



DOD BIOMETRICS MANAGEMENT OFFICE

EXECUTIVE OVERVIEW FOR INFORMATION ASSURANCE INDUSTRY DAYS

Presented by
LTC Robert Bollig

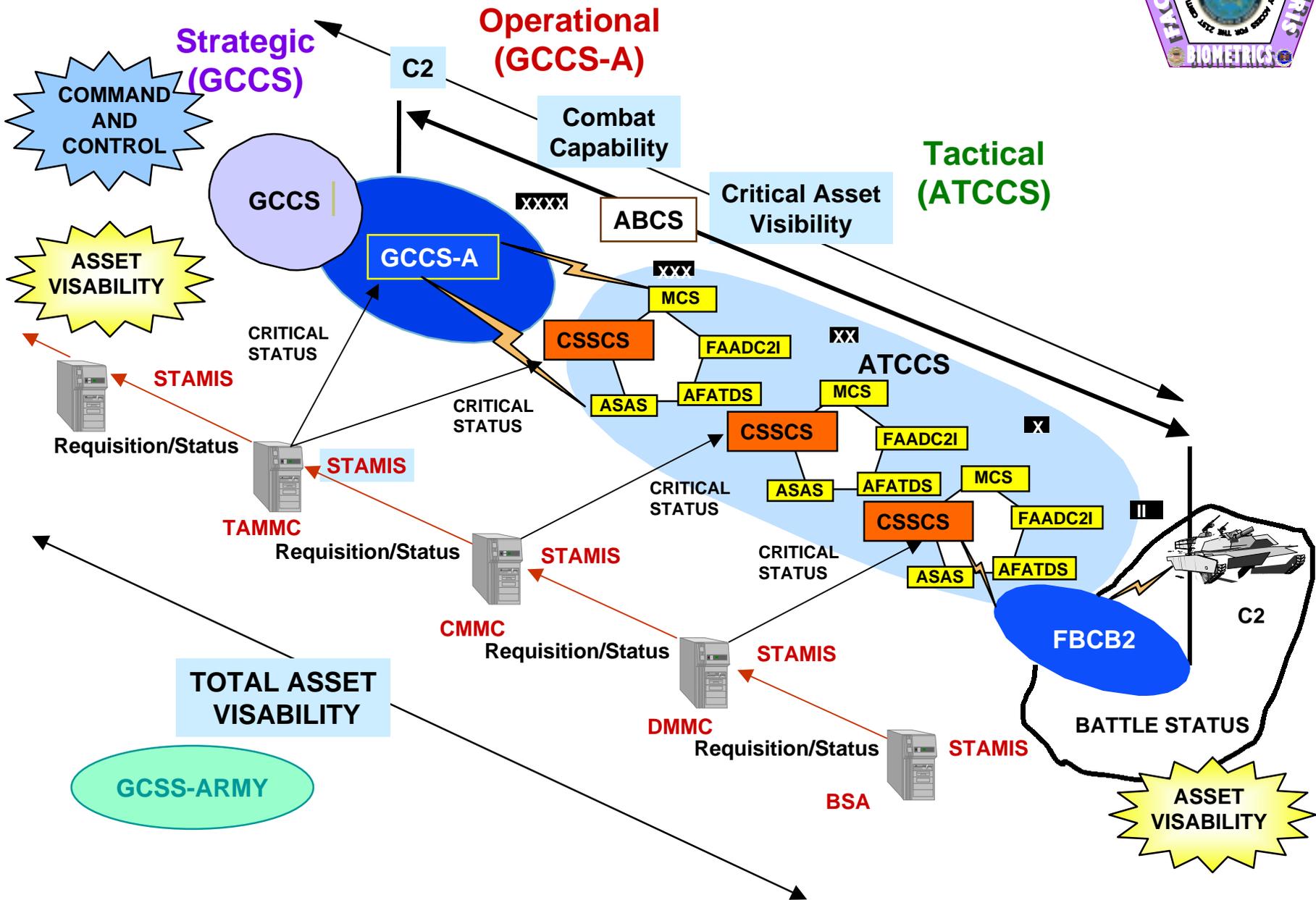
URL <http://www.army.mil/biometrics>

Commercial (703) 681-6446; DSN 761-6446

Mr. Phillip Loranger

Director of Biometrics

Why a Biometrics Management Office?



BMO Mission Statement



MISSION: The mission of the Department of Defense (DOD) Biometrics Management Office (BMO) is to ensure the availability of biometrics technologies within the Department of Defense. Acting on behalf of the Secretary of the Army through the Army CIO, BMO operates as the executive agent to lead, consolidate and coordinate all biometrics information assurance programs of the Department of Defense in support of Network Centric Warfare. The BMO executes the full spectrum of biometrics systems and technologies and is focused on providing Soldiers, Sailors, Airmen and Marines a technological edge in all environments by providing proven, reliable and effective biometrics access systems in support of garrison and combat operations.



DOD Biometrics Management Office Vision

“To serve as the center of gravity over a full spectrum of biometrics systems and technologies to provide the military user an edge in all operational environments with the best reliable and available security access systems.”

Biometrics Management Office Strategies



- The Army is the DoD Executive Agent for biometrics.
- The DoD BMO is operating and establishing the infrastructure to sustain the effort.
- The DoD BMO will develop necessary guidance for implementing Biometrics within the DoD.
- **Most importantly** the DoD BMO wants to partner with the biometrics industry to develop standards and performance measures for this technology.

PASSWORD?
WE DON'T NEED NO
STINKIN' PASSWORD!



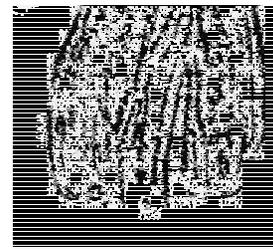
NEWS ITEM: THE ARMY WILL INVESTIGATE BIOMETRIC RECOGNITION DEVICES TO REDUCE OR ELIMINATE PASSWORD USE FOR ACCESSING COMPUTERS AND WEAPONS SYSTEMS.



What are Biometrics?



Biometrics are measurable physical characteristics or personal behavioral traits used to recognize the identity, or verify the claimed identity of an individual. For example: fingerprints, signature verifications, iris scan, hand/finger geometry, facial recognition, wrist veins.



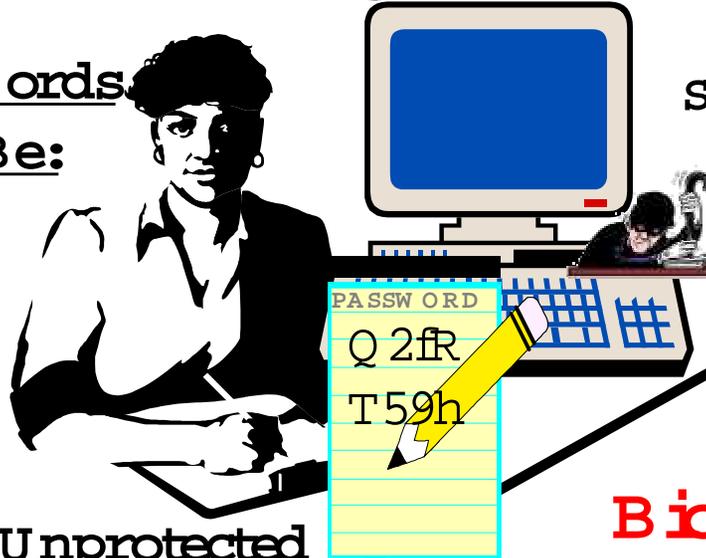
Why Biometrics in Information Assurance?



Passwords are
Not you!!!!

Password????
(Forgotten!)

Passwords
Can Be:



Stolen!

Unprotected

Biometrics
ID you as you

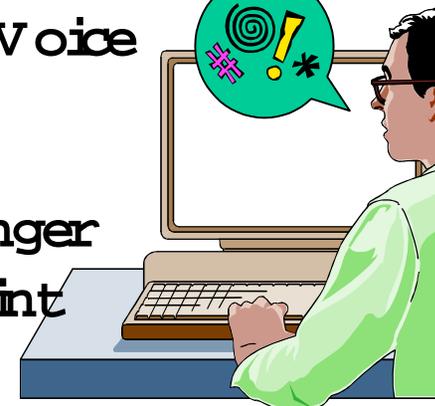
Voice



Eye/Iris



Finger
print



Biometrics Cannot Be:

- Forgotten
- Left Unprotected
- Stolen

Congressional Guidance

(FY 00 Defense Bill - MILCON)



“The Committee directs the Army to conduct a feasibility study of its requirements for a facility to house the combined activities of biometrics sensor and template repository, biometrics security technology, and other Army Information Assurance development and testing activities to accomplish a more focused and effective Information Assurance effort.”

Taken from Senate Report 106-74 accompanying the Military Construction Appropriations Bill for FY 2000

Congress Offered Their Help

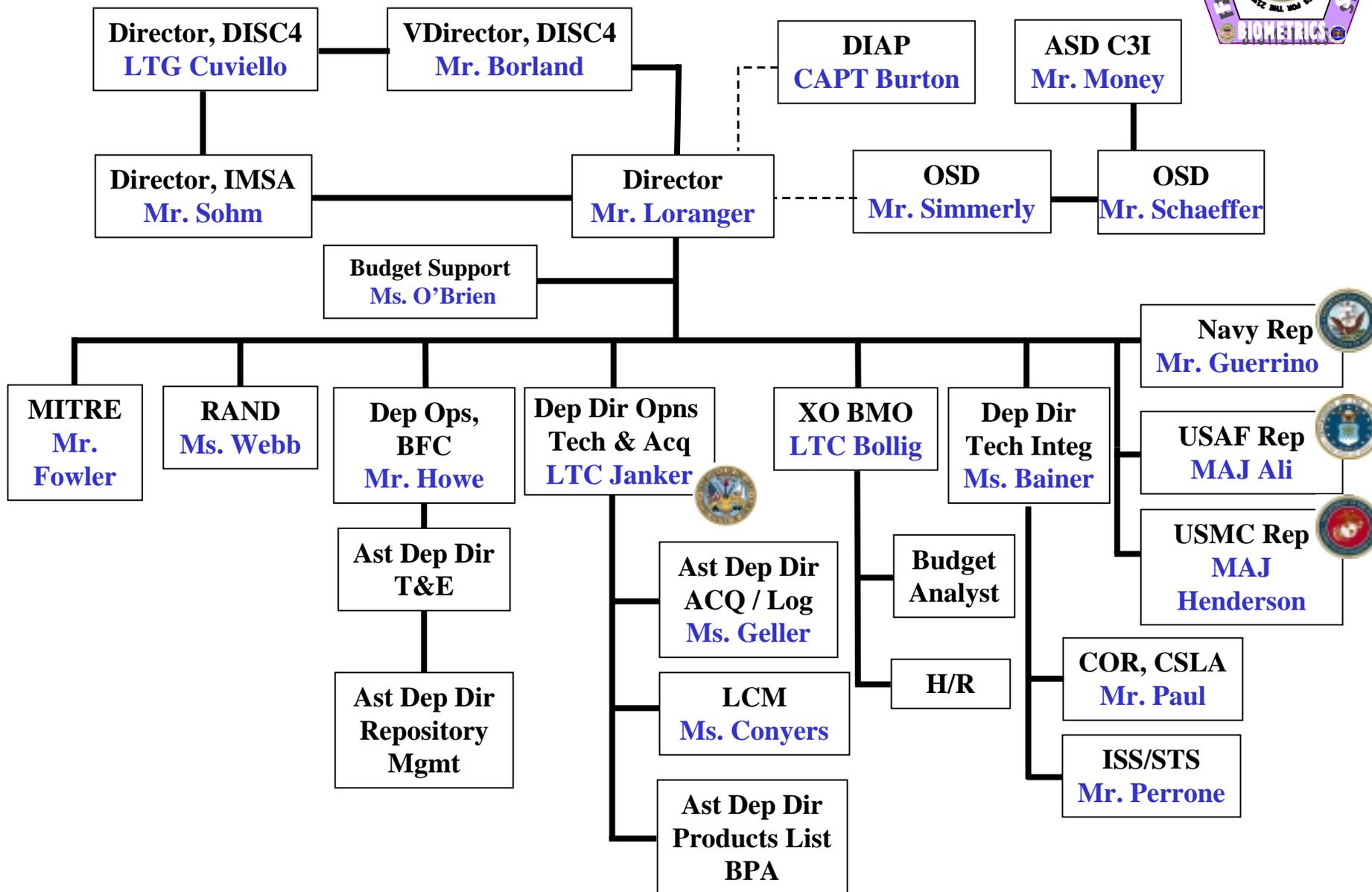


Public Law 106-246

(Signed by the President on 13 July 2000)

Sec. 112. To ensure the availability of biometrics technologies in the Department of Defense, the Secretary of the Army shall be the Executive Agent to lead, consolidate, and coordinate all biometrics information assurance programs of the Department of Defense....

Biometrics Management Office



Biometrics Management Strategy



Near Term (Tactical)

Utilize Existing Biometrics COTS Product

Mid Term (Operational)

Support and Establish Biometrics Standards

Long Range (Strategic)

Implement Biometrics Systems

Biometrics Management Strategy



Near Term (Tactical)

Utilize Existing Biometrics COTS Product

- **Leverage off of each service's success in biometrics technology.**
- **Accelerate transition of critical biometrics capability into DoD in order to reduce current system vulnerabilities.**
- **Provide commanders with proven and effective biometrics tools to solve identification problems and enhance force protection**

Biometrics Management Strategy



Mid Term (Operational)

Support and Establish Biometrics Standards

- **Support establishment of international biometrics data standards and communications protocols.**
- **Enhance Information system security by utilization of biometrics to reduce system vulnerability.**
- **Implement biometrics data and communication standards throughout DoD.**
- **Facilitate the growth of the biometrics industry by providing a single biometrics infusion point for all of DoD.**
- **Influence the next generation of biometrics tools for DoD via timely insertion of military requirements/participation with industry.**

Biometrics Management Strategy

Long Range (Strategic)



Implement Biometrics Systems

- **To create and implement integrated biometrics systems in support of Network Centric Warfare**
- **Enhance individual privacy via effective integration of emerging biometrics technology**

BMO Focus is on Technology



Technology that meets the following requirements:

- Low cost
- Integrates CBT
- Operates in the office
- BIOAPI compliant
- Minimum impact
- Operates in MOPP 4
- COTS
- Approved by BMO

Accomplishments



- **Feasibility Assessment, 31 Jan 00.**
 - Major finding- immediate need to establish Biometrics Fusion Center to house and manage biometrics activities for DoD.
- **Social/Legal Study, Feb 00**
 - Major finding- no legal roadblocks, but education is key to facilitate acceptance.
- **Established Biometrics Management Office in Skyline complex in Alexandria, VA, and appointed Director for Biometrics.**
- **Reports to Congress -**
 - Senate Report, and monthly for March - September.
- **Leased Biometrics Fusion Center Office Space.**
 - Bridgeport, West Virginia.
 - Modifications with target to open in late November 2000.
 - Defining infrastructure.

Why is DoD Interested in the Biometrics Industry?

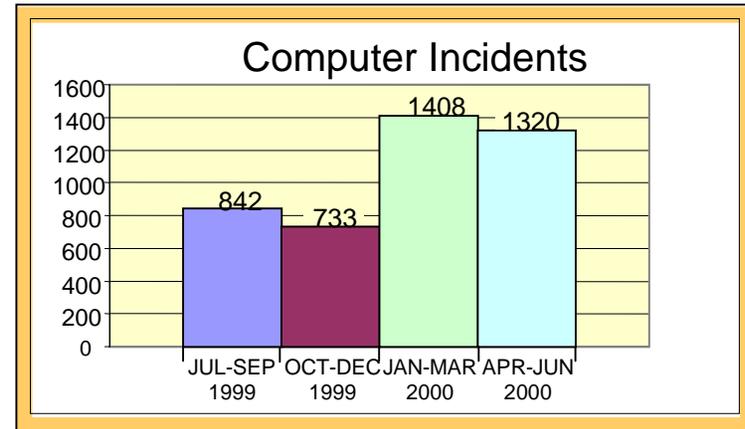
Threat to Defense Infrastructure

“Real and Growing”

- Nation States
- Trans-national threats
- Criminal elements
- Hackers
- Disgruntled employees

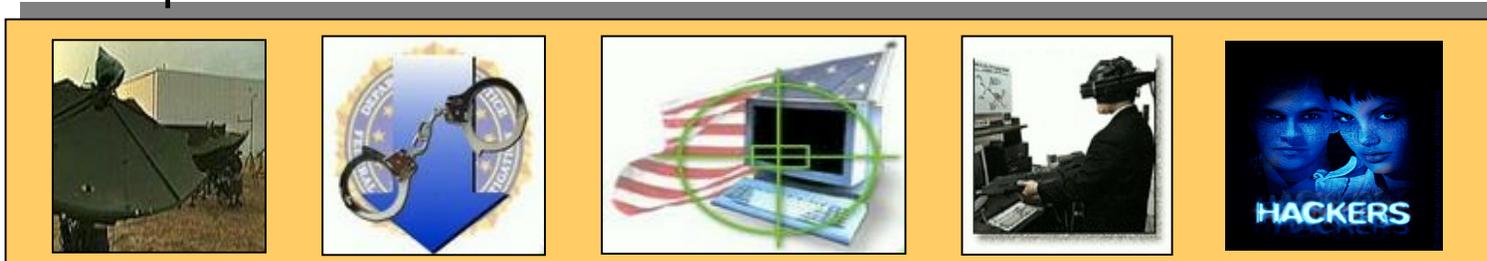
DoD Requirements

- DoD becoming more digitized
- Commanders demand more, better, & faster information
- Internet is key to DoD business processes



Technology Trends

- Processor speeds double every 24 months.
- 100,000 new computers connected to the Internet daily
- Software pushing hardware domain



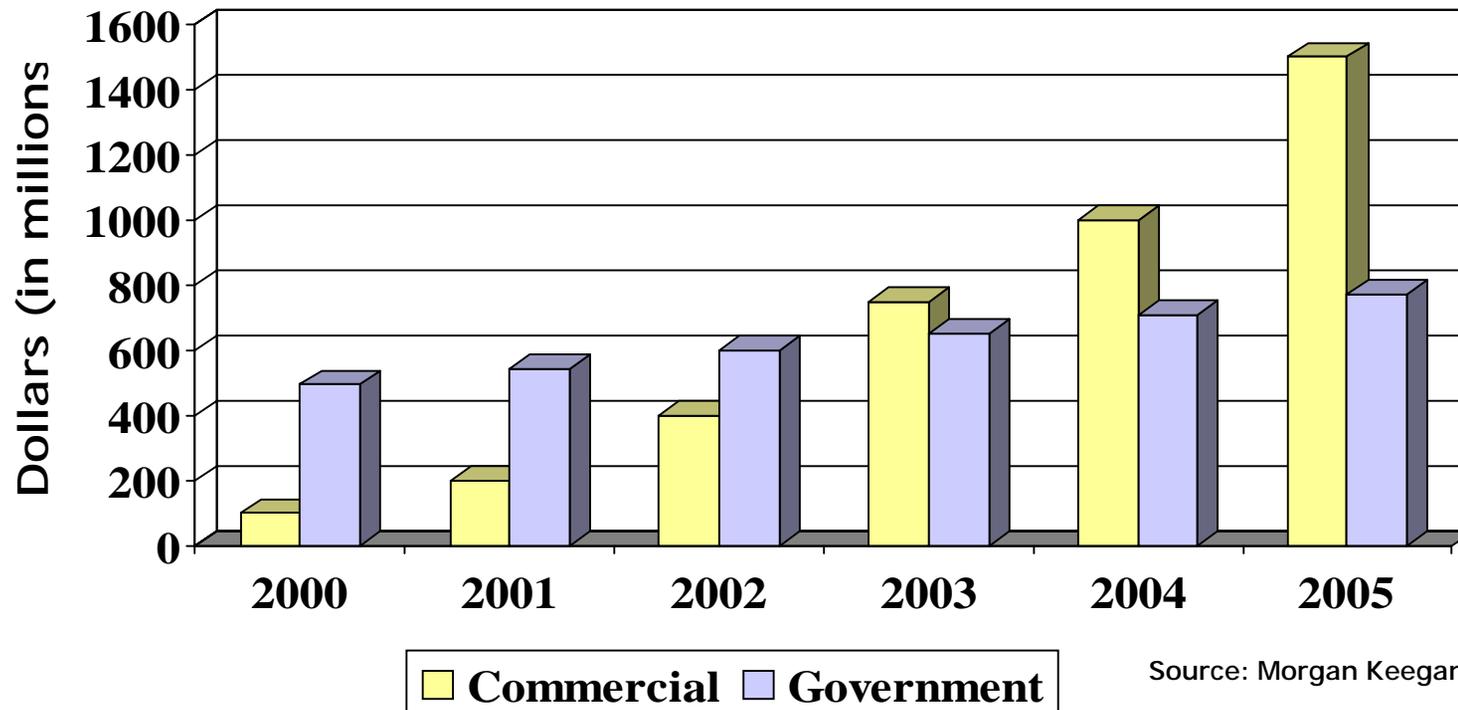
Why Should Industry Be Interested in DoD Biometrics?



- ✓ **Current market of \$500 million**
- ✓ **Estimated growth to \$2.2 billion in 2005**

- \$100 million in commercial market
- \$495 million in government market

- \$1.4 billion in commercial market
- \$800 million in government market



Source: Morgan Keegan Estimates

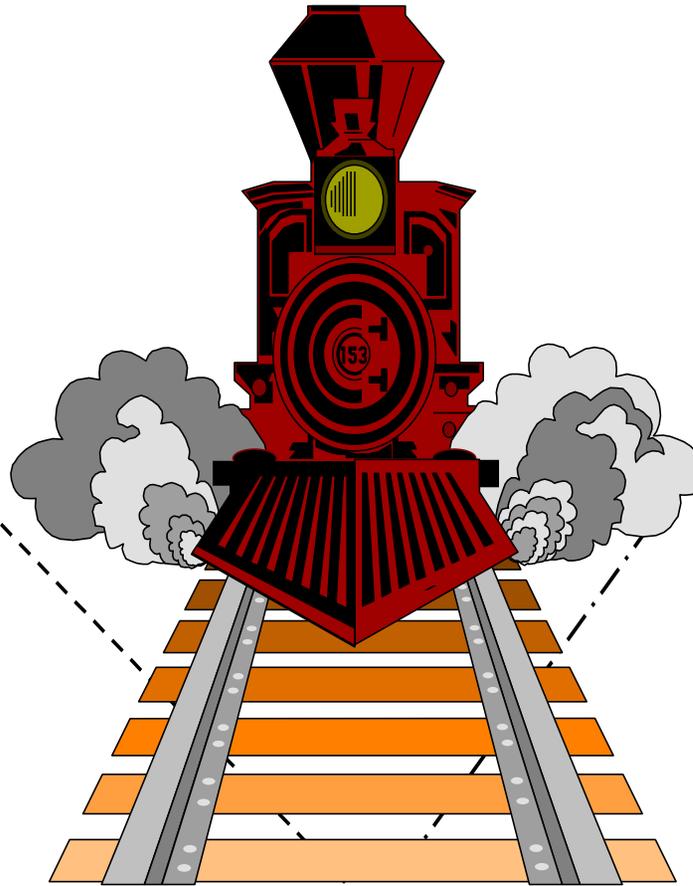
Doing Something Different



COTS that supports
Industry & DoD

(GOTS)
Government
off the shelf
Government
Solutions

(COTS)
Commercial
off the shelf
Industry
Solutions



INDUSTRY

- Promotes ability to modify system
- One infusion point for technology into DoD
- Significant customer base

DoD

- Suitable & effective solutions
- Cross-leveling between services
- Enhanced training via standardization
- Decrease vulnerabilities of NCW

MUTUAL BENEFITS

- Same challenges - what works for NTDR will support wireless internet
- Interoperability via data & communications standards
- Accelerated user acceptance

Policy and Doctrine



- **Task**
 - Develop DoD Biometrics Policy recommended by an informal Senior Advisory Group (SAG)
 - Introduce biometrics to doctrine developers
- **Initial contact with DoD Policy Developer**
 - ASD C3I POC
 - Models received for DODI and DODD

Announcement and Guidance Messages Planned



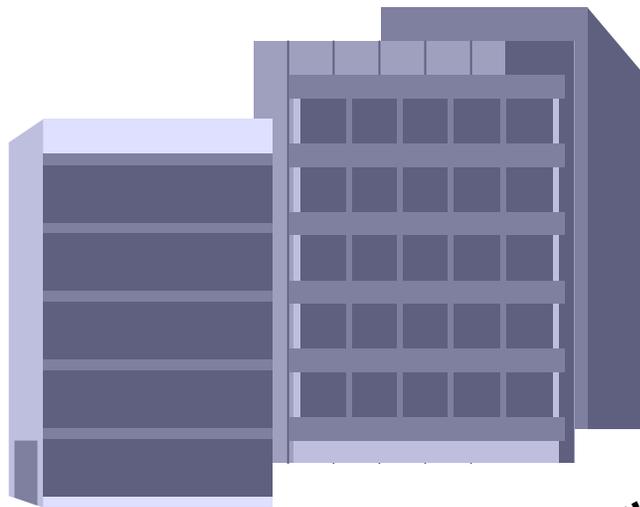
- **Establishment of the Department of Defense's Biometrics Management Office (BMO) IAW PL 106-246. (Draft for November release)**
- **Department of Defense's (DoD) Biometrics Management Office DataCall and Registry of Efforts. (Draft for November release)**
- **Establishment of the Department of Defense's Biometrics Fusion Center (BFC). (Draft for November release)**

Architecture and Standards

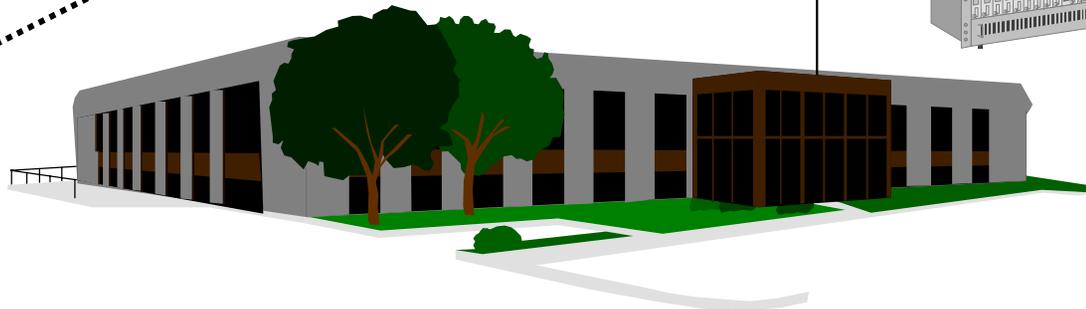


- **Introduce standards for inclusion in the JTA**
 - BIOAPI
 - FBI Fingerprint standards
- **Introduce biometrics into IA architecture**
 - Information Installation Infrastructure Configuration Control Board (I3A CCB)
 - Service CCBs
 - Service Weapons Systems Technical Working Groups
 - Military Communications-Electronics Board

Major Muscle Groups (MG) of the Biometrics Project



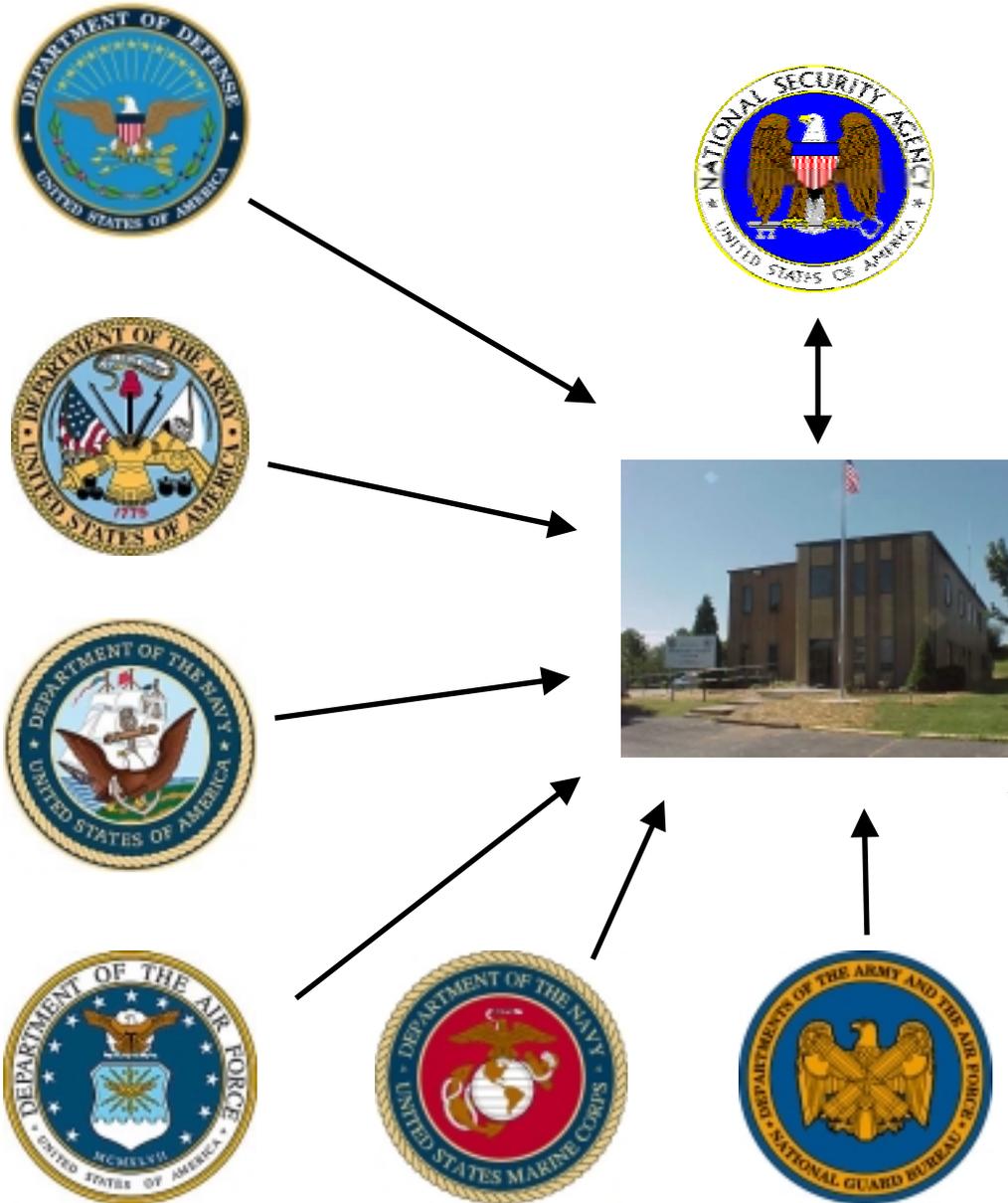
- MG1- Biometrics
Program Office located
in the MDW



Biometrics Fusion
Center located outside
of the MDW

- MG2- COTS T&E
- MG3- Repository

Government Partnership



•The BFC will continue to build a biometrics knowledge base

•The BFC will assist users with unique and near time requirements

•Short list of acceptable Biometrics Products



Industry Associates



among others...

BFC Vision



The DoD Biometrics Fusion Center (BFC) supports the full spectrum of biometric systems and technologies and is focused on providing Soldiers, Sailors, Airmen and Marines a technology edge in all environments by providing proven, reliable, and effective biometric access systems in support of network centric warfare.

Biometrics Fusion Center



- **Renovate within 45 days**
- **Scheduled completion 1st QTR FY01**
- **Comply with Americans with Disabilities Act (ADA)**
 - Provide handicap restroom facilities
 - Provide handicap ramp
 - Provide doors in compliance with ADA
- **Modify building for BFC use**
 - Build 1st floor conference room & 2 offices
 - Build 2nd floor ADP/Repository room
 - New paint, tile, and carpet
 - Improve Heat/AC for ADP/Repository room
- **Working agreement with WV National Guard for use of GUARD-NET (T1)**
- **GSA obtaining & proposing layout for workstations**



Purpose of Pilots



- To establish a methodical approach to biometrics system uses to determine mission enhancements.
- To leverage common needs and experiences across DoD to efficiently assess various biometrics approaches.
- To expose users to biometrics systems.
- To deliver mature COTS products that will meet the users stated needs.

Pilot Goals & Objectives



- **Help users**
- **Properly insert biometric COTS into their environments**
- **Learn about users environments**
- **Learn about users applications**
- **Learn about the performance of COTS systems in DoD environments**
- **Orchestrate the future of biometrics in DoD**

Pilots are the near-term key piece of our Campaign Plan

NSA Support to BMO



- **Early technical consultations to ODISC4**
 - Early 1999 – First contact
 - Mar 1999 – NSA hosts DISC4 biometrics working group
 - Technical consultations in preparation for BMO plans
- **Plans for Army biometrics program briefed at Sep 99 Biometrics Consortium Conference**
- **Support to RAND and STS reports (Oct 98 – Jan 00)**
- **Support planning session off-site in West Virginia (Feb 00)**
- **Now**
 - NSA core member of BMO team – attend staff calls
 - Preparing Memorandum of Agreement between NSA/BMO
 - Partnering on test & evaluation issues, working group, GSA, conference, etc.



Army Biometrics



Objective - Support at least 1 pilot in each functional area

- Pilots - Diversity of applications
 - Physical Access
 - Operations centers, buildings, weapons storage
 - Computer/Network Access
 - Laptops, LAN/WAN, authorizations, workstations
 - Identity Verification
 - E-mail, documents, NEO, security clearance
 - Threat Detection
 - ID known threats at a distance
 - Other
 - Smartcard augmentation, template repository
- Develop a DoD Biometrics Product List



Navy Biometrics



Navy FY00 Execution Planning Emphasis

- **Current Status of Projects in Navy and Marine Corps**
- **Procurement of Promising Biometric Devices**
- **Potential Applications in Navy**
 - **Access Control for Multiple Security Levels**
 - **Disabling Captured Equipment**
 - **Medical Applications**
 - **Speaker Verification**
 - **Demonstration of Current Prototypes**
 - **Investigation of Enhanced Smart Card Applications**



Air Force Biometrics



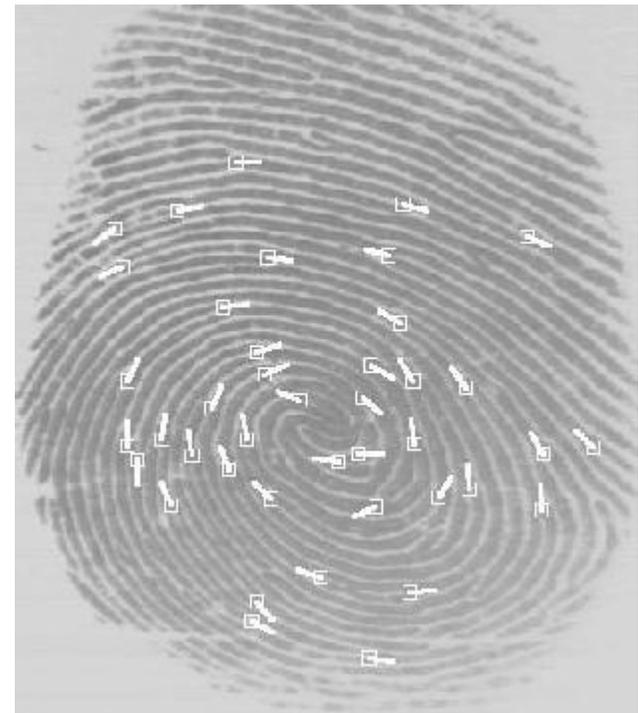
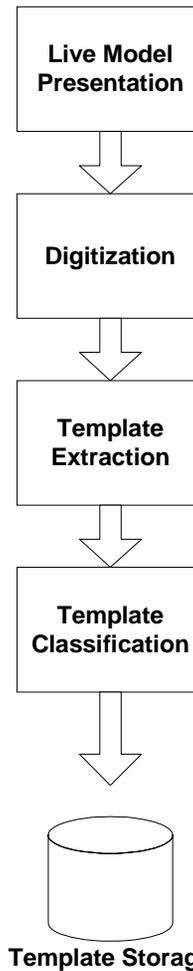
- **FY00 funds will be spent under four AF biometrics “pillars”**
 - Strategic Planning
 - Operational Requirements
 - Technology Assessment
 - Legal Review/Ramifications for AF
- **AF will fund full-time contractor to represent AF at DoD BMO**
 - Will investigate current state of AF biometrics
- **AF will look into initiating AF biometrics pilot(s) in FY01**

Types of Biometric Matching

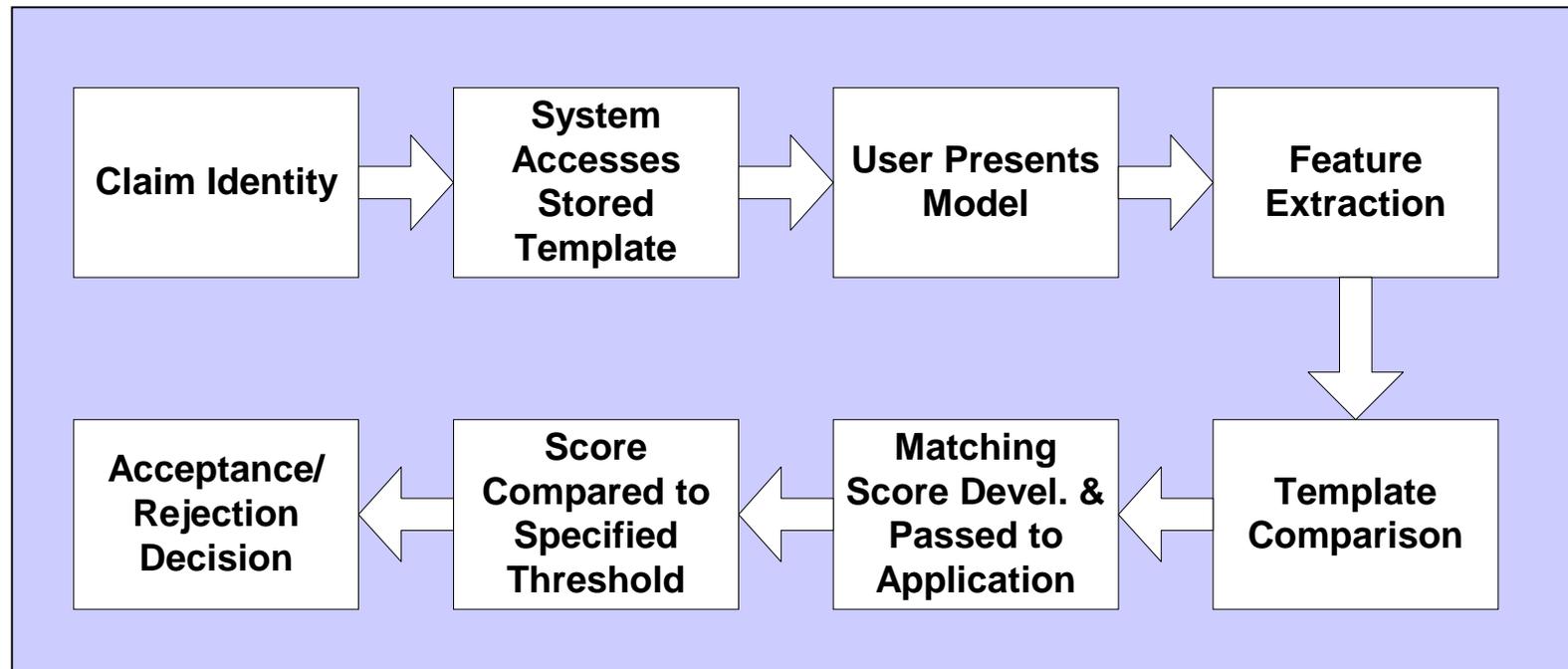


- **Identification Mode: One-to-many**
 - *Example:* ATM- one bank customer is checked against database of all customers
- **Verification Mode: One-to-one**
 - *Example:* The user is checked against only his/her own template while logging onto a PC
- **The majority of biometric applications are ‘Verification’ using a claimed identity**

The Enrollment Process



Biometric Access Transaction Process



Technologies



- **Fingerprint**
- **Facial Recognition**
- **Hand Geometry**
- **Iris Recognition**
- **Signature Verification**
- **Speaker Recognition**
- **Retina Scan**
- **Keystroke Dynamics**
- **Vein Pattern**
- **Layered Biometrics**

Biometric Applications



- **Logical access to IT resources**
 - **Logon (password replacement)**
 - **OS, E-mail, databases, applications**
 - **Web-based resource access**
 - **Document locking (Excel, Word etc.)**
- **Integrated Access Control**
- **Business Process Improvement**
 - **Faster, more efficient receipting, tracking and logging**
 - **Can be combined with a token, RFID, smart card etc**

Commercial Adoption



- **Banking**
 - (ATM, application process, network login)
- **Health Care**
 - Patient record access
- **Time & Attendance**
- **Access control**
 - Warehouses and high-value goods storage areas
 - Increasing number of commercial applications replacing passwords

Government Adoption



- **Integrated Access Control**
- **Benefit Administration counter-fraud
(State & Local systems)**
- **Border control (INS) & law enforcement (FBI)**
- **GSA's Government Smart Card**
- **DEERS /RAPIDS**
- **DoD Common Access Card**
- **DoD Biometrics Initiative**

Summary



- The Army is the DoD Executive Agent for biometrics.
- The DoD BMO is operating and establishing the infrastructure to sustain the effort.
- The DoD BMO will develop necessary guidance for implementing Biometrics within the DoD.
- **Most importantly** the DoD BMO wants to partner with the biometrics industry to develop standards and performance measures for this technology.



BIOMETRICS POINT OF CONTACT

**Phillip Loranger, DSN 761 6446
email: biometricsoffice@hqda.army.mil**