



SaveGarde



Pharmaceutical and Medical Manufacturing with IrisGuard:



Largest Iris Application in the World ...

Security in a humane atmosphere

More than 30 Million people verified ...
More than 40 trillion comparisons made ...

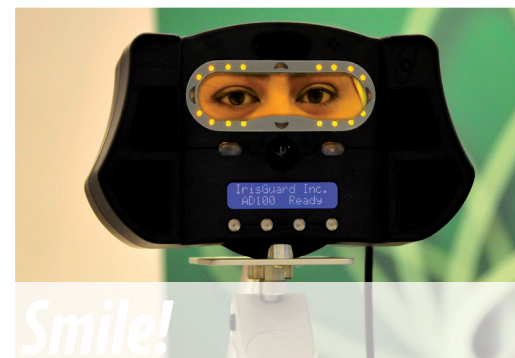
Why Iris-Recognition?

As well as contributing to the longevity and well-being of every European citizen, the research-based pharmaceutical industry is a key asset of the European economy, representing no less than 19.2% of total EU private R&D expenditure and 3.5% of EU manufactured exports. The industry employs approximately 635,000 people¹. Expectations on quality and output by Patients and the EU are high and American and Asian competition is strongly investing in Research and Production. Iris-based identification can contribute to an improvement of quality processes (conform to DIR 2001/83/EC; REG726/2004/EC): When accomplishing a quality verification task, the assessor is identified and his release decision is automatically documented, mapped with a time stamp and his personnel number. Quality control becomes faster, tangible and fraud proof (as it needs a live eye, pictures and video do not work). Being "... the first devices tested under IBG's cross-comparative methodology to achieve perfect transactional matching error rates (0.00% ...)»², our award-winning

solutions are designed in support of a humane environment, where technology creates unprecedented levels of security while being non-obtrusive to the users. The methodology is not DNA based, emits no radiation, is non-invasive, contact-free (no communicable diseases) and 10-times more accurate than fingerprints. No moving parts or contact handling, along with high quality materials lead to low maintenance costs. Following the highest data security standards, the employer has no access to the assessor's Iris data.

How does it work?

The assessor is enrolled once in an enrollment station and mapped with his corporate assessor code. At the moment of any quality decision, the assessor is identified; a log file with assessor code and time stamp is passed to the production system. The cameras have an incorporated eye-finding mechanism, optimize light and focus (we learned from 24 million runs), detects glasses or lenses and can handle them, and verifies the eye's liveliness.



Smile!
Iris Recognition is non-invasive, contact-free and emits no radiation



Technical Data on the Camera System:

Very Fast:

- 580,000 Comparisons/Second

Perfect Focus

- Auto focus
- Fine Focus
- Focus QC

Pupil Dilation

- Pupil/Iris ratio detection
- Flash tickler

Eye Openness

- Openness QC

Specular reflections

- Glass neutralization

Ambient conditions

- Auto saturation
- Auto shutter speed
- Tolerant of lighting

Motion blur

- Auto shutter speed

Device Resolution

- Custom lens design
- 22 Lines per mm
- 230-280 Pixels across iris
- No up-sampling

Proper illuminations

- Learned from 24 million users

Eye finding

- Wide-angle
- Eye tracking/centering
- Interpupillary distance

Built-in Counter-measures

- Contact Len detection
- Liveness detection
- Timeout restrictions
- Head-tilt detection

Other Features

- Real time .wav downloads
- Multi-lingual
- Programmable buttons
- LCD display

The security Model:

Imager USB protection

- 24 Byte OTP
- Two 3DES Keys
- SHA2 signature

Client-server-client protection

- Expiring OTP (5 seconds)
- SHA2 signature
- 3DES key (site specific)

Attack detection

- Client lockdown after 3 failed:
- Recognitions
- Acquisitions
- Inquiries
- Tamper-detection of:
- User Data
- Iris templates
- System logs

Template protection

- 3DES key (site specific)
- SHA2 signature
- Template never returned to caller.

Key generation

- Client generated
- Three keys (storage, transmission and images)
- 3DES-based
- Templates permuted

Client Authentication

- Username/password
- Username/password & Iris logon
- Username/MacID
- Username/MacID & Iris logon

Client Authorization

- Separate business and IT management
- Enroll, modify, delete, Recogn and activate privileges.

Network separation

- Web servers and Database and Application servers can be on different segments

Data-Security Standards used:

Triple DES Encryption that complies with:

- FIPS PUB 46-3, Data Encryption Standard (DES), [FIPS46].
- FIPS PUB 74, Guidelines for Implementing and Using the NBS Data Encryption Standard, [FIPS74].
- FIPS PUB 81, DES Modes of Operation, [FIPS81].
- NIST Special Publication 800-20 Modes of Operation Validation System for the Triple Data Encryption Algorithm [TMOVS].

SHA-256 Digital Signature algorithms that complies with:

- FIPS PUB 180-2 Secure Hash Standard, [FIPS180].

The OTP random number generator that complies with:

- ANSI X9.31 Appendix A [AX931] (which replaces X9.17 Appendix C).
- FIPS PUB 140-2, Security Requirements For Cryptographic Modules [FIPS140] (as updated on 3 December 2002).
- Implementation Guidance for FIPS PUB 140-1 and the Cryptographic Module Validation Program [FIPS140IG].