ISS

SecurOS® FaceX

Capture and Facial Recognition

Neural Network-based Facial Recognition Technology

Technology Overview

SecurOS® FaceX is an intelligent video analytics module that provides facial detection and recognition for advanced security programs. With its extraordinary recognition accuracy, SecurOS® FaceX operates in a wide range of conditions, including changing illumination and angles.

SecurOS® FaceX seamlessly integrates with Access Control Systems (ACS) allowing a person's face to be their credential, creating a frictionless/hands-free access solution. The face could also be combined with other credentials for single or multifactor authentication.

The module allows users to automate various operations related to monitoring, enrollment, authentication, and statistical analysis. SecurOS® FaceX provides the necessary level of security at sites where visitor enrollment and identification are required. For convenience and cost savings, the video server CPU can perform all neural network processes without the need of special GPU cards.

Applications

Public Arenas

Passport Control Zones

Restricted Areas

Retail

Transportation Hubs

Law Enforcement

Key Features

EVENT TO VIDEO EVIDENCE LINKING
Collect information on all detected faces as well as recognition data such as person name, camera, date, time, watchlist, and link to the video clips in the video archive

POWERFUL RECOGNITION ENGINE
Automatically detect and recognize faces in real-time and display the results in the SecurOS® FaceX GUI (graphical user interface)

FORENSICS SEARCH
Search for persons of interest by photo (search in database of previously detected people and in watchlists)

WATCHLIST MANAGEMENT
Easily manage watchlists, including the add-one-person-to-multiple-watchlists option

ANTI-SPOOFING
Anti-spoofing feature checks for face liveness and to ensure that printed photos or images from mobile devices (phone, tablet) will be flagged as spoofing and result in an alarm
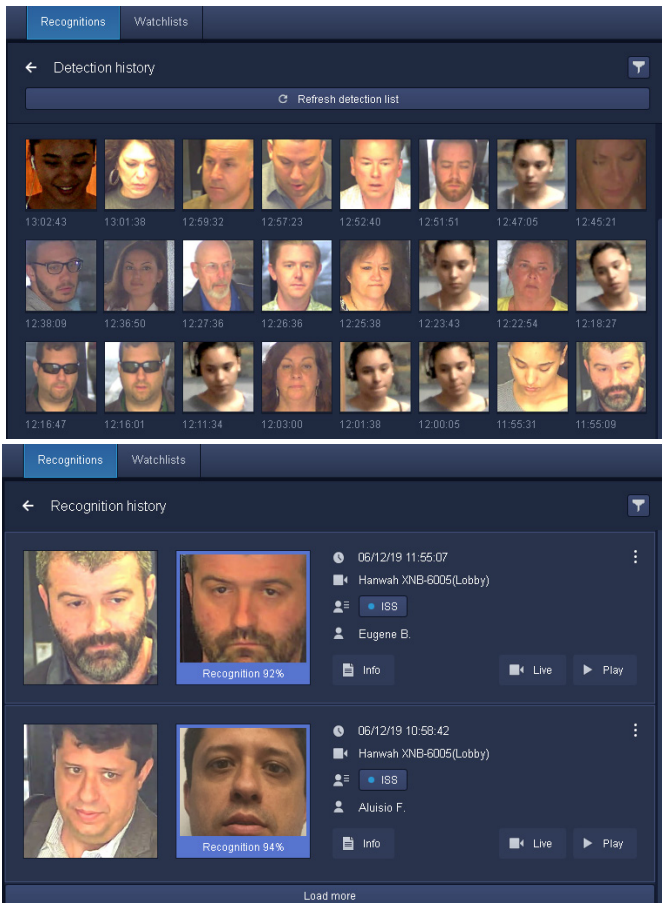
BATCH IMPORT
Batch import of photos into watchlists while automatically checking for duplicates on existing photos and person's full name

FaceX at Work

SecurOS® FaceX is available as a standalone module or as part of the SecurOS® video management platform, which provides interoperability with other subsystems like ACS or ANPR. Data can be sent to third-party systems as needed and no proprietary cameras are required to use the intuitive and easy-to-use interface.

Some of the key features of the solution include:

- Face capture and recognition using next generation neural network-based technology

- Delivery of demographic data, such as gender, age range, ethnic group, use of lenses, among others

- Create a list of authorized and unauthorized people

- Inform the operator at workstation monitor or send notifications by email, SMS, etc., if a particular person of interest is in the detection field of view

Specifications

Recognition Data	
Recognition Quality	ISO / IEC 19794-5 standard visa compliant photos social network photographs (and mug shots) face recognition by video stream. 99.5% True Positive Rate @ 0.05% False Match Rate 97.8% True Positive Rate @ 0.05% False Match Rate Up to 98% True Positive Rate @ 0.05% False Match Rate *(if camera installation procedure and reference photo quality meet the technical requirements)*
Number of people in watchlist	Unlimited
Number of watchlists	Unlimited
Face recognition speed against 100k faces in watchlist	Up to 20 faces per second per 1 physical CPU core (2.5 GHz)
Biometric template size	Approximately 2Kb
Biometric template extraction speed	4 templates per second per 1 physical CPU core (2.5 GHz)
Number of faces detected simultaneously in one frame	Limited by processor performance only
Data transfer protocol	TCP/IP
Search by picture, parameters	Date/time the person appeared in camera FoV, camera name, recognition threshold
Recognition event data of watchlist	Person name Recognition percentage Camera name Date & time of best-frame Captured face image (best-frame) Watchlist Link to person profile Link to a video archive Anti-spoofing alarm (if feature is enabled)