

Feature Sheet

DISCOVERY

Acsys FRS Discovery gives you the opportunity to explore the full range of possibilities for biometric authentication within your organization without a major up-front investment in software and hardware peripherals. FRS Discovery provides biometric authentication, combining the advanced face recognition capabilities of the Acsys Face Recognition System (Acsys FRS) with facial recognition and verification on a standalone PC.

FRS Discovery provides the following leading-edge functionality:

- Tracking of multiple faces simultaneously in real time
- Enrollment of facial images from a live or recorded video stream
- Enrollment of facial images from a static image (JPEG)
- Identification (one-to-many authentication) from a video stream
- Verification (one-to-one authentication) from a video stream
- Database search of static images for a specific individual

To help you in your proof-of-concept activities, the Acsys FRS Discovery 2.0 package includes the ability to link into web or CCTV cameras, proximity card and fingerprint readers, relay output cards and demonstration applications.

The system also provides a full OCX interface to allow you to integrate any component of the system into custom applications written in Microsoft Visual C++ or Visual Basic.

Features

The Acsys FRS Discovery package gives you first hand experience of our leading-edge face recognition technology. Features include:

Tracking of multiple faces simultaneously in real time

The tracking capability of Acsys FRS is simply the most advanced in the industry. Discovery demonstrates tracking of up to four faces simultaneously in a wide variety of conditions (indoor, outdoor and low-light). The system tracks faces in real time (30 FPS) and at head rotation angles of up to 90 degrees from the camera. The video display shows the tracking operation using color-coded overlays, and even illustrates the ability of the system to determine head orientation.

Enrollment of facial images from a live or recorded video stream

The system incorporates an interactive enrollment procedure in which the computer guides the user through the process verbally. The system is aware when the user enters and leaves the camera's field of view, when multiple users are attempting to enroll, and when the user is positioned too far from the camera, and responds appropriately with verbal instructions.



Enrollment of facial images from a static image (JPEG)

A video image is often all that is available to identify an individual. The system allows enrollment from a static image (JPEG). Although identification and verification will be less accurate than would be the case with live enrollment, Acsys FRS demonstrates exceptional authentication capabilities using even a single photograph.

Identification (one-to-many authentication) from a video stream

The system can identify up to four individuals simultaneously from a live or recorded video feed. This capability is extremely important in surveillance mode (i.e. identifying individuals in a crowd). The system logs each identification event and stores an image of the identified individual for subsequent analysis and reporting.

Verification (one-to-one authentication) from a video stream

Verification is performed on a single individual within the video frame (or static image). In the event that multiple individuals are present within the field of view, the system issues verbal warnings indicating that only one individual is permitted in from of the camera. The ability to distinguish multiple faces simultaneously is a key requirement for both physical and logical (computer) access control applications.

Database search for a specific individual

Database searches can be conducted using live- or static-enrollment generated templates. The demonstration program integrates six of the most popular OLEDB providers, including Microsoft Access, Microsoft SQL Server and Oracle 9i. The system allows customization of searches based on the number of closest matches and on confidence thresholds. The search speed provided within the demonstration program is 10,000 images per second.

Real-Life Applications

Acsys FRS Discovery includes the following demonstration applications:

- Access control
- Surveillance and database search
- Remote device activation

The access control application demonstrates the following combinations of standard card token (proximity card), personal identification number (PIN) and biometric authentication:

- Proximity card and facial recognition
- Proximity card and dual biometric (face and finger)
- PIN and facial recognition
- PIN and dual biometric (face and finger)

Surveillance and database search scenarios include:

- Enrolling subjects from video and identifying multiple individuals from live or recorded video
- Enrolling subjects from static image (JPEG), and identifying multiple individuals from live or recorded video
- Searching the database for enrolled subjects (whether the templates were generated from video or static images)
- Generating closest-matches report from a database of facial images

Remote devices can be activated upon detection of faces. Also, remote notification and image transmission via the Web can be triggered by the following event types:

- facial tracking
- identification



- verification
- verification failure

System Requirements

- Microsoft Windows 2000/XP editions
- 3.2 GHz Intel Pentium 4 DUAL PROCESSOR compatible or higher
- 512 MB RAM minimum
- 20 GB free disk space
- Video capture system compatible with DirectX 8.1, VFW

