

# BIOMETRICS

TASK FORCE  
ANNUAL REPORT FY09





## DIRECTOR'S MESSAGE

DR. MYRA S. GRAY

Over the past year, the BTF has grown and expanded in the size of its staff, the diversity of its activities, and the impact it's making. We're still helping warfighters to identify known and suspected criminals and capture those around the world intent on harming Americans or their property. This year, however, we saw a substantial increase in biometrics being used in Afghanistan, where biometrics lessons learned and troops trained on biometrics in Iraq are being put to good use.

Identity management (IdM) using biometrics is working for the warfighter. Every day thousands of records are collected and sent to the Department of Defense (DOD) Automated Biometric Identification System (ABIS) to store and compare against existing records. The technology is improving such that a submission from theater can be searched in the DOD ABIS and a response sent back to theater in less than two minutes.

This year, we also made a substantial upgrade to the DOD ABIS, which now enhances associated search and retrieval services and interfaces with existing DOD and interagency biometrics systems. The database interfaces with

collection systems, intelligence systems, and other deployed biometrics repositories across the federal government. Improved functionality now expands the ways in which the data can be used. New software algorithms and additional modalities are improving response times and providing more accurate match results.

Our interagency collaboration goes far beyond just sharing data, however. We work day in and day out with our partners throughout the federal, state, and local government as well as in industry and academia to develop and expand our biometrics capabilities and its positive impact on accurate and reliable IdM.

In addition to biometrics being employed more by the warfighters, it is being used to improve and streamline DOD business functions and processes. DOD's use of biometrics to verify personal records or restrict access to a secure facility, for example, is growing rapidly.

Biometrics is making a tangible difference both for the warfighter and at home.

Very Respectfully,  
Dr. Myra S. Gray

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## IDENTIFY, ENABLE, PROTECT

When the Army's biometrics program started in 2000, its focus was determining how to use biometrics to secure access to military networks, both on the battlefield and on the home front. This focus began to change in 2003, when DOD saw that biometrics could be used to prevent the enemy in Iraq and Afghanistan from hiding behind a web of multiple identities. It also then became a DOD-wide effort. By 2006, this capability was firmly in place, and DOD saw biometrics as an operational tool. It was also playing a key role in enabling intelligence operations.

Today, DOD is using biometrics to verify the identities of known individuals on the ground in Iraq and Afghanistan to enable operations to find

and capture improvised explosive device (IED) makers and insurgents and to protect the identities of DOD and U.S. government (USG) personnel. Biometrics is being used to ensure that only the right individuals have access to U.S. facilities and networks and to assist in safeguarding the identities of those same individuals.

This is the basis of Identify, Enable, Protect: three synergistic but distinct applications of biometrics being used to defeat our enemies and protect our allies, forces, and homeland.



## BACKGROUND

### PUBLIC LAW

In July 2000, Public Law 106-246 designated the Secretary of the Army as "... the Executive Agent to lead, consolidate and coordinate all biometrics information assurance programs of the Department of Defense (DOD)." At the time, DOD sought to leverage the promise of biometrics as an enabling technology for activities such as physical and logical access to facilities and networks for DOD personnel. In the wake of September 11, 2001, DOD shifted its focus to combating terrorism and began applying biometrics to the counterterrorism fight.

This fight requires new and innovative methods — such as biometrics — to identify and thwart nontraditional adversaries. Stripping away the anonymity of adversaries and verifying their identities are national security interests of the highest order. Since 2001, the effective employment of biometrics capabilities in two simultaneous theaters of war has proven the potential of this maturing capability. Since 2000, the Army has served at the forefront of collaborative DOD efforts to institutionalize biometrics as part of the larger DOD IdM Enterprise.

### DOD DIRECTIVE (DODD)

Acting on direction from the Principal Staff Assistant (PSA) for DOD Biometrics, the BTF supported a community effort in 2007 to establish department-wide roles and responsibilities for DOD biometrics. This effort culminated in February 2008 with Deputy Secretary of Defense approval of DOD Directive 8521.01E, "DOD Biometrics," which serves as DOD's foundational policy for the DOD Biometrics Enterprise.

The relationship between the BTF and the DOD Biometrics stakeholder community is essential to guiding the DOD to enterprise solutions that are cost-effective, functional, and beneficial to the entire federal biometrics community. This relationship is characterized by the responsibilities assigned to all parties identified in the DODD. The DODD also ensures that DOD leverages the expertise and capabilities of all DOD organizations to avoid duplication of mission functions.

As the embodiment of the Executive Agent (EA) and Executive Manager for DOD Biometrics, the BTF has responsibility for synchronizing and integrating DOD biometrics stakeholder activities to effectively support the community while maturing the enterprise at large. The BTF provides a service to the user community that goes well beyond the stereotypical biometric functions of collect, store, match, and share.

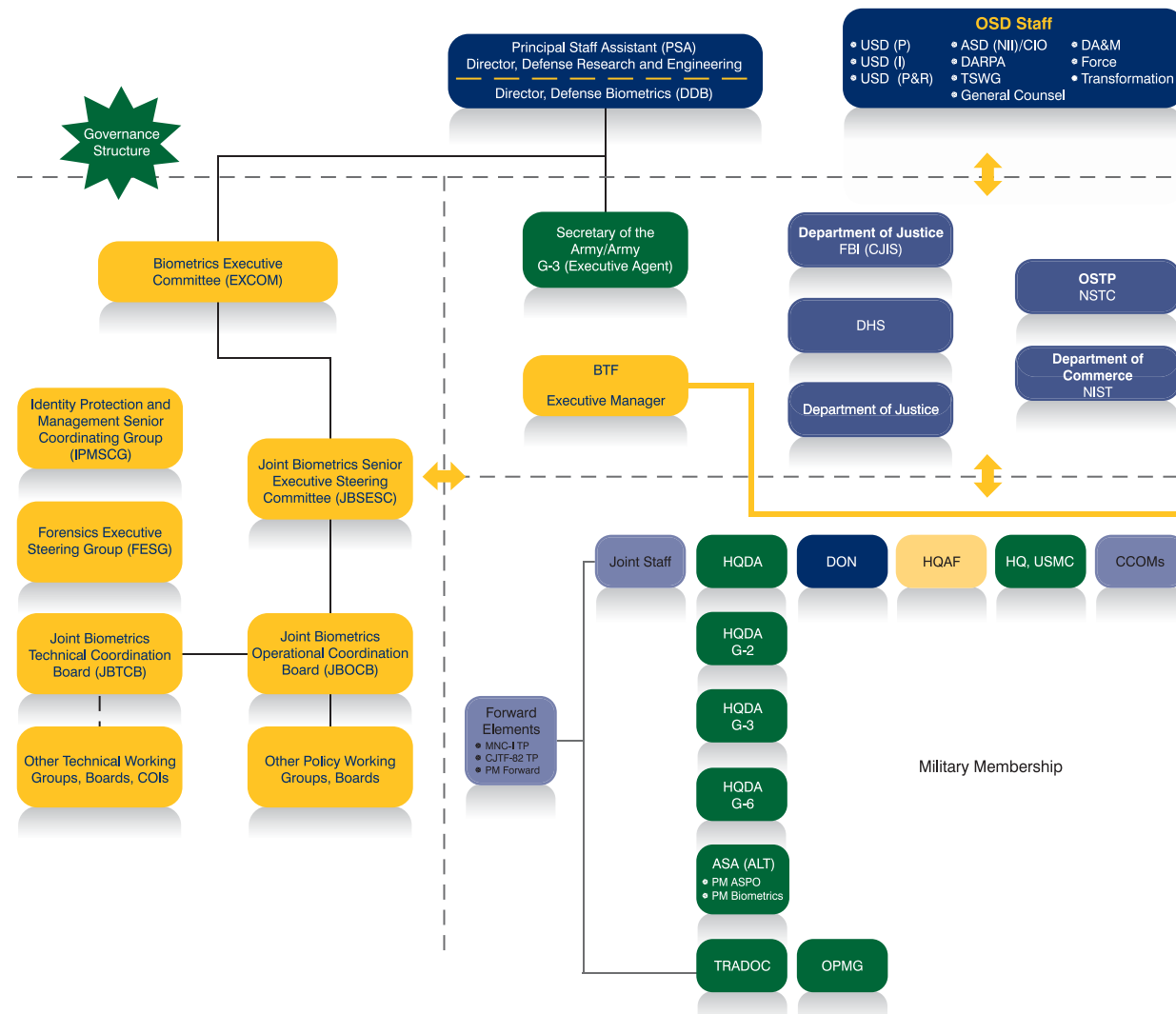
As the BTF executes its FY10 plan and prepares for FY11, it will be necessary to begin examining the directive for potential areas of revision prior to the four-year anniversary of its original issuance.

## BIOMETRICS TASK FORCE (BTF) MISSION

The BTF's mission is to lead DOD activities to program, integrate, and synchronize biometrics technologies and capabilities and to operate and maintain the DOD authoritative biometrics

database in support of the National Security Strategy. While DOD Biometrics has existed since 2000, the BTF organization and the mission outlined above have existed only since June 2006.

### DOD BIOMETRICS: STRUCTURE



## BIOMETRICS TASK FORCE STRUCTURE

A "DOD Biometrics Enterprise Strategic Plan" that established a vision, a mission, goals, and objectives was approved by the DOD Biometrics Executive Committee (EXCOM) on 27 August 2008. With that as a basis, the BTF was reorganized this year. The Strategic Plan's goals and objectives were used to establish the new organization structure, leading to four divisions responsible for enabling the Biometrics Enterprise.

### DOD BIOMETRICS ENTERPRISE MISSION

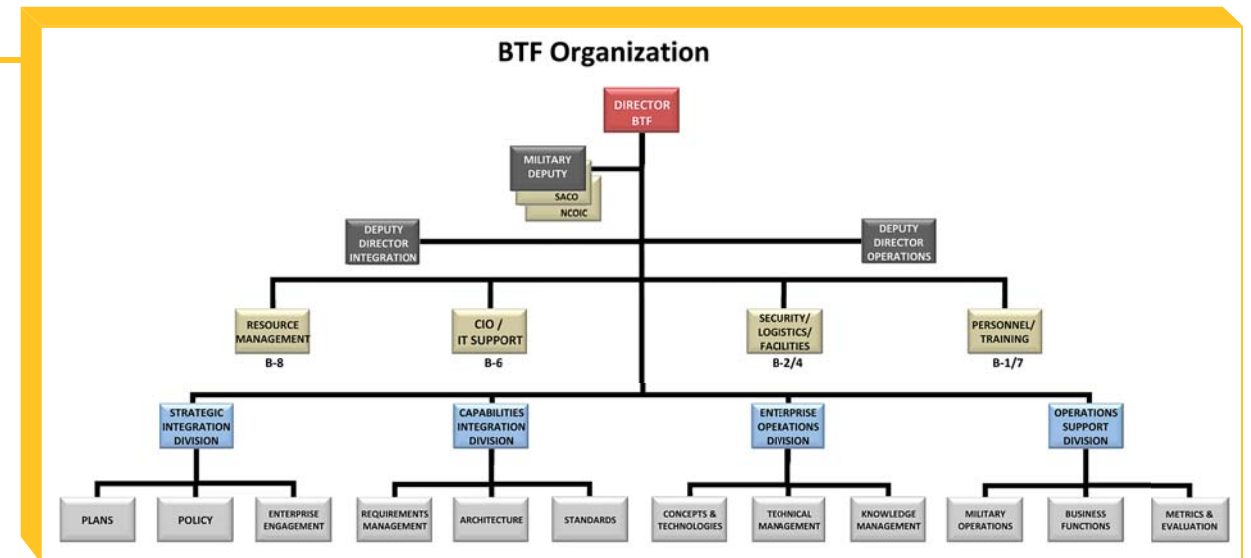
The DOD Biometrics Enterprise mission is to provide enduring biometrics capabilities to DOD and its mission partners and enable identification of individuals in support of national security

interests. The Biometrics Enterprise Strategic Plan (BESP) has established four goals, derived from DOD goals: Military Operations, Business Functions, Institutionalization, and Unity of Effort.

**Military Operations:** meet warfighting biometrics needs of Combatant Commands (COCOMs), Services, and Combat Support Agencies with sufficient timeliness and certitude.

**Business Functions:** integrate biometrics into DOD business functions as required to increase efficiency, effectiveness, and accuracy by validating positions of trust, logical access, and physical access.

### BTF Organization





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**Institutionalization:** ensure that biometrics is incorporated into standard DOD processes in order to enhance military operations and business functions.

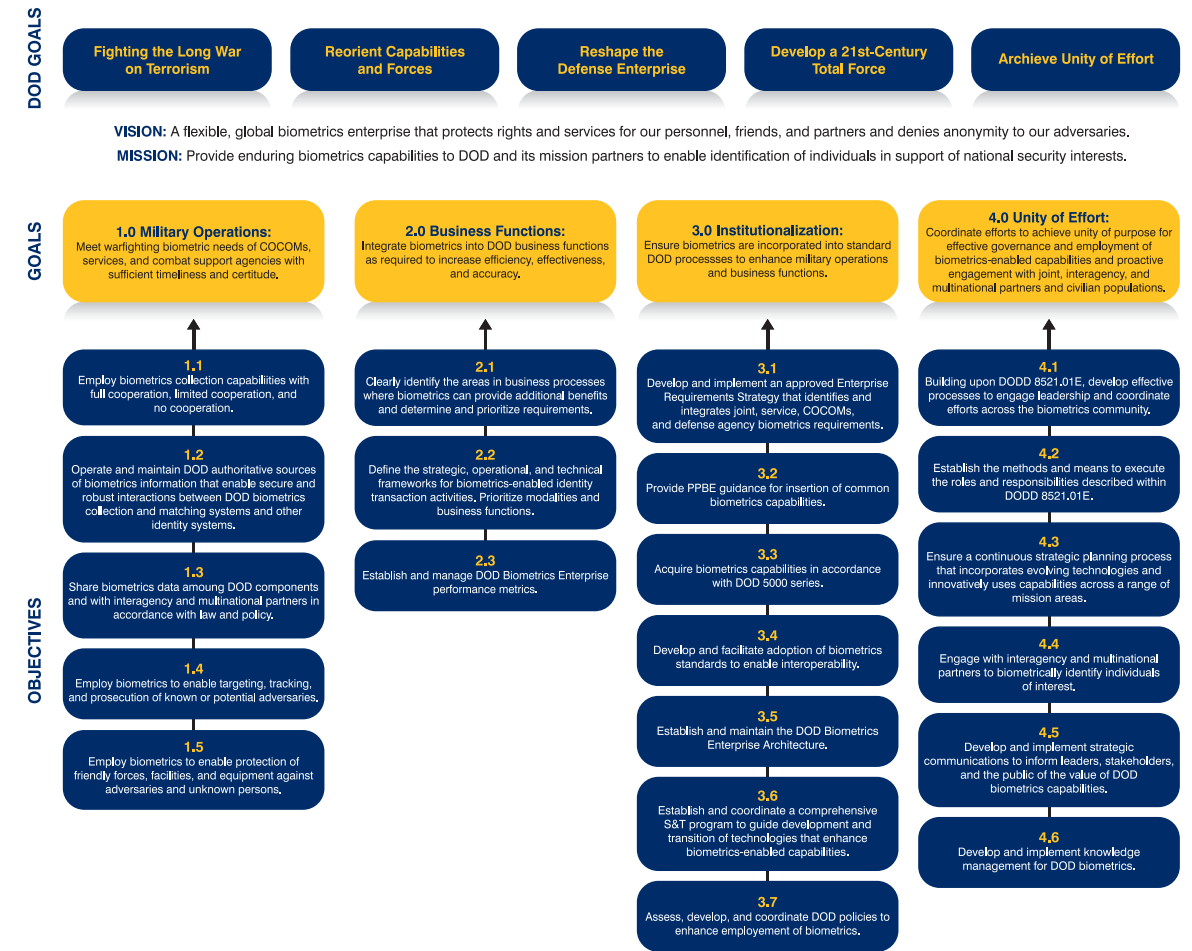
**Unity of Effort:** coordinate efforts to achieve unity of purpose for the effective governance and employment of biometrics-enabled

capabilities and proactive engagement with joint, interagency, and multinational partners and civilian populations.

These strategic goals have 21 supporting objectives. The BESP Implementation Plan (BESP I-Plan) identifies those detailed actions needed to achieve each objective.



**BIOMETRICS ENTERPRISE STRATEGY MAP**



**Note:** Accomplishments listed hereafter map to the Biometrics Enterprise Strategy Map. Numbers shown in parentheses refer to the specific objectives above.

## MAJOR FY09 ACCOMPLISHMENTS

### GOVERNING THE ENTERPRISE

BTF 2009 planning initiatives focused on improving DOD Biometrics Strategic Planning Process predictability. The objective is to deliver integrated biometrics capabilities to warfighters and DOD business process owners.

#### Engaging Leadership and the Biometrics Community (4.1)

The BTF established and continues to support the biometrics governance process. The biometrics governance bodies are the Joint Biometrics Operational Coordination Board (JBOCB), Joint Biometrics Technical Coordination Board (JBTCB), Joint Biometrics Senior Executive Steering Committee (JBSESC), and the EXCOM.

### Coordinating Development of DOD Instruction (4.2)

The PSA for Biometrics tasked the BTF with developing a Biometrics DOD Instruction (DODI) in coordination with the DOD biometrics community. The DODI establishes the processes and procedures by which the governance framework functions. The development approach for the DODI is built on DODD 8521.01E, the BESP, and the follow-on BESP I-Plan. The DODI is scheduled for Deputy Secretary of Defense signature in early December 2009. The Biometrics DODI will outline the Enterprise-wide procedures necessary for executing policy and responsibilities contained in the DODD.

### IDENTIFY THE INDIVIDUAL

An anonymous individual can be a tactical, operational, or strategic threat. By leveraging biometrics modalities, such as finger and palm prints, iris patterns, facial features, voice patterns, or DNA, biometrics strips away anonymity, determines identity, and enables operators to take action on this information, thereby mitigating threats.

#### Next Generation ABIS 1.0 Go-Live Event (1.2)

The BTF operates and maintains DOD's authoritative biometrics repository, the DOD ABIS, which provides matching services to BTF customers, including tactical and strategic DOD organizations and commands, other agencies within the USG, and international partners. The DOD ABIS is a high-availability, rapid response, multimodal system that is scalable to meet Biometrics Enterprise objectives. DOD ABIS operations consist of a 24-hour-a-day, seven-day-a-week watch desk, examination support, and system administration support.

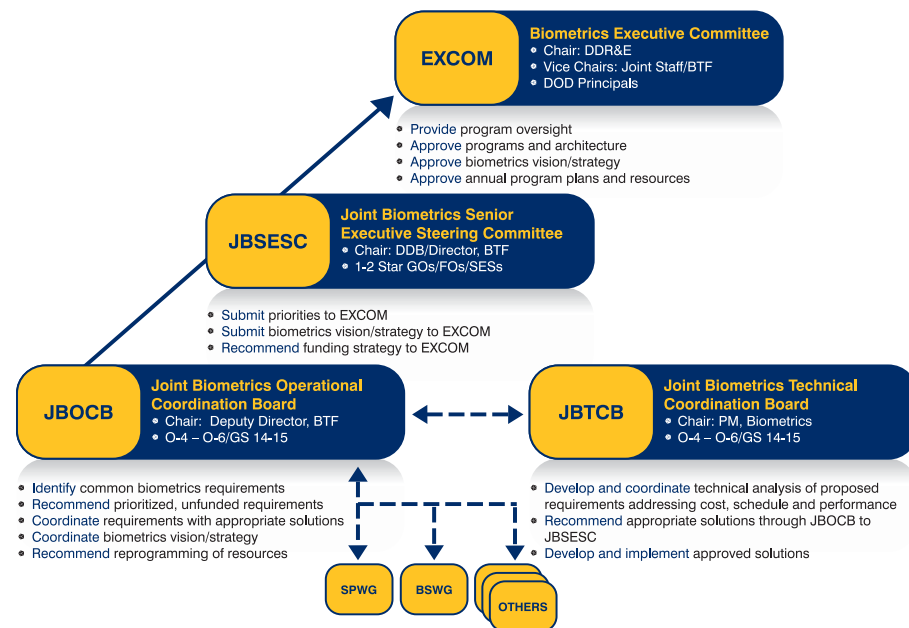
Next Generation DOD ABIS has increased the scalability of the system both in the number of transactions processed and the number of storable biometrics submissions. The design also allows easier integration of new biometrics modalities as the technology matures.

### INFORMATION SHARING

#### Advancing Biometrics Standardization (3.4)

To promote data sharing within the DOD Biometrics Enterprise and with the Federal Bureau of Investigation (FBI) and other joint, interagency, and multinational partners, the BTF leads the development and maintenance of the DOD Electronic Biometric Transmission Specification (EBTS), a mandated transmission specification that facilitates the exchange of biometrics data with the DOD ABIS and other repositories. In FY09, the BTF published and nominated to the DOD Information Technology Standards Registry (DISR) the most recent approved version of the DOD EBTS, Version 2.0.

## JOINT BIOMETRICS GOVERNANCE STRUCTURE



The BTF replaced its first-generation DOD ABIS with the enterprise-level, multimodal, Next Generation DOD ABIS in 2009. The Next Generation ABIS now serves as the authoritative biometrics data repository for DOD. The new algorithms and additional modalities provide improved match results and faster response times to warfighters.

Faster response times and more accurate matches translate into better identification using fewer biometrics examiners and providing quicker feedback to the query. The







### **SUPPORTING THE WARFIGHTERS**

The BTF maintains regular communication with U.S. forces in theater, including biweekly secure video teleconferences with Multi-National Corps-Iraq (MNC-I) and U.S. Forces Afghanistan (USFOR-A). The BTF maintains a Request for Information tracker system, represents the BTF at Biometrics and Forensics Working Group meetings, and provides briefings and training for personnel deploying in support of biometrics-enabled operations. In addition to these recurring commitments, the BTF continuously answers requests for information from the warfighter and the Biometrics Enterprise.

The BTF's requirements mission is to integrate operational and technical processes that transform strategy into efficient and effective employment of biometrics capabilities. The BTF focuses on supporting the warfighters in both areas of responsibility (AORs) by addressing existing gaps in personnel and equipment. The BTF ensures that it works hand-in-hand with MNC-I and USFOR-A to develop, analyze, synchronize, process, and implement all biometrics requirements.

**Acquiring Biometrics Capabilities for the Warfighter (3.5)**

The BTF fulfilled needed capabilities to the warfighters and provided biometrics systems to U.S forces in Iraq and Afghanistan. The BTF also successfully navigated the Biometric Enabling Capabilities (BEC) and Joint Personnel Identification (JPI) programs through Army and Office of the Secretary of Defense (OSD) overarching integrated product teams and a Materiel Development Decision. These are among the first steps to establishing a Program of Record. The BTF also worked with Project Manager Biometrics to finalize requirements for the Next Generation DOD ABIS, which went live on 29 January 2009 and provides significant operational gains over the legacy system.

The BTF conducted its first biometrics experimentation activity on foreign soil as a participant in U.S. Pacific Command's (PACOM) Crimson Viper exercise in Thailand. This experimentation venue provided an opportunity to

address capability gaps in multinational sharing. The BTF supported and provided biometrics science and technology (S&T) expertise to PACOM and its subordinate commands. With each experimentation event, the biometrics community received significant technological, conceptual, or procedural results that are being leveraged to shape the future of biometrics technologies for several years to come.

**Data Sharing and Interoperability (1.3)**

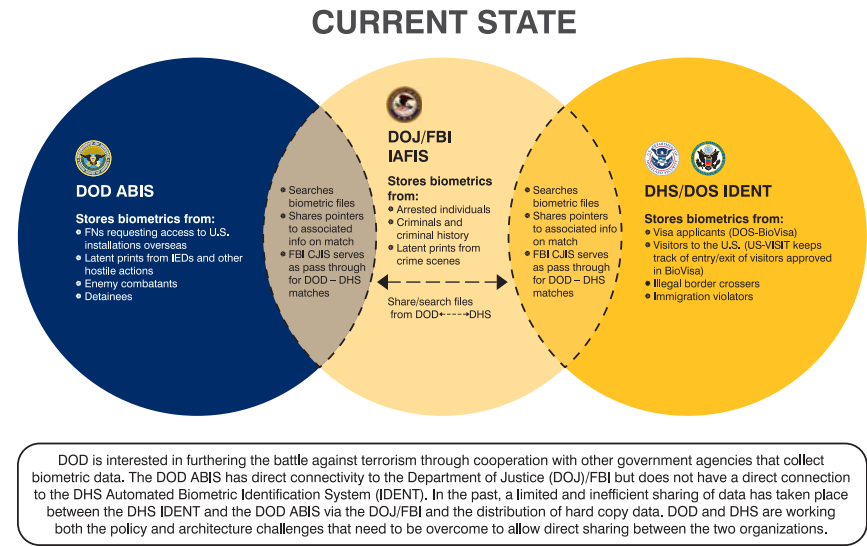
The DOD Biometrics Enterprise mission includes supporting DOD mission partners, usually other USG agencies. The Executive Manager for DOD biometrics developed the following position on biometrics data sharing and interoperability: "Biometrics databases across the U.S. government should be federated with an emphasis on keeping distinct the various mission sets and categories of individuals stored within the databases."



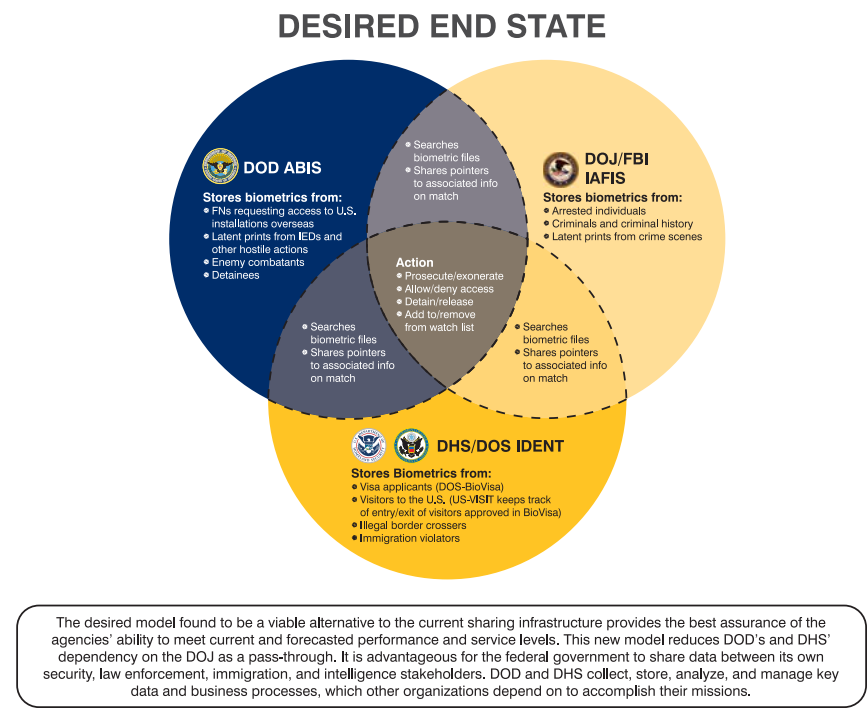
**Significant Interagency Match**

On 5 February 2009, DHS submitted a file to the DOD ABIS for search, which resulted in a match to an individual detained in December 2004 for planting IEDs and possible attacks against Coalition forces. The match enabled DHS officials to deny the subject entry into the United States.

Biometrics databases across the USG should have the ability to interoperate, but only databases with interrelated mission sets will interoperate (share directly) on a routine basis. Understanding that the DOD biometrics mission supports and enables aspects of FBI and Department of Homeland Security (DHS) missions, the BTF also developed a concept for interoperability between a triad of USG biometrics databases (DOD, DHS, and DOJ).



DOD is interested in furthering the battle against terrorism through cooperation with other government agencies that collect biometric data. The DOD ABIS has direct connectivity to the Department of Justice (DOJ)/FBI but does not have a direct connection to the DHS Automated Biometric Identification System (IDENT). In the past, a limited and inefficient sharing of data has taken place between the DHS IDENT and the DOD ABIS via the DOJ/FBI and the distribution of hard copy data. DOD and DHS are working both the policy and architecture challenges that need to be overcome to allow direct sharing between the two organizations.



The desired model found to be a viable alternative to the current sharing infrastructure provides the best assurance of the agencies' ability to meet current and forecasted performance and service levels. This new model reduces DOD's and DHS' dependency on the DOJ as a pass-through. It is advantageous for the federal government to share data between its own security, law enforcement, immigration, and intelligence stakeholders. DOD and DHS collect, store, analyze, and manage key data and business processes, which other organizations depend on to accomplish their missions.

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**Enhancing Lines of Communication (4.3)**  
In codifying the governance process, the BTF established the framework for the biometrics community to convene, interact, and operate. U.S. Central Command (CENTCOM) and U.S. Special Operations Command consistently used the governance forums to address ongoing biometrics requirements for Overseas Contingency Operations. As IdM has emerged as a force multiplier among the wars abroad, the BTF is linking the various COCOMs to organizations that can assist with promotion of this combat-enabling function.

**Biometrics Outreach (2.2)**  
Current BTF initiatives will enhance outreach to the various players in the Biometrics Enterprise. The BTF is working with the U.S. Military Entrance Processing Command to help with identity verification of new recruits as they process into the military. Biometrics technologies are being used to ensure that in-processing records stay associated with the correct individuals and to prevent fraud. This effort is run with the help of the Office of the Under Secretary of Defense for Personnel and Readiness.

The BTF is also working with COCOMs to institute and refine a biometrics program in accordance with DOD policies to effectively use biometrics capabilities within the COCOMs' areas of focus.



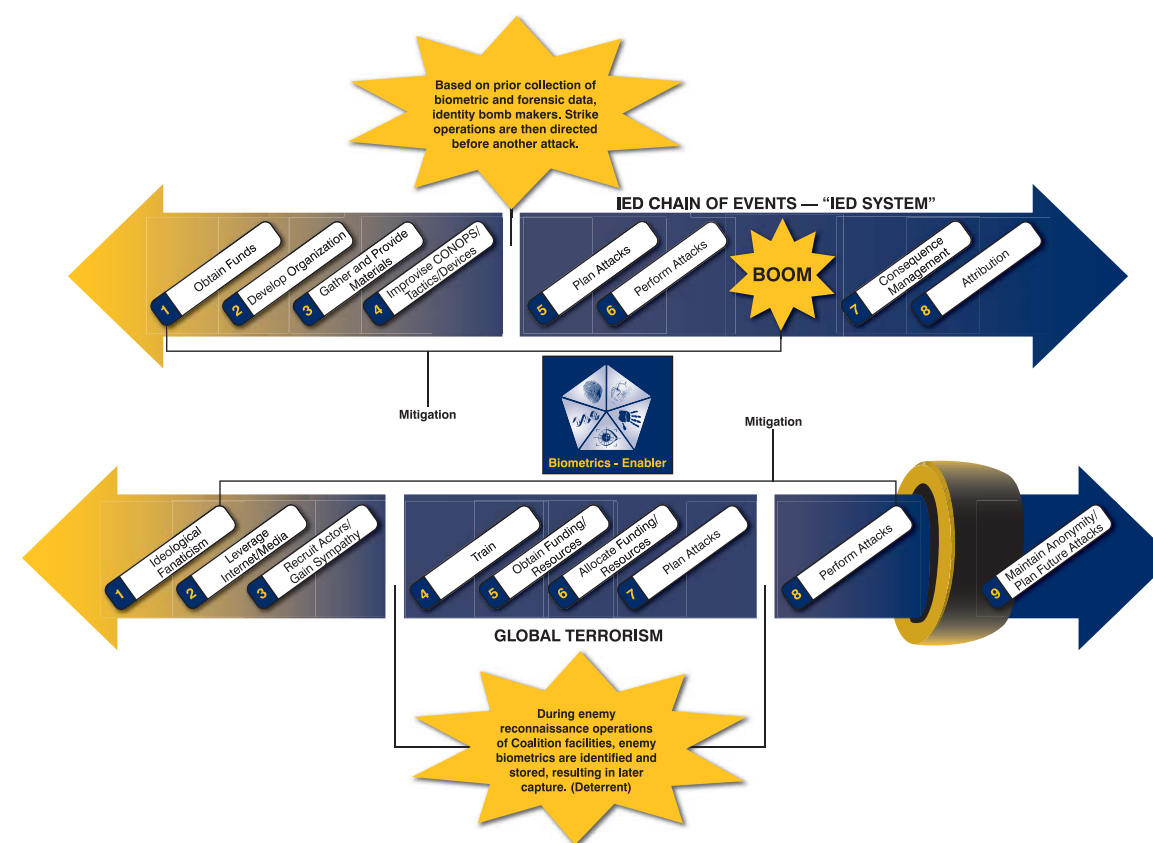
**Expanding Biometrics Resources and Knowledge**  
The BTF managed the development and release of a new DVD, "Unmasking the Enemy: Leaders Employing Biometrics." This fourth production in the DOD Biometrics Awareness DVD series features a keynote address by LTG James Thurman, Deputy Chief of Staff of the Army G-3/5/7, and comments from Service personnel who have used and trained others to use biometrics to achieve mission objectives. The BTF released more than 3,500 copies of the DVD to DOD and interagency organizations, with an additional 10,000 copies enclosed in hard copies of the Center for Army Lessons Learned Soldier's handbook, "Biometrics in Support of Identity Dominance Newsletter." Developed collaboratively with the Army G-2, the DVD series is widely used to inform warfighters of the advantages of leveraging biometrics to achieve national security objectives.

## ENABLE THE MISSION

Biometrics enables several DOD warfighting missions, which include high-value target tracking, Maritime Interception Operations, personnel recovery, facility and logical access control, disaster relief, humanitarian assistance,

security operations, in-theater interagency operations, access to services for non-U.S. persons, and U.S. border protection. Biometrics is a capability for all functional communities and is essential to establishing identity with certitude.

### STRIP AWAY ANONYMITY LEFT OF "THE THREAT"



## FULL-SPECTRUM SUPPORT

The BTF played a significant role in supporting the DOD science, technology, research, and engineering communities in an effort to guide the development and transition of technologies that enhance biometrics-enabled capabilities. The BTF coordinated strategic guidance, developed collaborative forums, facilitated development of future capabilities, and conducted experiments and technology demonstrations to address critical gaps and capability needs.

The BTF developed the Defense Biometrics S&T Strategic Guidance and associated plans and activities; interacted with players in government, academia, and industry — both internationally and domestically — to exchange ideas, enhance and improve capabilities, and drive technology innovation; conducted experimentation events in various scenarios to support the total force; and promulgated biometrics knowledge and awareness for utility throughout the biometrics community of interest.

The BTF is streamlining the data-sharing flow across DOD, USG, and multinational partners. It is engaged in new submissions across the U.S.-Mexico border with the U.S. Border Patrol and DHS, file sharing with DHS and Department of State, and its continuing relationship with the FBI Criminal Justice Information Services Division. The BTF is implementing new agreements to protect sensitive data and conform to other government standards. The Continuity of Operations (COOP) project in San Diego (mirror site) has entered its first phase, and the BTF is looking forward to full implementation of this architecture to create a seamless operation.

BTF engineers planned, completed, analyzed, and reported on events designed to evaluate commercial off-the-shelf (COTS) biometrics technologies for functionality, standards conformance, and DOD ABIS integration. These evaluations were in support of CENTCOM, Program Manager Army Space Programs Office (PM ASPO), Naval Innovation Laboratory, Army G-2, and others to ensure that deliverables were provided to support government action officers, developers, and integrators via the DOD Biometrics Expert Knowledgebase System.

The BTF identified numerous tactical capabilities and limitations in various biometrics collection and matching processes, as they exist today. Event and system findings were fed through the Joint Interoperability Test Command to DOD customers for standards conformance certification and for Doctrine, Organization, Training, Materiel, Logistics, Personnel, and Facilities analysis of future capability needs.

The BTF works with the DOD test community and the DOD Test Resource Management Center (TRMC) to establish a developmental testing and operational testing test bed and modeling and simulation capability. The TRMC captured BTF needs and requirements in its congressionally mandated biennial report on the DOD testing and evaluation community's state.

BTF engineers evaluate various biometrics-enabled COTS technologies to determine their adequacy to achieve DOD missions and goals. The vendors and devices are catalogued in a Technology and Innovation Management Database. The database currently contains

more than 400 vendors and their devices, identifies modalities, and provides the biometrics community with information needed to make informed decisions about procurement of biometrics-enabled technologies.

## ENTERPRISE REQUIREMENTS STRATEGY

### Executing DOD Biometrics Roles and Responsibilities (3.4)

The BTF Director, fulfilling Secretary of the Army responsibilities for coordinating, integrating, and synchronizing DOD biometrics activities, made several strides in BESP I-Plan execution. Having received feedback to the draft BESP I-Plan, the BTF Director conducted two iterations of an Executive In-Progress Review (IPR) of the BESP I-Plan, in June and September 2009, to review draft action and metrics plans.

The IPR process prepares the BTF to lead the community in briefing the plan's progress to the joint biometrics governance structure. Starting with the JBOCB, the action plans will be reviewed in the second quarter of FY10, culminating in a recurring status report to the EXCOM.

### DOD Biometrics S&T Strategic Planning, Guidance, and Implementation Support (3.6)

The BTF played a significant role in developing the "Defense Biometrics S&T Strategic Guidance" for the Biometrics Enterprise. The "Defense Biometrics S&T Strategic Guidance" provides direction for establishing a robust DOD Biometrics S&T Program that will produce future capabilities through joint coordination. Ultimately, it will lead to future biometrics capabilities that enable both warfighters and DOD business

users. The S&T Strategic Guidance tasked the BTF with drafting the S&T Implementation Plan, which will detail the steps necessary to execute the Director's strategic guidance and lay the groundwork for the S&T Roadmap, to be developed in FY10.

The BTF serves as the Chair of DOD Biometrics S&T Coordination and Advisory Group (CAG), which is responsible for reviewing and assessing the DOD Biometrics S&T Program to support the Biometrics Enterprise and overseeing the Defense Biometrics S&T Strategic Guidance implementation. Composed of stakeholders from across the biometrics S&T community, the CAG involves representatives of Services, agencies, Joint Staff, and OSD who meet quarterly to coordinate efforts across DOD and help guide the direction of biometrics S&T.





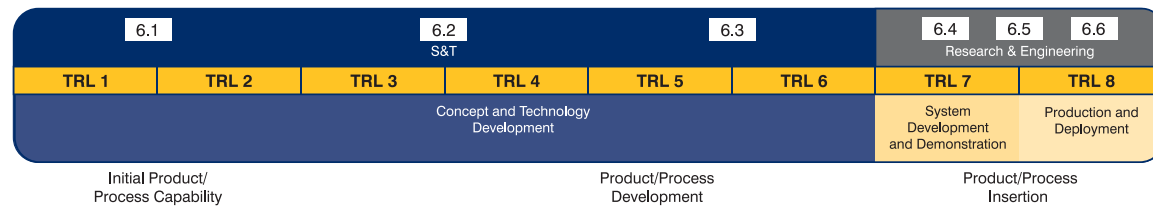
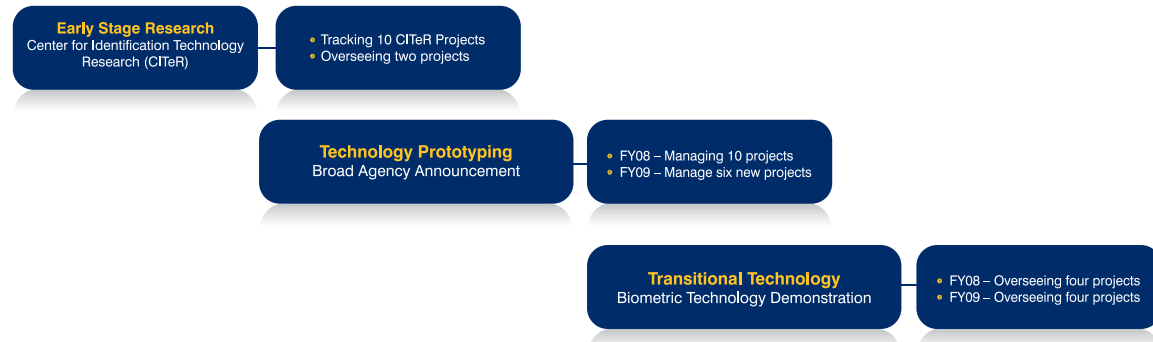
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### BIOMETRICS S&T INITIATIVES



The intent is to encourage investment across the range of the technology development spectrum.

#### Broad Agency Announcements (BAAs) and Biometric Technology Demonstrations (BTDs) (3.6)

The BTF played a critical role in the BAA and BTD programs — two wide-reaching initiatives that advance technology development. Two BAAs that the BTF supported are sponsored by the Director, Defense Biometrics (DDB) and the Joint IED Defeat Organization (JIEDDO). The BAAs fund innovative research projects for biometrics and forensic identification, respectively.

The BTD program is sponsored by the BTF to fund demonstrations of biometrics capabilities that will be transitioned to a DOD sponsor. The

FY09 BTD program provided funding for four projects that demonstrate a biometrics capability for the DOD sponsor and show potential for supporting the larger Biometrics Enterprise. In all, the BTF oversees more than 26 FY08 and FY09 BAA and BTD projects on behalf of the DDB, JIEDDO, and itself.

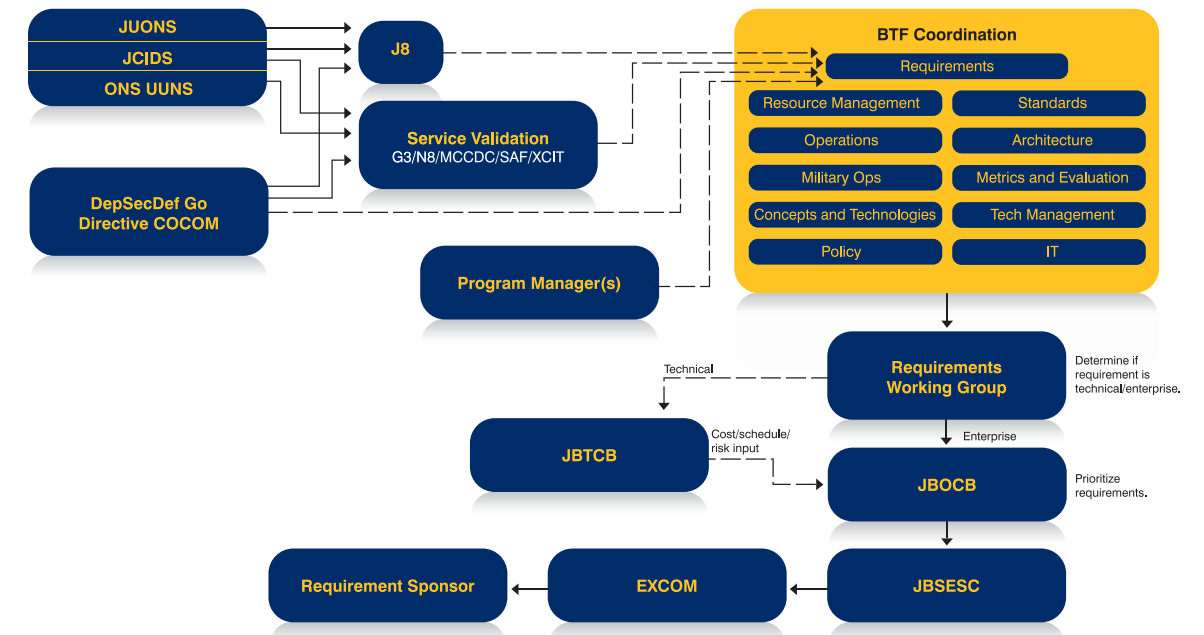
The BTF is preparing for the FY10 BAA program. Solicitations for this effort will be released in late fall, with final selections made three to five months afterward. The BTF conducted the FY10 BTD solicitation during the summer and early fall, and awards are being finalized.

#### Implementing an Enterprise Requirements Strategy (3.7)

A major FY09 BTF objective was to continue identifying and executing requirements across the Biometrics Enterprise. A key BTF mission is developing and implementing an approved Enterprise Requirements Strategy. The strategy identifies and integrates the Joint, Service, COCOM, and Defense Agency Joint Capabilities Integration and Development System (JCIDS) requirements for biometrics. As DOD entered FY09, the EXCOM approved the JCIDS requirements strategy.

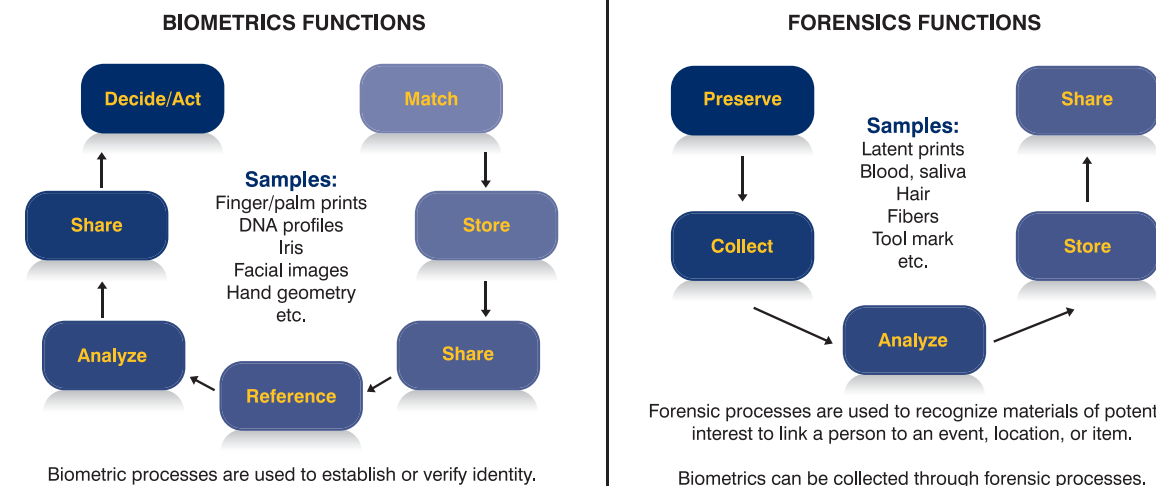
The BTF also has begun developing a process to efficiently execute current and urgent requirements to support the warfighters. On 22 June 2009, the BTF held the first Biometrics Requirements Working Group (BRWG), which was the initial step in socializing this process across the Services and COCOMs. The BTF continues to refine the governance process to coordinate, integrate, and enforce an enterprise strategy.

### REQUIREMENTS





## THE BIOMETRICS AND FORENSICS RELATIONSHIP



### JOINT, INTERAGENCY, AND MULTINATIONAL INTEGRATION EFFORTS

#### Driving Research and Innovation (3.6)

Through its involvement in the National Science Foundation's Center for Identification Technology Research (CITeR), the BTF helps shape and guide academic research into areas of interest for DOD and the federal government. In addition to projects funded via sponsor organizations to CITeR, the BTF identified academic proposals that fit specific DOD needs and secured additional funding for those projects.

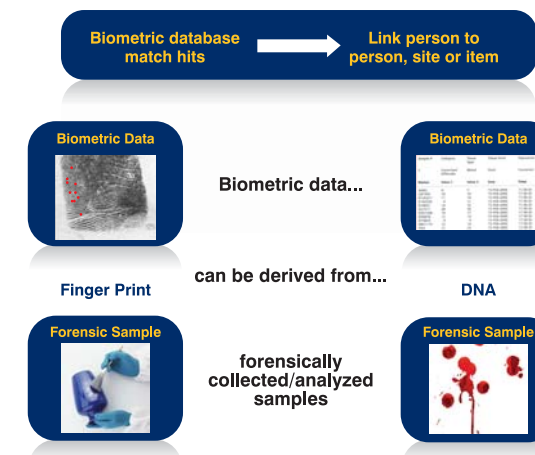
BTF personnel remain active in working groups, conferences, and symposia that involve international and domestic leaders in the biometrics and forensic sciences. By providing subject-matter expertise, technical support, and specialized experimentation venues, the BTF ensures that DOD biometrics interests and

goals are addressed in areas of emerging capabilities, process standardization, and information exchange.

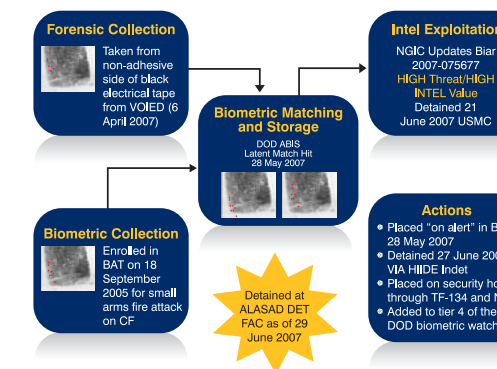
#### BTF Memorandum of Agreement (MOA) with the Armed Forces Institute of Pathology (1.4)

An MOA between the BTF and the Armed Forces Institute of Pathology went into effect on 4 May 2009, establishing a statement of work and assigning responsibilities for DNA support to the DOD biometrics mission. The BTF provides funding for the 24/7 operations at the Armed Forces DNA Identification Laboratory and other DNA equipment and resources in support of theater operations. This MOA assists in directly supporting actionable decision making by providing 24/7 operations focusing on DNA analysis collected during biometrics enrollments and forensic exploitation activities.

### BIOMETRIC SAMPLE CAN BE COLLECTED THROUGH FORENSIC PROCESSES



### SYNERGISTIC EFFECT OF EMPLOYING BIOMETRICS AND FORENSICS



**PROTECT AND SHARE BIOMETRICS INFORMATION**

A fundamental purpose of the BTF is to be a hub for biometrics data sharing as well as maintain the means to exchange data and information with other USG agencies and Coalition partners. The BTF position on biometrics data sharing is that biometrics databases across the USG should be federated, with an emphasis on keeping distinct the various mission sets and categories of individuals stored within the databases. As the EA, empowered to share biometrics information with interagency and multinational partners, it is incumbent upon the BTF to ensure that

biometrics data and other associated personally identifiable information are protected during all steps of the biometrics process (i.e., collect, store, match, and share).

**Defense Biometrics Architecture Overview**  
The figure below presents an abstract view of the “To Be” Enterprise as the provider of a set of capabilities or services that enable DOD forces to make operational decisions about how to apply identity information in combat and non-combat situations. The “To Be” Enterprise will employ a service-oriented architecture to deliver the biometrics services shown in the center of the

figure above to provide biometrics operational outcomes to U.S. forces and our allies and partners in support of a variety of missions and business functions. Under the BTF Director’s guidance, with DOD oversight, this enterprise leverages DOD’s policies, requirements, and financial and acquisition processes to provide and sustain trained and equipped biometrically enabled forces. Biometrics’ enabling role in defense operations globally reflects the fact that the use of collected biometrics data is not an end in itself; rather, it is a means to an end — positive operational outcomes.

interest in identifying data product compliance, interoperability issues, and new modality requirements for the Biometrics Enterprise data architecture products.

**Employing Biometrics to Enable Protection of Friendly Forces, Facilities, and Equipment (1.5)**

On 6 April 2009, the BTF received a copy of a personnel recovery policy memorandum signed by the Principal Deputy Director, Defense Research and Engineering (DDR&E). The BTF staffed the policy through the Army Office of General Counsel, the Defense Privacy Office, and OSD General Counsel. The Principal Deputy DDR&E signed the memorandum, supporting the matching of a narrow population of friendly force data (e.g., personnel recovery data) against an adversarial force database (e.g., DOD ABIS). The memorandum establishes this as a normal practice, which has been added to the DOD ABIS system of records notice purpose statement.

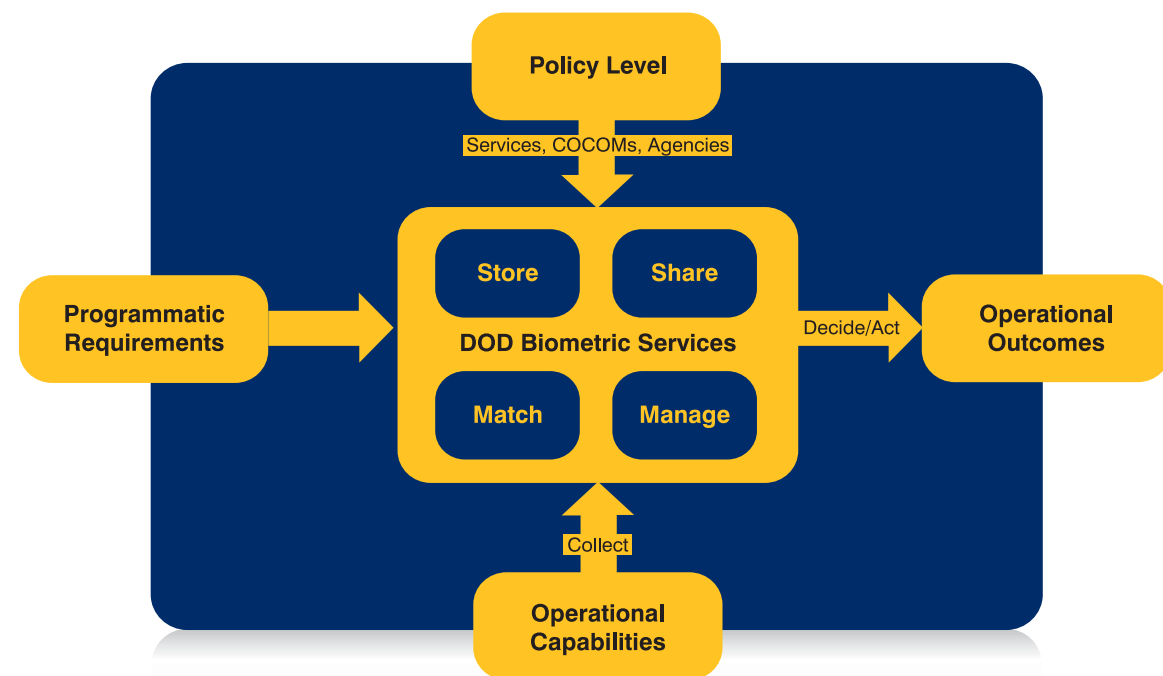
**Biometrics Data Architecture Products (3.5)**  
The BTF leads the Biometric Data Team, which has developed the initial versions of the Biometrics Enterprise data architecture products: the Core Logical Data Model, an Integrated Data Dictionary, and an Ontology and a Biometrics Glossary that include fingerprint and iris modalities. These products support DOD in defining biometrics standards, exchanging biometrics data between systems, and developing new biometrics systems. Supporting this effort, the BTF sponsors a Biometrics Data Sharing Community of Interest (BDS COI), which has members from across DOD and partners from the USG, academia, and industry. The BDS COI refines and verifies the Biometrics Enterprise data architecture products.

**PRIVACY**

The BTF adheres to the DOD Privacy Program and the Army Privacy Program. Specifically, the BTF ensures compliance with the Privacy Act through developing System of Records Notices, the E-Government Act of 2002 through conducting Privacy Impact Assessments, and other laws and regulations. The BTF is also developing a Privacy Assurance Plan and staffing a “Privacy Interests of Non-U.S. Persons” policy throughout the EXCOM and the interagency. BTF personnel took DOJ Freedom of Information Act (FOIA) training, which enabled them to develop BTF FOIA Standard Operating Procedures.

The BTF is moving to achieve interoperability and information sharing through a variety of architecture-related activities. The BTF serves as a subject matter expert for BEC/JPI architectures and the Biometrics Glossary. The BTF is also the lead for the biometrics community of

**“TO BE” ARCHITECTURAL CONCEPT**



Progressive migration to “service oriented architecture.”



RECOGNITION SYSTEM

00191 00-2000

ID3D HandKey™

- If wearing ring turn stone up
- Slide hand firmly against web pin
- Hold hand flat against platen
- Close fingers against pins



**REAL-TIME SHARING**





**Developing Knowledge Management for DOD Biometrics (4.6)**

The Under Secretary of Defense for Acquisition, Technology and Logistics' 11 February 2008 memorandum tasked the BTF with establishing a DOD interagency collaboration site for discussing DOD biometrics. The "DOD Communities" Web site on the DOD Biometric Expert Knowledge System is the official DOD Web site for sharing biometrics information and collaborating with all biometrics stakeholders and senior leaders who represent the DOD at national-level meetings and forums. The DOD Communities Web site offers the capability for DOD Components to provide feedback, coordinate, and share biometrics issues from the National Science and Technology Council (NSTC) and the National Counterterrorism Center working groups.

To ensure that DOD interoperability and data-sharing requirements are standardized, the BTF participated as voting members in four meetings

of the national standards body on biometrics (INCITS M1) and one meeting of the international standards body on biometrics (JTC 1/ SC 37). The BTF coordinates its activities across DOD and with USG agencies (e.g., DHS, National Institute of Standards and Technology (NIST), and the FBI) via the BSWG, as well as through participation in the NSTC Subcommittee on Biometrics and IdM, and the DHS Biometric Coordination Group.

In FY09, the BTF chaired five BSWG meetings. The BTF works with the Defense Information Systems Agency (DISA) to adopt and implement high-priority biometrics standards across DOD. The BTF submitted 26 standards for inclusion and/or modification within DISA and, specifically, the DISR Security Information and Assurance Cryptographic, and Technical Working Group (SIAC-TWG), the authoritative central repository for all information technology standards, including biometrics for application and use within DOD.

ORGANIZATION	BTF ROLE	STANDARDS BODY/ WORKING GROUP
 DOD	Chair and coordinate	DOD Biometric Standards Working Group
	Provide technical expertise	DISR Security Information Assurance and Cryptography Technical Working Group
 Federal government	Champion (lead) and coordinate	NSTC SC on Biometrics and IdM
		NSTC SC Biometrics and IdM SCA WG
		DHS BCG
 United States	Voting members, editors, technical contributors	INCITS M1 and M1 TGs
 Multinational entities	Members of U.S. expert delegation, editors, technical contributors	ISO/IEC JTC1 SC37 and SC37 WGs OASIS

NIST and Interagency Coordination

**First Latent-to-Latent Match on Next Generation DOD ABIS**

BTF examiners linked two separate IED-related incidents by making a latent-to-latent match. On 27 January 2009, BTF examiners conducting parallel operations testing confirmed a possible latent-to-latent match produced by the Next Generation DOD ABIS. This match connected two IED-related incidents that occurred in different locations more than 15 months apart. Latent-to-latent searching is a capability not available on the previous version but is available with the Next Generation DOD ABIS. Latent-to-latent matches serve to associate separate events to an unknown individual and generate additional link-based intelligence to enable targeting, tracking, and prosecution of known or potential adversaries.



In FY09, the BTF published and nominated to the DISR the DOD EBTS, Version 2.0. The BTF developed a process to administer application-specific implementations of DOD EBTS to assure interoperability. The BTF leads DOD efforts in researching, analyzing, and developing quality measurement algorithms and tools and regularly participates in industry events focused on cutting-edge biometrics technologies and related issues to validate interoperability of systems and data across the Joint, interagency, and multinational environment.

In FY09, the BTF completed NIST phase I testing of the face measurement quality tool and feasibility testing of the iris quality measurement tool. Additionally, the BTF published its first issue of the quarterly BSWG newsletter, which provides BSWG members with a useful source of information related to developing, adopting, and implementing biometrics standards across the Joint, interagency, and multinational environment. In FY09, the "Defense Standardization Program Journal," an informative DOD standardization newsletter that provides a

forum for news and in-depth articles examining various standardization topics, published three articles written by three BTF members.

The BTF continues to lead DOD efforts to develop and adopt high-priority biometrics standards, participate in standards development organizations and interagency forums, and develop biometrics tools in support of DOD interoperability and data-sharing mission requirements in coordination with DOD organizations and USG agencies. The BTF is developing an XML version of DOD EBTS that conforms to the National Information Exchange Model, which will facilitate a more flexible framework for biometrics data sharing among the DHS IDENT, the FBI IAFIS, and the DOD ABIS. The BTF is currently working with DISA to establish itself as an authoritative body within the DISR SIAC-TWG.

## **INTERAGENCY AGREEMENTS**

### **Develop DOD Policy to Enhance Employment of Biometrics (1.1)**

On 19 March 2009, the BTF stood up an interagency Biometrics Policy Working Group that originally focused on implementation of Identification-based Decision Processes To Enable Confident Transactions (IDProTECT), which is a BTF pilot program leading to an enduring, friendly, biometrics-based identification system for support of a range of DOD business functions and military operations. The group is a conduit for biometrics policy development and interagency coordination. This coordinating body has been an important step in establishing the policy groundwork for post-pilot phases of IDProTECT and other sponsored programs.



### **Afghanistan Border Patrol Submissions (1.5)**

The BTF received a set of biometrics files from the Ministry of Interior Afghan Border Patrol for individuals hired for border patrol duty on the Afghanistan/Iran border. The files were submitted for search in the DOD ABIS. The search resulted in matches and watch list hits for suspected terrorist activity, and the individuals are being removed from the job. The Afghanistan/Iran border is more secure to the extent that these individuals will not be working and potentially allowing other undesirable individuals to cross. As the number of files from Afghanistan submitted to DOD ABIS increases, the more secure that region will become.

### **Airport Point of Entry Match (1.4)**

The BTF received fingerprint images for an individual trying to enter the United States through an international airport. The individual's biometrics data were searched against IDENT, resulting in a potential National Ground Intelligence Center (NGIC) watch list match. NGIC could not confirm the match and requested that the BTF search the individual's biometrics. The BTF formatted the

prints for submission to the DOD ABIS, resulting in a watch list hit. Sharing biometrics data with interagency and multinational partners is vital in securing the homeland.

### **Tier 1 Watch List Match (1.4)**

The BTF submitted encoded latent prints recovered from an IED site. The latent prints did not match a particular Handheld Interagency Identity Detection Equipment (HIIDE) collection; however, during data migration, a match was made in the Next Generation DOD ABIS and verified by latent print examiners. The subject was added to the watch list and was later encountered, resulting in a watch list hit. Real-time positive identification of persons of interest enables Coalition forces to target, track, and prosecute known or potential adversaries.

## **FACILITIES**

The BTF currently occupies several General Services Administration (GSA) leased facilities in West Virginia as well as a GSA leased space

in the National Capital Region. In March 2007, the DDR&E met with senior FBI officials, and an agreement was signed for DOD and FBI to partner in developing and executing plans for a joint biometrics Center of Excellence (COE). The joint design team eventually named the effort the Biometrics Technology Center.

The facility will house various parts of the DOD Biometrics COE. The BTF will finalize a Concept of Operation for the DOD Biometrics COE in the second quarter of FY10.

The FBI will be soliciting bids for construction of the 375,000-square-foot office building. The contract will be awarded in late summer 2010, and completion is scheduled for summer 2013. The BTF's Clarksburg office is scheduled to move in to the new building in late 2013.

### **USS Gettysburg Submits Biometric Records of Suspected Pirates**

On 15 May 2009, the USS Gettysburg in the Gulf of Aden sent the BTF biometric files of 17 suspected pirates to search against the DOD ABIS. These submissions resulted in non-identifications, but each submission improves the tactical value of the DOD ABIS's tactical value and the likelihood of linking the individuals to previous encounters. As the U.S. Navy intensifies its anti-pirate operations in and around the Gulf of Aden, the BTF continues to receive biometric records of suspected pirates from U.S. ships. The ability to quickly and accurately determine if an individual is in the DOD ABIS database may deter future pirate attacks.





## WAY AHEAD

FY10 promises to be no less exciting than FY09 was. The BTF will continue to assess and analyze system and operational performance to provide faster, more reliable responses to customers.

### Managing a Continuous Strategic Planning Process (3.2)

As of October 2009, the BTF is leading planning initiatives to review and revise the BESP as appropriate. With the upcoming publication of the President's 2010 National Security Strategy and the 2010 DOD Quadrennial Defense Review, the primary focus of the Strategic Planning Working Group (SPWG) is to ensure BESP alignment with new national defense goals and objectives. The SPWG seeks to improve the plan's incorporation of stakeholder equities while acknowledging the role of biometrics in the DOD's larger IdM framework.

The BESP review's kickoff, first quarter of FY10, marks the last BESP review that will be conducted "off cycle." Starting in FY11, the Enterprise will realize the added benefit of alignment with DOD's two-year Planning, Programming, Budgeting, and Execution cycle through initiating the strategic planning process at the end of the first quarter of FY11.

This shift synchronizes the Enterprise's planning and execution schedule with DOD's major decision points in a fashion that allows for adequate coordination of stakeholder issues and requirements with the EXCOM. Additionally, it affords the EXCOM the opportunity to publish planning and programming recommendations specific to common and Joint DOD biometrics

capabilities before the Services and critical DOD Components enter into the program objective memorandum development phase.

### Enterprise Architecture (3.5)

The BTF will coordinate biometrics architecture requirements with all USG users and engage USG agencies in related aspects of enterprise architecture management, such as concept development, integrated acquisition strategies, policy, resource management, and technology integration. The BTF will develop Biometrics Enterprise architecture in support of the full range of military operations and business functions to properly capture biometrics and IdM needs. The plan is to implement a tool suite to support the BTF and solution development across all policy, classification, and operational environments.

### Architecture Priorities (3.1)

Future efforts are to develop biometrics architecture feedback mechanisms (a portal) to all biometrics users. The BTF is coordinating internally so that any biometrics architecture tool requirements are in alignment with knowledge management programmatic and development activities.

### S&T Collaboration (3.6)

Over the next year, the BTF will continue efforts to develop and enhance biometrics-enabled capabilities by establishing information exchange forums within the biometrics S&T community. To encourage the sharing of specific biometrics S&T project information, the BTF will host a Biometrics S&T Workshop to allow program managers to brief stakeholders on ongoing biometrics projects and technologies. To

maximize collaboration, the workshop will be open to representatives from across DOD and the interagency biometrics S&T community.

The BTF will lead the effort to develop a DOD Biometrics S&T Roadmap, which will capture biometrics S&T gaps, establish technical goals and objectives for each area, identify who is working to address each goal and/or objective, and ensure that a transition path to the acquisition community exists for each capability. This effort will require coordination and input from across the DOD Biometrics S&T community and relevant stakeholders in the USG, academia, and industry to accomplish the intended objectives.

**Establish Biometrics Resource Requirements (2.3)**

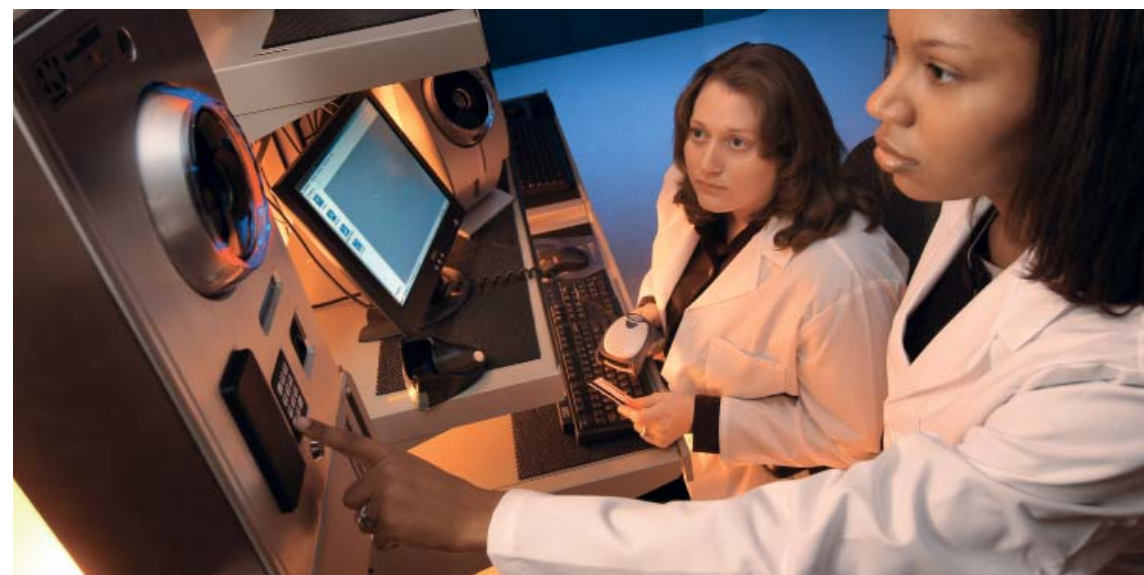
The BTF is continuing to develop and improve its processes with the establishment of the BRWG in FY10. The BRWG seeks to facilitate a collaborative effort across the Biometrics Enterprise. This ties directly into DODD 8521.01E's vision, "DOD Biometrics programs shall be designed to improve the effectiveness

and efficiency of biometrics activities throughout the DOD by eliminating unwarranted duplication and overlap."

Having the BRWG in the governance process will improve the effectiveness and efficiency of the common, Joint biometrics requirements process. Quarterly program management reviews provide awareness of the Biometrics Enterprise objectives, status, and integration pertaining to execution of the requirements, resources, and acquisition. A key component to institutionalization is the Health Assessment element of the Probability of Program Success. As such, this effort will kick off in the first quarter of FY10 to identify the likelihood of success and overall "health" of projects funded by the BTF.

**Acquisition Cycle (2.2)**

In developing a synchronized approach to the acquisition of future biometrics-related capabilities and with support from the biometrics community, the BTF will lead the FY10 development of an Acquisition Roadmap to facilitate an integrated effort and promote Program of Record awareness. Coupling the roadmap with the maturing of



the health assessment, the BTF will seek the implementation of a Capability Portfolio Management concept to support an annual assessment of the Biometrics Enterprise. These efforts will further support the overarching goal to improve efficiency and reduce duplicative programs and initiatives.

**Congressional Engagement (4.5)**

Interaction between the BTF and members of Congress is crucial for IdM growth, understanding, and awareness. Legislative support is essential to the enhancement of warfighter capabilities and business functions. The BTF's intent as the DOD representative for biometrics is to support the establishment of lasting relationships with the legislative members, committees, and their staffs.

**COCOM Engagement (4.5)**

The BTF plans to enhance the COCOM engagement process to synchronize and maximize enterprise efficiencies and lessons learned. The BTF will continue to support and advise the COCOMs on policies, doctrines, standards, emerging technologies, and other enterprise efforts to ensure that the needs of their organizations, the warfighters, and business functions within their AORs are exceeded.

**Future Goals (3.5)**

The BTF will complete comparisons and standards conformance evaluations for the Next Generation Tactical Handheld Biometric Terminal. The BTF will also institutionalize the DOD Biometrics Standards Conformance Program to facilitate the integration of systems into the Biometrics Enterprise and/or exchanging/sharing information with repositories of biometrics data.



**Two New Unsolved Latent Matches on Next Generation DOD ABIS**

BTF examiners identified two new individuals in two separate IED-related cases. On 20 January 2009, BTF examiners conducting parallel operations testing received and verified two significant unsolved latent identifications that were not made on the prior ABIS. The latent print identifications resulted in linking new individuals to two IED-related cases and new watch list nominations. Nominations enable Coalition forces to target, track, and prosecute known or potential adversaries.

## CONCLUSION

Biometrics enables and supports high-value target tracking, Maritime Interception Operations, personnel recovery, facility and logical access control, disaster relief, humanitarian assistance, security operations, in-theater interagency operations, access to services for non-U.S. persons, and U.S. border protection. IdM using biometrics has proven its utility for the warfighter. It is working so well in Iraq to track and detain known and suspected terrorists that those lessons learned are being shared in Afghanistan.

In the past few years, the use of biometrics by DOD has increased rapidly. The technology is improving such that a search result can be

returned to theater in less than two minutes. Because biometrics is enabling the warfighter and the mission, IED makers and insurgents are continually being identified and taken out of circulation, further protecting forces in the field and citizens at home.

Enabling critical DOD warfighting missions and DOD business functions while protecting the warfighters, privacy, and the data is at the heart of Identify, Enable, Protect.

### DOD Biometrics Collaboration Forum

The BTF will hold the DOD Biometrics Collaboration Forum 26-28 January 2010 in Charlotte, North Carolina, to address immediate warfighter issues, integrate the community of DOD biometrics users and affiliated agencies, and further biometrics within DOD. Biometrics stakeholders are encouraged to send representatives who can speak for their organizations and make recommendations. The agenda is structured to facilitate planned and impromptu collaboration between attendees. The end product will be a summation of the most urgent issues that need to be resolved in many areas of DOD biometrics and concrete ideas on how to resolve them.



ROLL UP YOUR SLEEVES



## ACRONYMS

**ABIS:** Automated Biometric Identification System  
**AOR:** area of responsibility  
**ASA (ALT):** Assistant Secretary of the Army for Acquisition, Logistics, and Technology  
**ASD (NII)/CIO:** Assistant Secretary of Defense for Networks and Information Integration, Chief Intelligence Officer  
**BAA:** broad agency announcement  
**BAT:** Biometrics Automated Toolset  
**BCG:** Biometric Coordination Group  
**BDS COI:** Biometrics Data Sharing Community of Interest  
**BEC:** Biometric Enabling Capabilities  
**BESP:** Biometrics Enterprise Strategic Plan  
**BRWG:** Biometrics Requirements Working Group  
**BSWG:** Biometric Standards Working Group  
**BTD:** Biometric Technology Demonstrations  
**BTF:** Biometrics Task Force  
**CAG:** Coordination and Advisory Group  
**CENTCOM:** U.S. Central Command  
**CF:** Coalition forces  
**CIO:** Chief Information Officer  
**CITeR:** Center for Identification Technology Research  
**CJIS:** Criminal Justice Information Services  
**CJTF:** Combined Joint Task Force  
**COE:** Center of Excellence  
**COI:** community of interest  
**CONOPS:** Concept of Operations  
**COTS:** commercial off-the-shelf  
**COCOM:** Combatant Command  
**DA&M:** Director of Administration and Management  
**DARPA:** Defense Advanced Research Projects Agency

**DDB:** Director, Defense Biometrics  
**DDR&E:** Director for Defense Research and Engineering  
**DHS:** Department of Homeland Security  
**DISA:** Defense Information Systems Agency  
**DISR:** DOD IT Standards Registry  
**DOD:** Department of Defense  
**DODD:** DOD Directive  
**DODI:** DOD Instruction  
**DOJ:** Department of Justice  
**DON:** Department of the Navy  
**EA:** Executive Agent  
**EBTS:** Electronic Biometric Transmission Specification  
**EXCOM:** Executive Committee  
**FBI:** Federal Bureau of Investigation  
**FESG:** Forensics Executive Steering Group  
**FN:** Foreign National  
**FO:** Flag Officer  
**FOIA:** Freedom of Information Act  
**FY:** Fiscal Year  
**GO:** General Officer  
**GS:** General Schedule  
**GSA:** General Services Administration  
**HIIDE:** Handheld Interagency Identity Detection Equipment  
**HQAF:** Headquarters Department of the Air Force  
**HQDA:** Headquarters Department of the Army  
**HQ:** Headquarters  
**IdM:** Identity Management  
**IDProTECT:** Identification-based Decision Processes To Enable Confident Transactions  
**IED:** improvised explosive devices  
**INCITS:** standards body on biometrics

**I-Plan:** Implementation Plan  
**IPMSCG:** Identity Protection and Management Senior Coordinating Group  
**IT:** information technology  
**ISO/IEC:** International Standards Organization/International Electrotechnical Commission  
**JBOCB:** Joint Biometrics Operational Coordination Board  
**JBSESC:** Joint Biometrics Senior Executive Steering Committee  
**JBTCB:** Joint Biometrics Technical Coordination Board  
**JCIDS:** Joint Capabilities Integration and Development System  
**JIEDDO:** Joint IED Defeat Organization  
**JPI:** Joint Personnel Identification  
**JTC 1/SC 37:** international standards body on biometrics  
**JUONS:** Joint Urgent Operational Needs Statement  
**MCCDC:** Marine Corps Combat Development Command  
**MNC-I:** Multi-National Corps–Iraq  
**MOA:** Memorandum of Agreement  
**NCOIC:** Non-Commissioned Officer in Charge  
**NGIC:** National Ground Intelligence Center  
**NIST:** National Institute of Science and Technology  
**NDRS:** National Detainee Registry System  
**NSTC:** National Science and Technology Council  
**OASIS:** Organization for the Advancement of Structured Information Standards  
**ONS:** Operational Needs Statement  
**OPMG:** Office of the Provost Marshal General  
**OSD:** Office of the Secretary of Defense  
**OSTR:** Office of Science and Technology Policy  
**PACOM:** Pacific Command

**PM:** Project Manager  
**PM Biometrics:** Project Manager Biometrics  
**PM ASPO:** Program Manager Army Space Programs Office  
**PSA:** Principal Staff Assistant  
**S&T:** science and technology  
**SACO:** Staff Actions Control Officer  
**SAF/XCIT:** Secretary of the Air Force for Warfighter Integration, Tools, and Middleware  
**SCA WG:** Standards and Conformity Assessment Working Group  
**SES:** Senior Executive Service  
**SIAC-TWG:** Security Information and Assurance Cryptographic, and Technical Working Group  
**SPWG:** Strategic Planning Working Group  
**TF:** Task Force  
**TG:** Task Group  
**TRL:** Technology Readiness Level  
**TRADOC:** U.S. Army Training and Doctrine Command  
**TRMC:** Test Resource Management Center  
**TSWG:** Technical Support Working Group  
**USD(I):** Under Secretary of Defense for Intelligence  
**USD(P):** Under Secretary of Defense for Policy  
**USD(P&R):** Under Secretary of Defense for Personnel and Readiness  
**USFOR-A:** U.S. Forces Afghanistan  
**USG:** U.S. government agencies  
**USMC:** U.S. Marine Corps  
**US-VISIT:** U.S. Visitor and Immigrant Status Indicator Technology  
**UUNS:** Urgent Universal Needs Statement  
**VOIED:** Victim-Operated IED  
**XML:** eXtensible Markup Language





