification

Face recognition

When connected to a video camera, RECVIS software makes it possible to identify the person in the visual field by comparison with a database.

Principle

People are identified automatically in real time based on the images from a video camera. The RECVIS software uses an algorithm to extract robust visual descriptors, calculated locally using nine characteristic points of the face, around the eyes, nose and mouth. The identification algorithm also takes into account scale factors, face alignment and changes in luminosity.

The digitized faces are then classified by comparing them with those present in a previously constructed database containing all of the system's known users.

When a new user wishes to use the system, a series of images is acquired and all of his descriptors are immediately added to the database.

http://lear.inrialpes.fr

Applications

Face recognition is a rapidly expanding field. It is at the heart of many biometric applications such as security checks (airports, stadia, casinos, etc.), automatic labelling of photographs (Picasa, Facebook), automatic loading of personal data (Kinect, Toshiba computers), mobile telephony (iPhone, Android, etc.), home care support, etc.

A collaboration between Inria and Technosens

The RECVIS software was developed as part of a collaboration between researchers from Inria's LEAR team and the Grenoble-based company TECHNOSENS.

TECHNOSENS develops and markets the "e-lio" videophone communication tool, which is capable of adapting to its user's capacities. The regular version allows the user to connect to his profile using a remote control.

The integration of RECVIS algorithms will enable "e-lio" to recognise the user and log him in automatically.

CONTACTS

Guillaume Fortier
+33 (0)4 56 52 71 31
guillaume.fortier@inria.fr

Jakob Verbeek
+33 (0)4 76 61 52 33
jakob.verbeek@inria.fr

Technology transfer at Inria

Philippe Broun
+33 (0)4 76 61 53 86
philippe.broun@inria.fr