

## National Science & Technology Council *Interagency Working Group on Biometrics*

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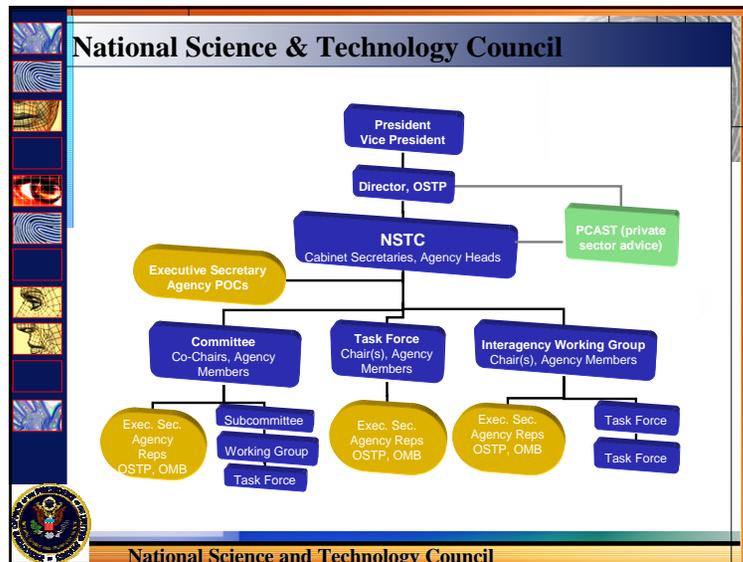
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**Principal Functions**

- Coordinate the science and technology (S&T) policy making process
- Ensure that S&T policy decisions and programs are consistent with President's goals
- Help integrate the President's S&T policy agenda across the Federal Government
- Ensure that S&T are considered in the development and implementation of Federal policies and programs
- Further international cooperation in S&T.

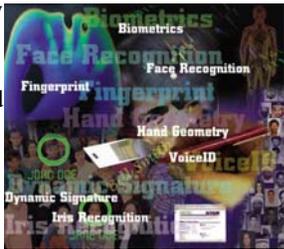


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## “Biometrics”

- automated methods of recognizing an individual based on their physical or behavioral characteristics
- an emerging technology that has the potential to improve federal operations and business practices significantly
- one of the most misunderstood and misreported technologies discussed today



The collage features various biometric technologies: Face Recognition, Fingerprints, Hand Geometry, Dynamic Signature, Iris Recognition, and VoicelD.



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## Interagency Coordination: A Brief History

- Biometrics Consortium (1992-present)
  - Biometric Interoperability, Performance and Assurance Working Group (2000-2002)
    - Government-only task force
- Aviation Security Biometrics Working Group (2001-2002)
- Government Biometrics Workshop (2003)
- NSTC IWG on Biometrics (2003-present)



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## OSTP and Biometrics: A Brief History

- Significant interest immediately after 9/11 terrorist attacks
- Saw the potential of the technology, but understood the need for RD&E collaboration
- Informally began developing a coordination matrix
  - Biometrics R&D Taxonomy (~300 specific research topics)
  - Proposed interagency priorities (125 topics)
  - Voted interagency priorities (27 topics)
  - Synthesized R&D tracks (9 categories)
- 2003: Formalized into “NSTC Interagency Working Group on Biometrics”



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## NSTC Interagency Working Group Activities

- Creation of interagency technical and policy consensus on biometrics research and development issues, based on individual agency research agendas and positions
- Vetting of USG positions on biometric technology development and practices in domestic and international meetings, and reporting on same
- Sharing of agency experience with fielded biometrics technologies; generation of agency requirements for future RDT&E efforts
- Leverage funding across agencies for complementary biometrics RD&E projects and grants



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## NSTC Interagency Working Group Participants

- Co-chairs
  - Office of Science & Technology Policy
  - DHS Science & Technology Directorate
- Participants
  - Executive Office of the President
  - Department of Homeland Security
  - Department of Justice
  - Department of Commerce
  - Department of State
  - Department of Defense
  - Department of Transportation
  - Intelligence Community
  - National Science Foundation
  - National Labs



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## 4 Subgroups for Interagency Coordination

- I. Biometrics Modalities
- II. Biometrics Systems and Human Interface
- III. Biometrics Fusion, Test Infrastructure, and Evaluation
- IV. Social, Legal, and Privacy Issues



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## Objectives of each Subgroup

- Develop interagency coordination plans focused on the top priorities.
  - Data sharing
  - Collaboration on research and funding plans
  - Multiagency research effort using shared resources
- Serve as an interface to other organizations
  - Private sector
  - Standards organizations
  - International research community



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## Subgroup I: Modalities

### Goals

- Understand the Federal government's technical requirements that are modality-specific (e.g., face, finger, iris, voice, gait)
- Increase the flexibility of single-modality biometric systems to perform in multiple operational contexts.

### Near Term Coordination Activities

- Face Recognition
  - uncontrolled environments and at a distance
  - aging algorithms and artifacts
  - High-resolution algorithms and sensors, including 3D
- Fingerprint
  - rolled-equivalent
  - digital
  - fast collection



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## Subgroup II: Systems and Human Interface

### Goals

- Define databases and collection systems (i.e., stations and protocols for collection and distribution of biometric signatures and meta data)
- Research factors affecting the human interface with biometric systems
- Research the business case of biometrics

### Near Term Coordination Activities

- Standard biometrics collection station(s)
- Operational/test data collection procedures that are universally accepted.
- Decision support tool(s) to assist in Federal agency selection (i.e., procurement) of biometric systems
- Analyze human/system interface issues and share results



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### Subgroup III: Fusion, Test Infrastructure, & Evaluation

**Goals**

- Provide framework and tools to support biometric evaluations
- Enable assessment of, and improvements to, various fusion approaches

**Near Term Coordination Activities**

- Development of application scenario definitions
- Multi-modal data collection and distribution for RD&E
- Development and/or refinement of evaluation protocols and software for universal usage
- Large scale performance prediction

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### Subgroup IV: Social, Legal, and Privacy Issues

**Mission**

- Determine the social, legal and privacy issues associated with using biometric technologies in support of federal programs.
- Develop tools and “Best Practices” to help federal agencies analyze these issues in order to achieve desired system performance while ensuring personal privacy and compliance with legislative requirements.

**Goals**

- Help agencies integrate privacy analysis throughout the system development and operational lifecycle.
- Support R&D Analysis of privacy policy issues.
- Identify potential R&D topics for privacy enhancing technology.

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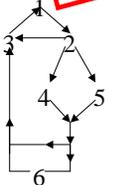


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### Subgroup IV: Social, Legal, and Privacy Issues

**Steps**

- 1) Information gathering and sharing
- 2) Analysis
- 3) Exception handling
- 4) Remediation
- 5) Guidance Development
- 6) Vetting Process.



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### NSTC IWG: Next Steps

- Finalize Coordination Plans
- External Review and Comment
- Implement



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