SMART IDENT VIDEO IDENTIFICATION

Introduction

The aim of the SmartIdent video identification system is to support security personnel by automatically alerting them to the presence of persons registered in the system.

x-pin identification automatically scans the incoming video streams, detects the faces and checks if they match people in a watch list. In case of a match, operators are notified and specific actions can be taken. The operator is now focused on the suspect persons. He does not have to monitor a large amount of video streams simultaneously. The aim of the Smart Ident video identification system is to support security personnel by automatically alerting them to the presence of persons registered in the system.

Is robust against:

- ✓ Typical gesture changes
- ✓ Pose (+/- 15° deviation)
- ✓ Minor face occlusions
- ✓ Beard and hairstyle changes
- ✓ Wearing glasses
- ✓ Illumination changes

x-pin TECHNOLOGY

Is based on:

- ✓ State of the art algorithms
- ✓ High performance Databases
- ✓ Newest Camera technologies
- ✓ High performance server systems

Applications:

- ○ Watch list searches for unwanted persons.
- ○ Access control for airports, subway or railway stations.
- ○ Checking for banned or unwanted persons in sport arenas, clubs or recreation centers.
- ○ Automatically identifying VIPs or customers to offer them special services right after their arrival.

Features:

- ○ Real time multiple video stream analysis
- ○ Real time multiple faces finding per video stream.
- ○ Real time face matches against watch list Real time match notification and recording.
- ○ Interactive and batch enrollment.
- ○ Enrollment from still image, live video stream.
- ○ Flexible video switch board management

Technical Facts:

The server architecture is designed as a BNE (Biometric Network Engine) for high-performance multi-core server architectures. This architecture is equipped with scalable software modules and can therefore handle a high number of cameras and high frame rate as needed. For displaying the persons found, based on a list for example, an operating system-independent GUI (graphical user interface) is available. Reliable recognition of multiple persons in real-time under changing lighting conditions and changes in facial expression is ensured.

Server:

Highly scalable and robust blade server hardware, designed to overcome hardware failures.

Camera Resolution	Situation	Number of Cores
0,4 MPixel	Narrow door, one person walks through	4 @ 2.0 GHz
0,8 MPixel	Door, two persons wals through	8 @ 2.0 GHz
1,3 MPixel	Narrow hall way, two persons walk through	8 @ 2.0 GHz
2,0 MPixel	Hall way, three persons walk through	8 @ 2.8 GHz
4,0 MPixel	Queue, eight persons, 4 fps	8 @ 2.8 GHz

Camera:

SmartIdent video identification is a robust multi-camera system for identifying persons on the basis of their biometric facial data. Established CCTV cameras as well as high-resolution digital cameras can be operated with the identification server where the minimal video stream quality is 640 x 480 pixels.

Camera Type	Pixel Count	Frame Rate	Power Supply	max. Distance to Server	max. Distance to Server with Extender
CCTV	0,4 MPixel	10 fps	Separately	100 m	100 m
USB	0-2 MPixel	10 fps	Up to 3m via USB	3 m	100 m
Firewire	0-6 MPixel	5-10 fps	Up to 4.5m via Firewire	4.5 m	1000 m
GigE	1-15 MPixel	3-10 fps	Up to 100m via Ethernet	100 m	Unlimited

x-pin.com GmbH

Millennium City
Handelskai 94-96, Stiege 4/2. OG
1200 Vienna, Austria

phone +43-1-2361000
fax +43-1-2361000 99
mail office@x-pin.com