

## Technology

Biometric Intelligence and Identification Technologies' (BI2 Technologies) business is based on its knowledge of biometric identification and intelligence technologies and its presence and reputation in the markets where the demand for these technologies have significantly increased.

Biometrics are technologies that capture, store and automatically confirm the identity of people by comparing patterns of physical or behavioral characteristics in real time against enrolled computer records of those patterns. Leading biometric technologies accomplish this task by scanning patterns of the, fingerprint, iris, Deoxyribonucleic Acid (DNA), face, hand, palm, signature, skin, dental, or voice.

Biometrics are far superior to other common means of confirming identity, such as tokens (something one possesses) or passwords (something one knows). Tokens (drivers' licenses, for example) and passwords (Social Security numbers, for example) cannot ensure positive identification of a person. Tokens are routinely counterfeited and stolen. Passwords are routinely forgotten, left in plain sight, and stolen. Unlike tokens or passwords, biometric identifiers are inextricably linked to persons themselves and therefore cannot be forgotten, counterfeited, or stolen.

Biometrics help protect privacy by erecting a barrier between personal data and unauthorized access. Technically, biometric capture devices create electronic digital templates that are encrypted and stored and then compared to encrypted templates derived from "live" images in order to confirm the identity of a person. The templates are generated from complex and proprietary algorithms and are then encrypted using strong cryptographic algorithms to secure and protect them. Thus, standing alone, biometric templates cannot be reconstructed, decrypted, reverse-engineered, or otherwise manipulated to reveal a person's identity. In short, biometrics can be thought of as a very secure key: Unless a biometric gate is unlocked by using the right key, no one can gain access to a person's identity.

The demand for biometric technologies has increased significantly following the events of 9/11.

The principals of BI2 Technologies have been nationally recognized experts in the application of biometric technologies, particularly iris recognition and finger print technologies, for the public sector since 1995.

### Iris Recognition Technology

Iris recognition biometric technology positively determines the identity of an individual by capturing a high-resolution digital photograph of the individual's iris. The unique features contained in the iris are compared against a database and the identity of the individual determined.

The technology is non-intrusive - the individual does not need to touch anything to use the system. Automatic voice prompting, auto focus, plus enrollment and recognition speed make the system easy to use. An individual is detected automatically upon approaching the imager (a digital camera). A glance at the aperture mirror from 10-18" distance allows the camera to capture an iris image, which is digitally processed into an iris template. No PINs, passwords, or cards are required.

Iris recognition technology is strictly "opt in." Subjects agree to enroll and participate, reducing privacy concerns. The user must consciously elect to participate in iris recognition for authentication by presenting their eye to the camera. They also must be within a designated capture zone, which is approximately 10-18 inches away from the camera. The technology cannot work without the explicit cooperation of the end-user. All a person needs to do is look into a camera for a few seconds. A video image is taken of their iris, which is non-invasive and inherently safe. Unlike other biometric technologies, iris recognition is inherently safe – there is nothing to touch (so no diseases can be transmitted from one person to another) and there are no lasers, strong lights or any kind of harmful beams.

Iris recognition was proven to have the highest biometric accuracy, with no false matches in over two million cross-comparisons according to the Biometric Product Testing Final Report (19 March 2001, Center for Mathematics and Scientific Computing, National Physics Laboratory, U.K.)

Iris recognition technology is being used worldwide in transportation, military, law enforcement, banking, and information technology industries to positively and quickly verify an individual's identity.