



Biometrics Solutions

Secure Identity Management Systems



Raytheon's scalable, high assurance biometrics solutions provide improved security and efficiencies for identity management, access to critical facilities, warfighter support, immigration control, intelligence analysis, guest worker programs and national identity programs. When it comes to designing the most effective biometrics solutions, Raytheon uses all available resources.

By partnering with leading vendors and teammates, Raytheon provides its customers with superior biometrics solutions. As an integrator, Raytheon employs hardware and software solutions from a variety of sources. We work with the leading biometrics companies in the world allowing us to choose the best available technologies to meet our customer's requirements. The integrator's responsibility — our responsibility — is to provide the best solutions to our customers on time and on budget.

An End-to-End Solution Approach

To ensure customer success, Raytheon approaches biometrics solutions from all angles, evaluating new and emerging biometrics technologies including fingerprint, facial and iris capture devices, as well as back-end, large scale, biometric matching systems. Raytheon makes use of recognized biometrics experts dedicated to addressing challenges such as optimizing large scale biometrics systems or remote, high speed biometrics identification. As a biometrics systems integrator, we explore industry-best alternatives and integrate them into comprehensive solutions.

Development of Agile SOA Architectures

Raytheon has developed a robust biometrics service oriented architecture (SOA). This next generation SOA will accommodate a truly multimodal solution that includes face, fingerprint and iris recognition. With Raytheon's

SOA platform, agencies have the flexibility and agility to leverage existing legacy systems and adapt to ever changing security requirements.

Programs

Raytheon has a proven global track record as a systems integrator delivering complex systems on time and on budget.

- **Department of Homeland Security** — Raytheon is working with the U.S. Department of Homeland Security to modernize one of the largest civilian fingerprint systems in the world. Raytheon plays a key role developing the system by leveraging our experience with service oriented architectures to increase the department's ability to interoperate with other government agencies. The program provides the centralized biometric system for the entire department and now exceeds one hundred million records. The program also includes biometric collection and

identity document scanning at hundreds of U.S. ports of entry.

- **BOSS-U, Biometrics Operations and Support Services – Unrestricted** — This Raytheon-led indefinite delivery / indefinite quantity contract with the U.S. Army Biometrics Task Force includes biometric-related services and support. This project is designed to enhance the Department of Defense's infrastructure, architecture and standards for biometrics.
- **IDENT, U.S. Department of Homeland Security Biometrics Support** — IDENT is a U.S. DHS (formerly Immigration and Naturalization Service) mission-critical system deployed at more than 150 sites across the U.S. The system is designed to identify illegal immigrants crossing U.S. borders. Raytheon served as the prime contractor and provided system design and development of applications, and deployment.

■ **e-Borders, United Kingdom Border Management System** —

The Raytheon-led Trusted Borders team is leading this \$1.3 billion program for the UK Border Agency. e-Borders enables the Home Office to match arrival and departure information, provide technology necessary to positively identify travelers prior to boarding, and process these travelers in real-time against watchlists. Raytheon is the prime contractor and is responsible for all program management and systems integration, as well as software development and integration for all travel service capabilities.

■ **Classified U.S. government customer** — Raytheon was one of the teams awarded a contract to design the multi-modal architecture for a next generation biometrics system for a classified customer. Key items addressed in the study include extremely large biometric galleries, varying data quality, latent matching capabilities, and very short response times.

■ **Argentina Passport and National ID Card System** — Raytheon developed, installed and integrated the first digital passport issuance system in Latin America. The system, which included fingerprint biometrics, averaged 1 million passports and ID cards per year. In addition to designing and developing the secure document issuing system for Argentina, Raytheon provided security document consulting services to the Argentina Federal Police.

Research and Development

Raytheon has invested millions of research dollars over the past 10 years and holds a number of patents in biometrics-related technologies. Raytheon research and development activities include

articles published in biometrics research journals.

■ **Identity Management** — Raytheon's Identity and Entitlement Management demonstration system is based on a patented identity management architecture. Biometrics is a key component of this system. The Raytheon identity management design is unique in the inclusion of a trust model and its ability to react to changes in status, such as national threat level change.

■ **Raytheon Identity Center** — The RIC integrates a number of biometric technologies as part of a company-wide campaign to investigate biometrics, identity management and border management technologies.

■ **CITeR** — Raytheon, as an affiliate member in the Center for Identification Technology Research, funds research that is conducted through a collaboration of academic institutions, government agencies, and industry partners to advance biometric technologies.

■ **CyLab** — Raytheon is a Carnegie Mellon University CyLab partner, working with CyLab on advanced biometric technologies. CyLab is one of the largest university-based cyber security research and education centers in the U.S.

■ **Personal authentication device** — Raytheon developed a biometric and RFID-based identification token for physical access via remote authentication. Applications include identification of individuals in fast-moving vehicles.

■ **NIST Fingerprint Vendor Test Evaluations** — Raytheon submitted a fingerprint matching system as part of a past NIST FPVTE.

■ **Logan Airport Facial Recognition System Evaluation Program** —

As the system integrator, Raytheon led a team of biometric vendors in a facial recognition pilot at Massport's Boston Logan Airport. The system checked passenger photographs for match against the Federal Bureau of Investigation's Most Wanted photo database.

■ **Patents** — Raytheon holds a number of patents for distributed, mobile and centralized biometric systems, personal biometric tokens, identity management architectures, and pending patents for multi-biometric enrollment systems and related technologies.

Standards

Raytheon supports biometric standard bodies, and is currently involved in some of the latest biometric standards being sponsored by DHS.

■ **ANSI/INCITS M1** — Raytheon is a voting member of ANSI/INCITS M1 Biometrics standard organization, currently supporting enhancements to the BioAPI standard for capturing 10 print slaps.

■ **OASIS** — Raytheon is also a member of the Organization for the Advancement of Structured Information Standards. As an ongoing member, Raytheon is helping the organization tackle its first biometrics-related standard, the Biometrics Identity Assurance Services (BIAS).

Committees

Raytheon participates in several global biometrics committees, including the following:

■ **NDIA Biometrics Committee** — Raytheon is an active participant in the National Defense Industrial Association's (NDIA's) Biometrics Committee. NDIA is America's leading defense industry association and provides a forum for information exchange between industry and government on biometrics issues.

■ **TAA Identity Management Committee** — The Technology Association of America is the premier technology industry association working to promote technological innovation. Raytheon is an active member of the Homeland Security Identity Management Subcommittee — whose role is to provide a forum for industry to work with federal and state governments to develop best practices for the authentication and verification of identity.

■ **European Security Research and Innovation Forum** — The European Security Research and Innovation Forum (ESRIF) is a European advisory group in the civil security research domain. ESRIF's primary objective is to develop and promote a coherent European civil security research and innovation strategy through public-private dialogue. Raytheon is a member of the Identity and Border Security working groups.

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