



SyberID

Identity Authentication

www.sybernautix.com



Why we need Biometric System?

Biometrics is one of the most technically advanced and rapidly evolving security technologies in the market today. Biometrics adds additional security beyond physical and virtual credentials based on iris recognition, facial recognition and finger print identification. Biometric technology analyzes scanned features like finger prints; facial image etc. and compares them to a database of registered individuals.

One of the most difficult aspects of selecting a biometric solution is identifying which devices and software technologies are most appropriate and cost-effective for each implementation.

At Sybernautix, we understand these challenges as we support the leading international, national, industry and consumer-based identity solutions from around the world. That's why we developed a component-based, application framework with which identity solutions can be built and configured based on specific technical and business requirements. As the leading player in this market, we can provide these solutions in less time, with more flexibility and proven reliability.

About the Company

Sybernautix - Your Partner in Biometric Security Systems

Sybernautix Solutions Limited - Provides world-class software solutions with its extensive domain expertise and technology specialization, to global customers in the areas of Biometric Technology Services, Security Management Services, Technology Consulting, Application Development and Business Process Outsourcing.

Sybernautix provides end-to-end business solutions that leverage technology. We provide solutions for a dynamic environment where business and technological strategies converge. Our approach focuses on new ways of business combining IT innovation and adoption while leveraging an organization's current IT assets.

SyberID – Biometric Identity Assurance

Reliable and automatic user authentication is becoming a necessity nowadays. **SyberID** is an answer for user authentication and proactive surveillance. A reliable biometric solution not only achieves the purpose of security but also enhances the efficiency within the organization.

Through our biometric identity assurance product suite & expertise, **SyberID** provides a fast flexible and cost-effective way to implement identity –based solutions that meets the customer demand of biometric identity & authentication programs.

Sybernautix offers the industry's truly comprehensive, end-to-end solution for protecting and securing identities. This encompasses hardware, software, services, tools and applications for the identification of individuals through biometrics (finger, face and iris), enrolment and processing of identity data and authentication of secure identity credentials.

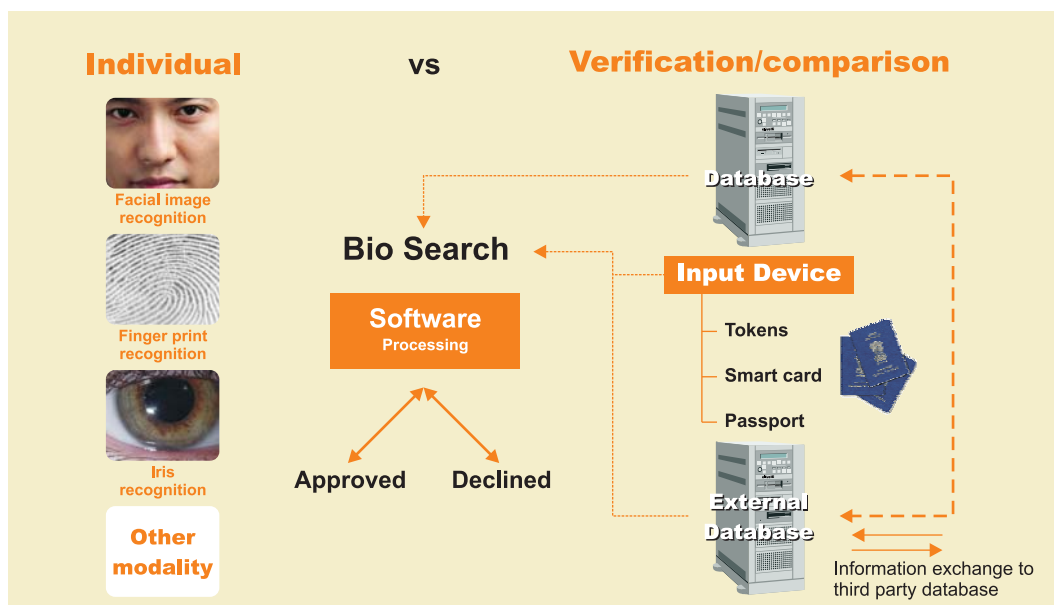
SyberID – Multi-Biometric Authentication

SyberID is the digital generation solution which takes multi biometric matching to new level of security and sophistication. **SyberID** technology will readily integrate with existing security and other applications.

SyberID serves two major purposes: Identification and Verification.

Identification is the process of establishing the identity of an individual by matching a live scan against a database of biometric samples of known people, i.e., 1:n matching.

Verification is the process of verifying the identity of an individual by matching a live scan against a previously captured biometric sample, i.e., 1:1 matching.





Facial Recognition

The face is an important aspect of human behaviour, whilst also being a basic instrument of social interaction.

SyberFaceID is a “face detection / matching engine” using face-recognition technology for identifying individuals, and can be effectively applied in a variety of systems. It detects face images that are captured with cameras and other devices, and matches them against pre-registered face data.

Biometric facial recognition systems such as **SyberFaceID** will increase in significance because they facilitate touch-free processes without the need for contact or interaction with the person being identified.

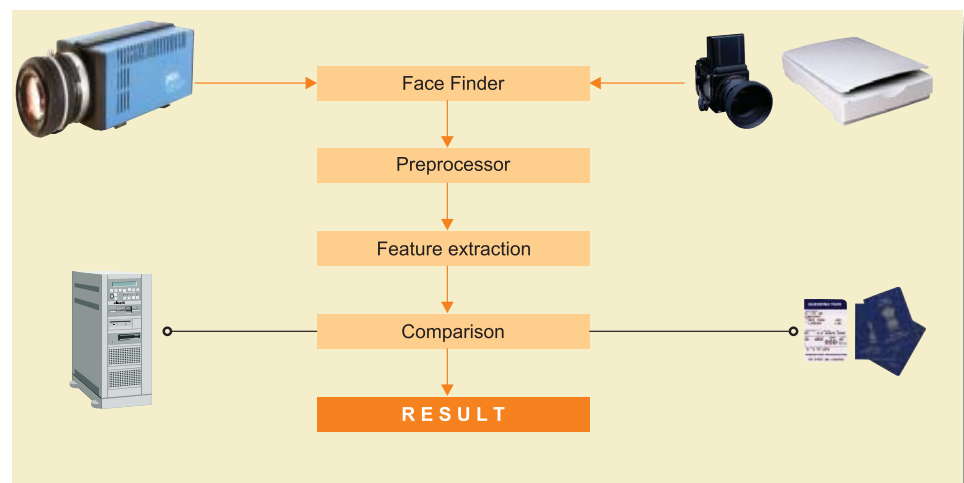


Image Grabbing



Preprocessing



Detection



Recognition



Standardization

Face Recognition System Composition

- **SyberFaceID** is a multi matching facial recognition system which works using a combination of eye zone extraction and facial recognition techniques, providing users with a short processing time and high detection rate.
- **SyberFaceID** supports various graphics and video formats - as well as live camera feeds - with the images being compared in either a 1:n search/match or a 1:1 match.
- Face geometry reconstructed in sub-millimeters (real ground-based measurement capturing x-y-z axes)
- Facial feature extraction based on underlying cranial structure (unique & unchanging over time)
- Real-time face analysis, feature extraction & matching –identification in under 1/10 second
- Identification and authentication based on individual facial features regardless of vantage point and facial changes (glasses, beard, expression)

Finger Recognition

SyberDigiID solutions are state-of-the-art fingerprint biometric technologies for verification and identification of individuals.

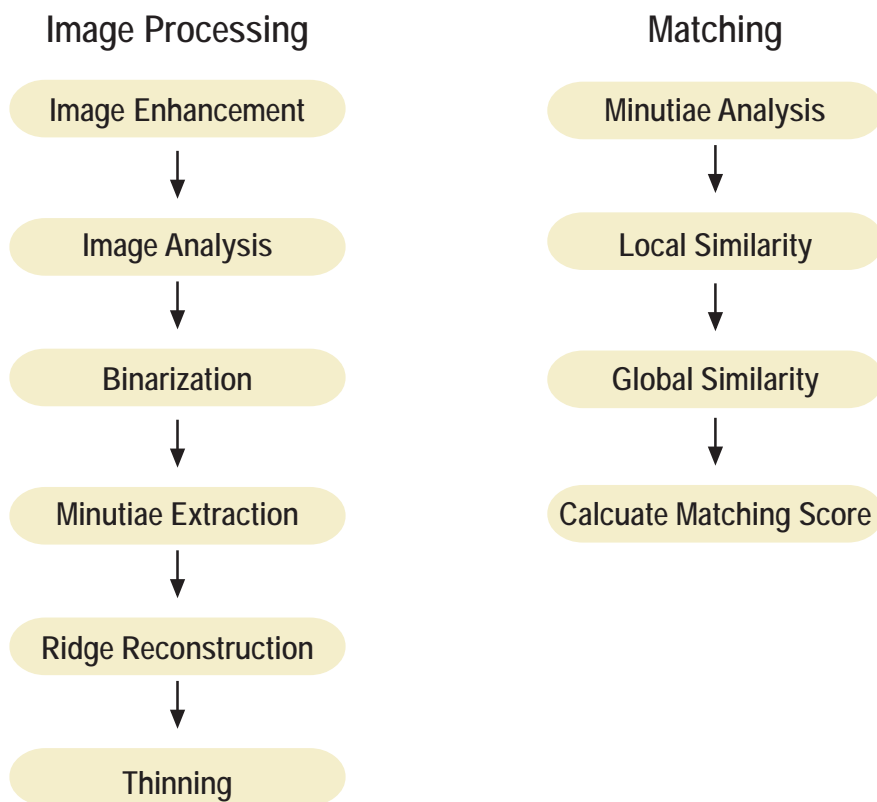
SyberDigiID Fingerprint Identification technology is a computerized solution that captures, compares, matches, identifies, verifies and stores digitized fingerprint images, with advanced one-to-many matching algorithm.

For enterprises that need to positively identify employees, members or customers, biometric finger recognition systems such as **SyberDigiID** is a turnkey hardware and software solution that provides quick and reliable positive identification.

Fingerprint Recognition Algorithm

To verify the identity of a user by automatically extracting minutiae from his or her fingerprint image, a fingerprint recognition algorithm is required.

SyberDigiID fingerprint recognition algorithm is composed of two main technologies: **image processing** technology that captures the characteristics of the corresponding fingerprint by having the image under- going several stages, and **matching algorithm** technology that authenticates the identity by comparing feature data comprised of minutiae with templates in a database.





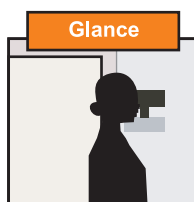
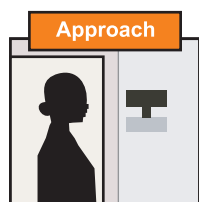
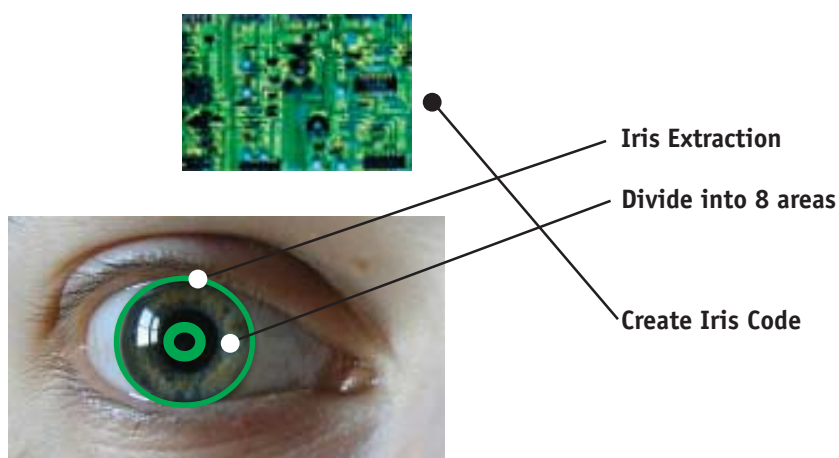
Iris Recognition

Iris recognition is the fastest, most accurate and scalable of all biometric technologies. The iris contains massive amounts of detailed information unique to each individual and useful for identification. The iris is so unique that even identical twins have different irises. Once the iris is completely formed at about 18 months of age, the structure remains unchanged throughout one's lifetime. Iris recognition technology is noninvasive and completely safe.

Iris recognition is the technology that verifies the identity of an individual by using a ring-shaped iris pattern between the black pupil and the white area of an eye.

Personal identification using the iris is composed of two parts: obtaining the iris image and recognizing it. Firstly, the system performs the function of obtaining the iris image suitable to iris recognition.

The second part is comprised of two stages: extracting the iris area from the image and creating an iris code, and perform a match based on the iris characteristics



Our Products

At the Sybernautix, we have a competence in numerous Biometric security applications, presenting a sample of our fare:

Access Control System

Biometric security systems are used very effectively as access control systems in many areas such as Government, Aviation, Financial Services and Private Organisations. Biometric solutions offers high security, reduce identity fraud and protect valuable data while the privacy of customer confidential information as well as employees - all in a highly cost effective and security with high user convenience.

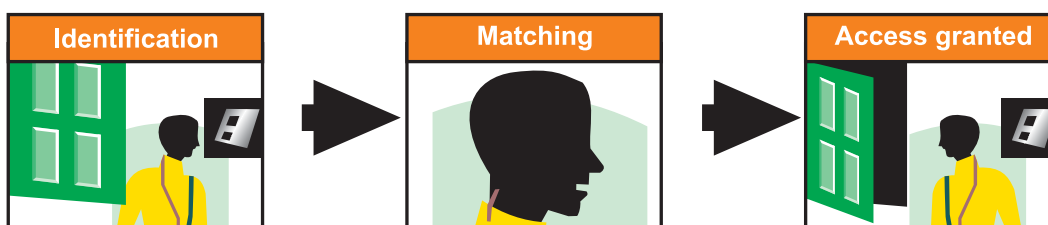
Sybernautix provides a highly secure biometric physical and logical access control system designed to protect access to secure areas or restricted zones in a building and protect confidential data as well as information assets of an organization.

Sybrnautix's secure access control system can integrate with existing access control or time & attendance systems and provides an enhanced layer of security through the use of biometric technology.

This system offers the choice of using any biometric recognition type such as finger, face or iris.

Main Features

- One-to-many matching algorithm: database matching between live images and database images
- Protect the premises on tracking the movement of all entrants with real time surveillance and time log
- Contactless avoiding any human interruption
- Automatic entry / exit date and time recording
- Easy tracking of the physical movement of staff and visitors
- Management reporting & Statistics
- Ability to integrate - Visitor Management, Time & Attendance, Video surveillance and Security Guard Management
- Seamless integration with back-end application
- Recognition time of less than a second





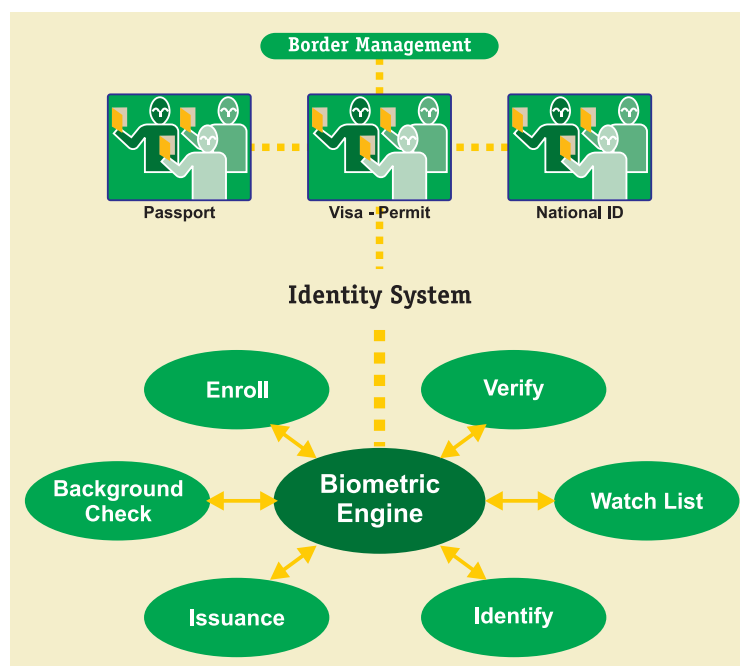
Border Control & Airport Management

The increasing threat of terrorist attacks, the fraudulent use of travel documents and illegal immigration, as well as the issue of expediting legitimate travellers through borders are just some of the challenges facing government today when trying to protect their national security at air, sea and land ports. Government needs to implement accurate authentication for all citizens and employees in their countries at each entry/exit points. It needs enabling technologies that are highly scalable, robust and flexible in order to cope with high volumes, integrate with existing systems and applications and be readily available and highly reliable.

Sybernautix's multi-biometric identity authentication system, **SyberID**, supports border control and immigration management solutions - making them more secure by providing full non-repudiation and accurate identification and verification of individuals.

Sybernautix has developed a highly secure identity assurance platform which:

- Supports multiple identity credentials such as passports, visas, smartcards, RFIDs, identity cards etc. and multiple biometrics (face, finger, iris)
- Easy tracking of the staff and travellers: automatically detects and captures the facial images without any human interruption
- Easy integration into existing border control infrastructure (gates, check-in, immigration, clearing systems etc.)
- Optimize the usage of watch list and VIP list: one-to-many matching algorithm: database matching between live images and database images
- Supports encryption of data for privacy reasons
- Streamline operation procedures and minimize manual operations
- Integrates seamlessly with multiple applications and systems at border entry and exit points



Video Monitoring

There is a fast growing demand from government, law enforcement, and industry customers for biometric solutions to identify persons from video cameras.

SyberID - Alert is a software product supporting the identification of persons in video surveillance applications. It incorporates Sybernautix's latest facial recognition technology. **SyberID - Alert** can work as a stand-alone solution, but also easily integrates into DVR systems; a variety of integration interfaces are available.

SyberID - Alert automatically scans incoming video streams, detects multiple faces and checks if the found faces match a watch list of persons; in case of a match, operators are notified - all in real time. The operators can now focus on the identified person instead of observing a large number of video screens simultaneously.

It is a highly secured and reliable video monitoring system, which is suitable for the high traffic circulation because the entire process takes few seconds without any human interruption by flexibly integrated into for easy identification.

Main Features

- Real time multiple video stream analysis and Reconcile the evidence with the facts
- One-to-many matching algorithm: database matching between live images, video images and database images
- Real time face comparison against watch list and alarm notification & recording
- Enrollment from still image, still image camera and live video stream
- High scalability in terms of watch list size, number of video streams, and number of visible faces



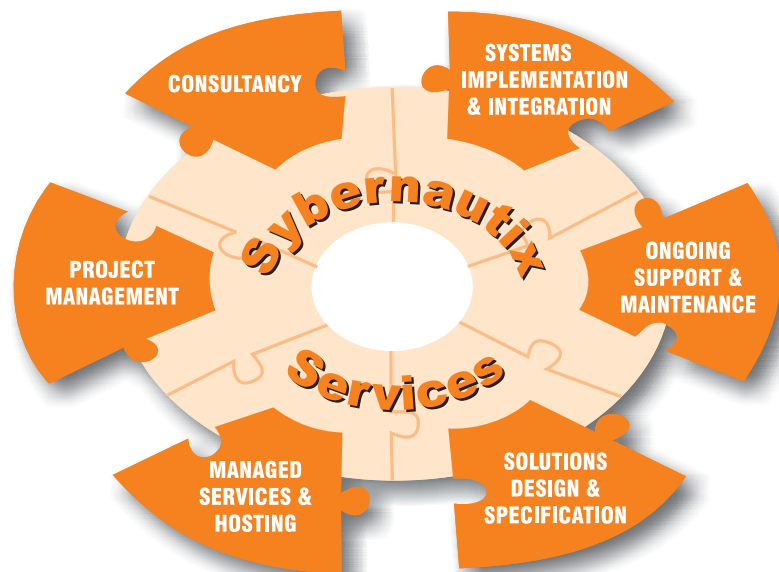


Who will benefit from SyberID?

Whenever, wherever and to whomever accurate protecting and securing identity is important, Sybernautix has the complete biometric solution.

We can develop and design solutions for the below industries

- **Immigration & Border Control Management**
- **Transportation & Aviation Security** (Airport & Airline)
- **Government & Law enforcement agencies**
- **Physical & Logical access control**
- **Secure Video surveillance**
- **Civil Identity Protection**
- **Financial services**
- **ID document issuance** ePassport, Visa's, Driving license, National ID's & Smart cards (Biometric acquisition & database search)





Biometrics in Action



SYBERNAUTIX

Multi-Biometric Solutions

SyberID

Identity Authentication

www.sybernautix.com





Committed to deliver the best Biometric security solution
performance available on the market.

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