

# U.S. Navy Biometrics: An Overview



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# *Why Biometrics?*

- **Military operations**
  - Physical Security / Force Protection
  - Real-time tactical & strategic decisions during battlefield & interdiction operations
  - Disaster / humanitarian relief
- **Business Functions**
  - Physical and logical access controls
  - Privilege management
    - Health care, benefits, finance, time and attendance, etc.





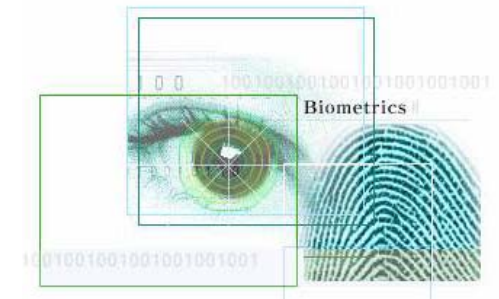
# *Required Capabilities*

- Efficiently enroll, verify and identify individuals encountered in the conduct of operations
- Rapidly compare identity info to watchlists
- Rapidly record various types of information associated with an individual
- Rapidly recall, update and manage 'trusted' information associated with individuals
- Rapidly assess credibility of witness/INTEL source
- Share information
- Operate in austere, expeditionary environments
- Operate remotely/non-intrusively against non-cooperative subjects



# *Navy Thrusts*

- **Navy Ashore**
  - Entry Control Point (OPNAV N4/CNIC, NAVFAC & SPAWAR)
- **Navy Afloat**
  - EMIO Capabilities Enhancement (OPNAV N6, PMW-160 & SPAWAR)
  - Identity Dominance System (OPNAV N8, PMS-480 & NSWC)
- **Navy Law Enforcement/Counter Intel/Intel**
  - Forensics (NCIS)
  - Exploitation (ONI)
- **Navy RDT&E**
  - Face Recognition Technology (ONR)
  - Fusion (ONR)
  - Biometrics to Human Networks (ONR)
  - Forensics (N-PSEAG)





# *Navy Ashore Thrusts*

## Entry Control Point

- Deployment of biometrics-enabled entry control will be based on Required Operational Capabilities (ROC) priorities
- Awaiting OSD policy. Main issues:
  - ❖ Databases
  - ❖ Interface hardware & software
  - ❖ Local vs. central data storage
  - ❖ Trusted travelers
- Physical Security Equipment Action Group (PSEAG) is building a Joint common interface via which all Services can access required government databases, using COTS at entry points





# *Navy Afloat Thrusts*

## **Maritime Interdiction Operation (MIO)**

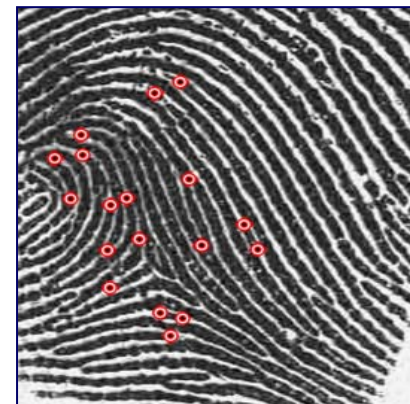
- **Stop-Gap solution acquired via Rapid Deployment Capability**
- **NAVCENT issued policy for Biometrics collection**
- **Long-term requirements described in the Identity Dominance System CDD**
- **Wireless Shipboard System being developed**
  - **For communication between boarded vessel and Navy ship**





# *Navy Forensics Thrusts*

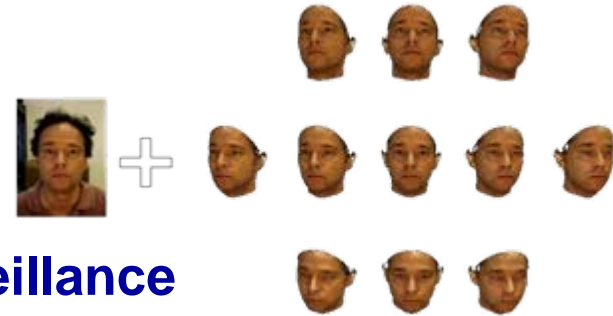
- **Team DON (USN/USMC/NCIS) is creating and deploying Joint Expeditionary Forensics Facilities for CENTCOM**
  - ❖ **Latent Print**
  - ❖ **Firearms**
  - ❖ **DNA**





# Naval RDT&E Thrusts

- **Office of Naval Research (basic & applied research)**
  - Pattern Recognition
    - Face Recognition Technology
  - Human Activity Recognition
    - Biometrics from Intelligent Video Surveillance
    - Human ID at Distance, including Maritime Domain
    - Face biometrics from video
  - Face/activity recognition to Human Networks
  - Night biometric technologies
- **Navy Physical Security Equipment Action Group (advanced development, prototype and demonstration)**
  - Mobile and modular forensics lab design
  - Forensics training kits for war fighters (in partnership with TSWG Forensics & Training Subgroups)
  - Battlefield Evidence Information Management System (BEIMS)







# *Future Needs*

- **Continued improvement in face recognition for outdoor, night and non-cooperative subjects**
- **Data fusion of multi-biometrics (face, iris, hand, motion)**
- **Biometric-quality face data from surveillance video**
  - Automatically correct images to optimize matching algorithms
- **Face and iris biometrics at greater ranges**
  - Correct for air turbulence, moisture and motion blur
  - Nominal 300 M face, 20 M iris
- **Biometrics to Actionable Intelligence**
  - Accurate classification of human networks enabled by the fusion of data from all possible identity specific technologies
    - Biometrics
    - Tagging, tracking and location
    - Symbols of choice (email address, phone number, address, name...)