

Technology and Integration Services

Introduction

International Biometric Group has more extensive technical experience in a broader range of environments than any other biometric-focused organization.

Key strengths include:

- Experience deploying **ALL** types of biometrics
- Extensive capabilities in cryptographic systems, smart cards, network/intranet/internet security, retail/POS, and ID systems
- Vendor-neutrality allows IBG to pick the **BEST** solutions for each client

Whether you are a deployer, systems integrator, or product developer, IBG helps you use biometrics to build more **accurate, affordable, competitive, compatible, and reliable solutions.**

Core Capabilities

Systems and SDK Integration

IBG's systems integration experience extends well beyond development with COTS products, and includes delivery of innovative solutions for e-commerce, background checks, and transactional authentication. IBG provides the following services:

- Evaluates and optimizes image processing, feature extraction, and template matching algorithms
- Creates standards-compliant solutions: BioAPI, x9.84, CBEFF, B10.8, FBI Appendices, and emerging efforts
- Develops proprietary symmetric key technology for encryption of biometric data
- Integrates biometrics into 3rd party applications
- Develops custom infrastructure using multiple technologies, input devices, and matching algorithms
- Provides pre-testing Common Criteria assessments
- Ports implementations from Windows to UNIX

Commonly Used Application Development, Networking Protocol and Programming Skills

- Visual Studio – C++ Java, VB, Jscript, VBScript, PHP, ASP, JSP, XML, XSL, DHTML, Perl, CGI
- DCOM, JMS and EJB, J2EE, MFC
- iPlanet, IIS, Apache, Tomcat, JBoss, JRun, BEA Weblogic and ATG Dynamo
- SQL Server, Oracle, MS Access, and MySQL
- Internet Winsock programming and various Internet protocols: HTTP, HTTPS, SSL, LDAP, FTP, SMTP, POP3, NNTP, RADIUS, Kerberos and TELNET

Cryptography and Security

IBG's technology professionals have proven experience in encryption, PKI, and other security tools used to secure biometric data and enable biometric systems:

- Cryptographic experience: PKI, PKIX, DSA (DSS), ECC, DES, TDES, Blowfish
- Cryptographic standards work: ANSI X3.105, X3.106 X9.9, X9.17, X9.19, X9.24, X.509 FIPS 46, 81, 140-1, 140-2, 180, ISO 7498-2, PKCS and Interac
- Experience with Certificate Management Systems (Netscape, Baltimore, Microsoft, Oscar), VPN, Netegrity and LDAP directory (Netscape, OpenLDAP, IBM, Microsoft AD)
- Web transaction processing, proxies, logical Internet/intranet architecture, router and firewall security

Biometric Platform Development

Biometric technologies are proprietary. Enrollment in one fingerprint system, for example, is incompatible with other fingerprint systems.

IBG works together with credit bureaus, financial infrastructure companies, and other institutions interested in large-scale, long-term biometric projects to develop flexible biometric platforms for complex authentication requirements.

This reduces reliance on any particular vendor, architecture, or technology, and provides a long-term solution path for institutions with ambitious biometric plans, whether for employees, customers, or citizens.

Smart Cards

IBG has worked with all major smart card platforms, with full working knowledge of standards, issuance, security, and architecture challenges which frame the use of biometrics in Smart Card Applications.

- Java Card, Multos
- EMV, Mondex
- PC/SC, OCF
- ISO 7816-x
- Cryptographic cards: Gemplus, Schlumberger, VISA Cash, Mondex, Proton
- SAM design and implementation
- Match-on-card architecture
- Card management systems and middleware
- Card issuance and lifecycles

Biometric Applications

IT/Network Security

Major challenges in deploying biometrics in IT/Network Security include accuracy and performance, integrating biometric match decisions with existing systems, interoperability across proprietary technologies, and secure storage and transmission of biometric data.

IBG's capabilities in IT/Network Security include:

- Flexible, vendor-independent system design
- Evaluation and testing of leading biometric solutions for IT/Network Security
- Integrating biometric solutions into legacy applications
- Adherence to emerging biometric standards
- Application development
- Multiple device integration
- Encryption of biometric data / match decisions
- Custom reporting and auditing systems
- Identifying vendor strengths and weaknesses

Identification Systems

Identification systems are among the most complex biometric systems. IBG helps clients design and deploy effective biometric solutions for a full range of identification systems. IBG's capabilities in Identification Systems include:

- Smart Card integration
- Interfaces between 1:1 and 1:N systems
- Capabilities in AFIS, facial-scan, and iris-scan solutions positioned for identification systems
- Vendor-neutral system design
- Multiple device integration
- Integration into legacy systems
- Privacy-sympathetic system design
- Image processing and optimization
- Compression and storage architecture
- Encryption of biometric data / match decisions

Access Control

Based on its hands-experience with hand geometry, finger-scan, and iris-scan technologies – the primary technologies used in Access Control – IBG implements large-scale access control solutions for employee applications and incorporates biometric capabilities within systems integrators' existing product or service offerings.

For more information,
please call 212-809-9491 or
email sales@biometricgroup.com

e-Commerce

IBG has designed highly robust and flexible custom solutions for e-commerce authentication, combining vendor-independence with a real-world understanding of security and performance requirements. Working with IBG limits your risk of technology obsolescence, and ensures the long-term viability of your e-Commerce solutions.

Why do you need IBG?

- Breadth of capabilities, from research to strategic development to technical design and deployment
- Hands-on expertise with all biometric technologies, and fields related to biometrics, such as cryptographic systems, tokens and smart cards, application development
- Vendor-independent/technology-neutral with working relationships with all leading biometric vendors – across technologies
- Proven hands-on expertise in travel and transportation, financial services, enterprise security, and civil ID systems

About IBG

Founded in 1996, International Biometric Group, LLC is the biometric industry's leading independent integration and consulting firm, providing a broad range of services to government and private sector clients.

- **Consulting services** include feasibility assessments, business case development, biometric system design and requirements gathering, technology evaluation, strategic assessment of market opportunities and competitors, and privacy impact analyses of biometric deployments.
- **Integration services** include evaluating, designing, and deploying biometric solutions for Internet and e-commerce applications, large-scale public sector identification and authentication initiatives, network security applications, point of sale environments, and smart card applications.
- **Research services** include industry-leading Comparative Biometric Testing, advanced market analysis on biometric technologies and the biometric marketplace, and customized analysis on topics such as biometrics and smart cards, user perceptions of biometrics, and strengths and weaknesses of companies in the biometric marketplace.