A Fast and Efficient Biometric Capture and Enroll System for Border Control

Throughout the world, international travel is growing quickly. This rapid increase in border crossings has placed tremendous pressures on Immigration and Border Control Agencies to deploy solutions that allow for both the smooth transit of visitors while providing the highest level of security that can be achieved. It is desired that solutions have the ability to capture multiple forms of identification at the Point of Entry including biometric data. Captured biometric data can include facial images, fingerprints or irises appended to an immigration record, as data for comparison against a set of watch-lists (terrorists, Visa holders, sex traffickers), or used to verify identity at eGates for travelers. For successful implementation of such systems, each of the hardware and software components must be purpose built to provide simple and effective performance.

The NextgenID Quick Biometric Capture and Enroll System (QBCE) for Border Control has been designed to provide state-of-the-art technology with absolutely dead simple operation. Based on the NextgenID Facial Image Capture (FIC) hardware platform running in conjunction with the NextgenID Biometric Capture and Enrollment software, the NextgenID Border Control system is:

Simple - Base functionality automatically captures each travelers' facial image upon entry, standardizes to ICAO format, appends day/time/location data, and stores in a database, all without any requirement for Immigration Officer attention or diversion from normal workflow processes and procedures.

Quick - The system automatically captures, adjusts and stores an ICAO compliant facial image in less than 5 seconds and provides the capability for a full biometric enrollment (face, finger, iris, signature) in under 120 seconds. The NextgenID Border Control system is unrivaled in its speed of capture and processing.

Consistent - The NextgenID Biometric Capture and Enrollment software automatically verifies and validates the biometric data captured and stores the information in a consistent manner in accordance with accepted international standards.

Ease of Deployment - The NextgenID Border Control system can be deployed to multiple Immigration points in a matter of hours as a standalone capture and enrollment solution. The NextgenID FIC hardware is designed to be easily mounted to counters or hung on glass partitions within minutes. In its base format, the NextgenID Biometric Capture and Enrollment software can be installed on existing computers to be run as a standalone service or can be easily integrated through available API's to 3rd Party applications.

Extendable - Starting with the base feature of face image capture and enroll, the NextgenID Border Control system can be expanded to include the capture of multiple biometrics and breeder documents.

Scalable - From installation at a single Immigration point of entry to the coverage of an entire country, the NextgenID Border Control system has been designed with near infinite scalability in mind running as a distributed system using web services interfaces.

Secure - All captured data is automatically encrypted before being forwarded/sent and stored. This assures the highest integrity of the data and its ultimate protection.
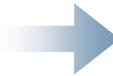
NextgenID Facial Image Capture (FIC) Units

Face Image Capture Units are designed to capture high quality face images suitable for printing on secure documents and for biometric comparison using face recognition technology. Units can be custom powder coated to meet customer desired esthetics or national color schemes.

The FIC is available in either single or dual light configurations. The Face Image Capture Units are designed to capture face images for biometric enrollment and identity verification in applications where the applicant is cooperative or semi-cooperative. Auto Image Capture takes many images of the traveler and chooses the best for matching and storage, all without operator input. The FIC come in a range of camera resolutions from 1 to 5 mega pixels and lens focal lengths. To accommodate different mounting requirements extension supports are available for the FIC unit.

FIC 1

Auto Image Capture 1

NextgenID Biometric Capture and Enrollment Application

Working as either an integrated application or as a background service, the NextgenID Biometric Capture and Enrollment Application is a modular platform that initially offers the quick and easy capture and enrollment of facial images with the ability to add more capture capabilities by way of software configuration settings.

All applicable captured data is immediately corrected and put into applicable standards, such as, ISO, ICAO, USA-NIST, USA-FBI, and USA-FIPS without any specialized operator training. Most if not all operations are automatic and controlled by the enrollment application. All captured enrollment data is automatically encrypted and stored in memory during normal operations. The Local enrollment application communicates with a centralized NextgenID Enrollment Service. This service provides security services to assure receipt from trusted enrollment capture systems and serves as a customizable integration service to third party applications, disaster recovery systems, in addition to the NextgenID Biometric Recognition System (BRS) that provides biometric matching services for fraud, duplicate, terrorist, verification and identity functions. The enrollment application provides logging functions in addition to near-time metrics of enrollment capture devices including enrollment time, quality metrics, operator, location as examples. The enrollment application also provides a minimalistic approach and contains the process to a single screen. This simplifies operation and speeds the process for efficiency.

Mobile Enrollment Station **Full Enrollment KIOSK** **Dual Light FIC**

Product Features	Software	Product Specifications
▪ Ideal for co-operative biometric enrollment capture ▪ Capture optimized for 1 m - 2m ▪ Ruggedized for continuous operation in varied environments ▪ Standalone or networked architecture ready ▪ Portable - Unit can be transported in ruggedized casing and assembled in minutes ▪ USB connection to computer ▪ Rugged extruded aluminum housing ▪ Choice of mounting -fixed or swivel mount to counter or wall or glass mount. ▪ Can operate 24/7 System is designed for robust and constant use with little routine maintenance	▪ Allows for automatic capture of multiple biometric features - Face, finger (single or 10 print), iris, signature ▪ Automatically adjusts facial image to ICAO standards ▪ Automatic verification and ▪ validation of fingerprint minutiae ▪ Automatic verification of digital ▪ signature ▪ Adjustable GUI for varied business operating processes ▪ Automated face enrolment time in sub 5 seconds ▪ Total enrolment time for all biometrics and documents in sub 60 seconds ▪ Event Logging and Reporting Captured Images can provide the following functions: ▪ 1-1Verification 1-n identification of duplicates through the NGID Face Recognition System (FRS)	Multiple Biometric Capture Options ▪ Facial Image ▪ Single Finger or Ten Print ▪ Single or Dual Iris ▪ Digital Signature Biometric Camera Options ▪ 3.1 megapixel 2048{V) x 1536{H) Color ▪ 1.3 megapixel1280(V) x 1024(H) Mono Operating Temperature Range ▪ 0°C to 50°C non-condensing Compliance: FCC Class B, CE, RoHS Dimensions of enclosure in. (mm) ▪ 16" or 21" (H) x 3.75" (D) x 2.75" *(W):* (410 or 530 (H) x 93 (D) x 70 (W) Platform: Windows XP, Vista, 7 Power: External 110 or 220 VAC, 50- 60hz

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