NSTC Activities in Biometrics and Identity Management

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Office of Science & Technology Policy

June 24, 2008
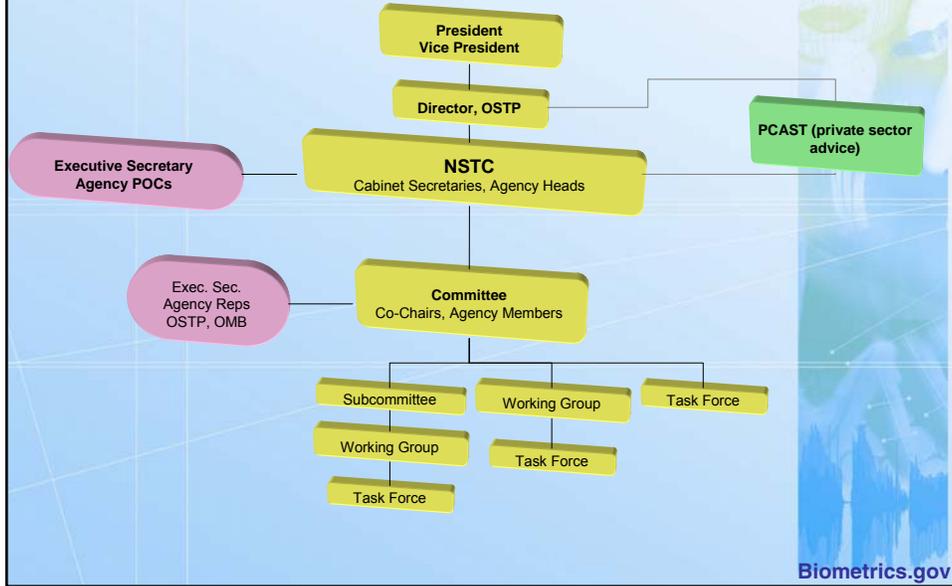

National Science & Technology Council

► Established by Executive Order 12881
  ► (a) The principal functions of the Council are, to the extent permitted by law:
    ■ 1. to coordinate the science and technology policy-making process;
    ■ 2. to ensure science and technology policy decisions and programs are consistent with the President's stated goals;
    ■ 3. to help integrate the President's science and technology policy agenda across the Federal Government;
    ■ 4. to ensure science and technology are considered in development and implementation of Federal policies and programs; and
    ■ 5. to further international cooperation in science and technology.
  ► (b) All executive department and agencies, whether or not represented on the Council, shall coordinate science and technology policy through the council and shall share information on research and development budget requests with the council.
  ► (c) The Council shall develop for submission to the Director of the Office of Management and Budget recommendations on research and development budgets that reflect national goals. In addition, the Council shall provide advice to the Director of the Office of Management and Budget concerning the agencies' research and development budget submissions.
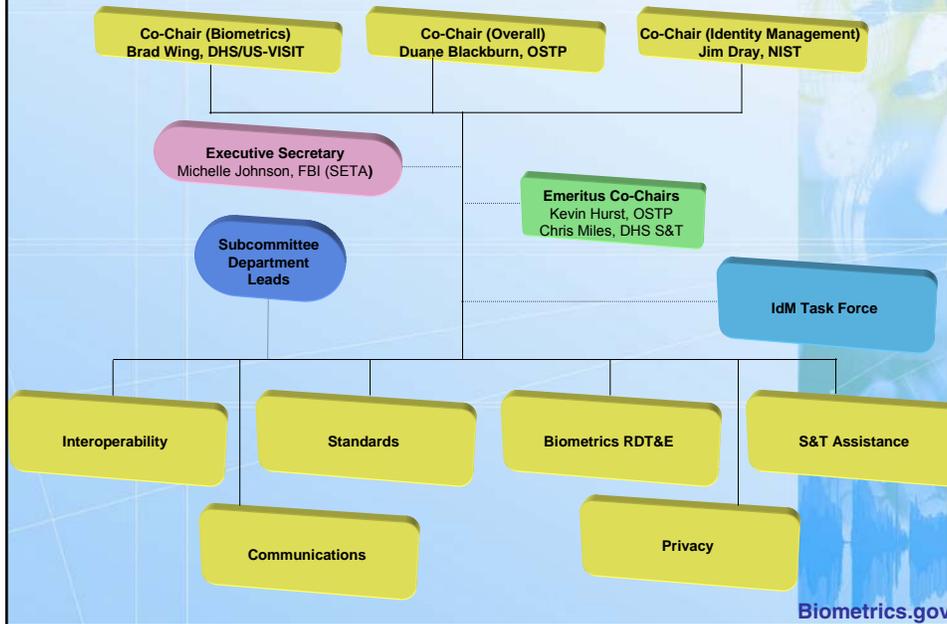
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NSTC Organizational Framework

President
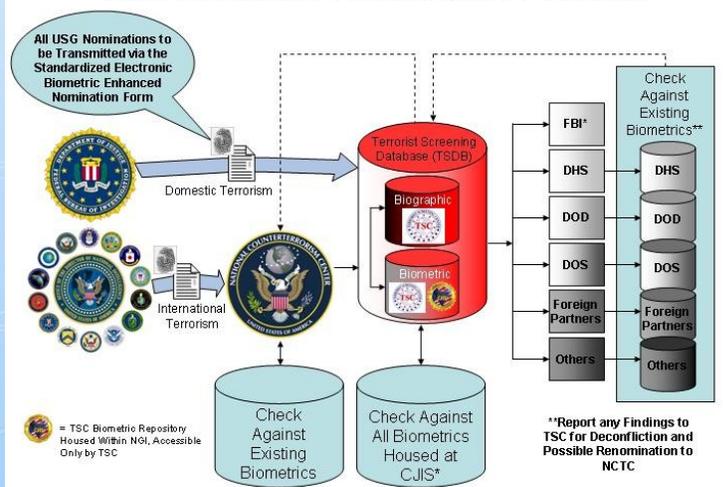Vice President

Director, OSTP

PCAST (private sector advice)

Executive Secretary
Agency POCs

NSTC
Cabinet Secretaries, Agency Heads

Exec. Sec.
Agency Reps
OSTP, OMB

Committee
Co-Chairs, Agency Members

Subcommittee

Working Group

Task Force

Working Group

Task Force

Task Force

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Subcommittee Growth

Phase I – Forming 2002-2003	Phase 2 - Storming 2003-2006	Phase 3 - Norming 2006-Present
Goals: • Share lessons learned from operational systems • Grow USG biometrics expertise • Build relationships **Deliverables** • List of topics for potential collaboration • Initiate joint RDT&E efforts	**Goals:** • Advance technology, privacy & communications • Grow USG biometrics expertise • Build relationships **Deliverables** • Joint RDT&E topics • Foundational documents • Privacy paper & websites • *The National Biometrics Challenge*	**Goals:** • USG-wide biometric system of systems • Community able to meet other government and private sector needs • Expansion to IdM **Deliverables** • System of Systems framework • USG-wide plans for standards, RDT&E, privacy & communications • Enhanced operational capabilities

NSTC Subcommittee on Biometrics & IdM

Co-Chair (Biometrics)
Brad Wing, DHS/US-VISIT

Co-Chair (Overall)
Duane Blackburn, OSTP

Co-Chair (Identity Management)
Jim Dray, NIST

Executive Secretary
Michelle Johnson, FBI (SETA)

Emeritus Co-Chairs
Kevin Hurst, OSTP
Chris Miles, DHS S&T

Subcommittee Department Leads

IdM Task Force

Interoperability

Standards

Biometrics RDT&E

S&T Assistance

Communications

Privacy

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Interoperability Plan for KSTs*

New Biometric Nomination Process

All USG Nominations to be Transmitted via the Standardized Electronic Biometric Enhanced Nomination Form

Domestic Terrorism

International Terrorism

Terrorist Screening Database (TSDB)

Biographic
TSC

Biometric
TSC

FBI*

DHS

DOD

DOS

Foreign Partners

Others

Check Against Existing Biometrics**

DHS

DOD

DOS

Foreign Partners

Others

= TSC Biometric Repository Housed Within NGI, Accessible Only by TSC

Check Against Existing Biometrics

Check Against All Biometrics Housed at CJIS*

**Report any Findings to TSC for Deconfliction and Possible Renomination to NCTC

* This is the plan for KSTs only. NSTs and other data sharing is managed differently

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NSTC Policy for Enabling the Development, Adoption and Use of Biometric Standards

http://biometrics.gov/standards/

► Approved -- September 8, 2007
► The goal of this Policy is to establish a framework to reach interagency consensus on biometric standards adoption for the Federal government.
► Federal agency adoption of these recommended standards, and associated conformity assessment programs, will:
  ► enable necessary next generation Federal biometric systems,
  ► facilitate biometric system interoperability, and
  ► enhance the effectiveness of biometrics products and processes.
► Policy utilizes a *Registry of USG Recommended Biometric Standards* to maintain an up-to-date listing of recommended standards*.*

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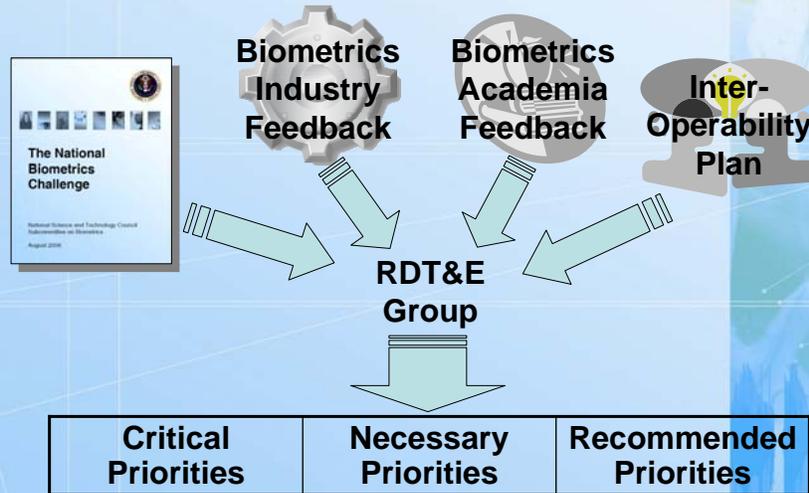## Registry of USG Recommended Biometric Standards

Sample Recommendation:

Table 1 - Registry of Biometric Data Collection, Storage, and Exchange Standards

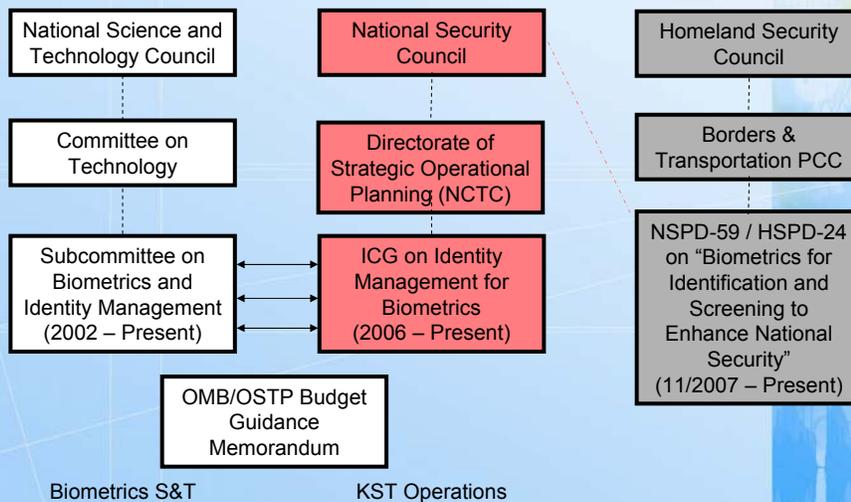| #	Validity period	Biometric data	Domain of applicability	Recommended standards	Notes
	Iris Recognition				
13.	October 2007 - current	Iris images	Capture, storage and exchange of data (e.g., enrollment or registration)	The rectilinear image format of ISO/IEC 19794-6:2005 or ANSI/NIST-ITL 1-2007, Type 17	If lossy compression is applied to iris images the compression ratio shall not exceed 6:1. For compression algorithms without a bit-rate parameter (e.g., JPEG), this may require iteration over the compression "quality" parameter. The INCITS 379:2004 standard shall not be used. The ANSI/NIST-ITL 1-2007, Type 17 format is a strict derivative of ISO/IEC 19794-6:2005, and may be used as an alternative. Other standards, including those enumerated below shall not be used as a substitute for the required standard; they may be used only in addition: All ISO/IEC 19794-6:2005 polar image formats. Irises stored in any of the polar image formats of ISO/IEC 19794-6:2005 may be retained only if their rectilinear image parents are also retained.

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Accomplishing the Technology Needs

The National Biometrics Challenge

National Science and Technology Council
Subcommittee on Biometrics

August 2006

Biometrics Industry Feedback

Biometrics Academia Feedback

Inter-Operability Plan

RDT&E Group

Critical Priorities	Necessary Priorities	Recommended Priorities

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USG Biometrics Coordination - Organizational

National Science and Technology Council	National Security Council	Homeland Security Council
Committee on Technology	Directorate of Strategic Operational Planning (NCTC)	Borders & Transportation PCC
Subcommittee on Biometrics and Identity Management (2002 – Present)	ICG on Identity Management for Biometrics (2006 – Present)	NSPD-59 / HSPD-24 on "Biometrics for Identification and Screening to Enhance National Security" (11/2007 – Present)
	OMB/OSTP Budget Guidance Memorandum	

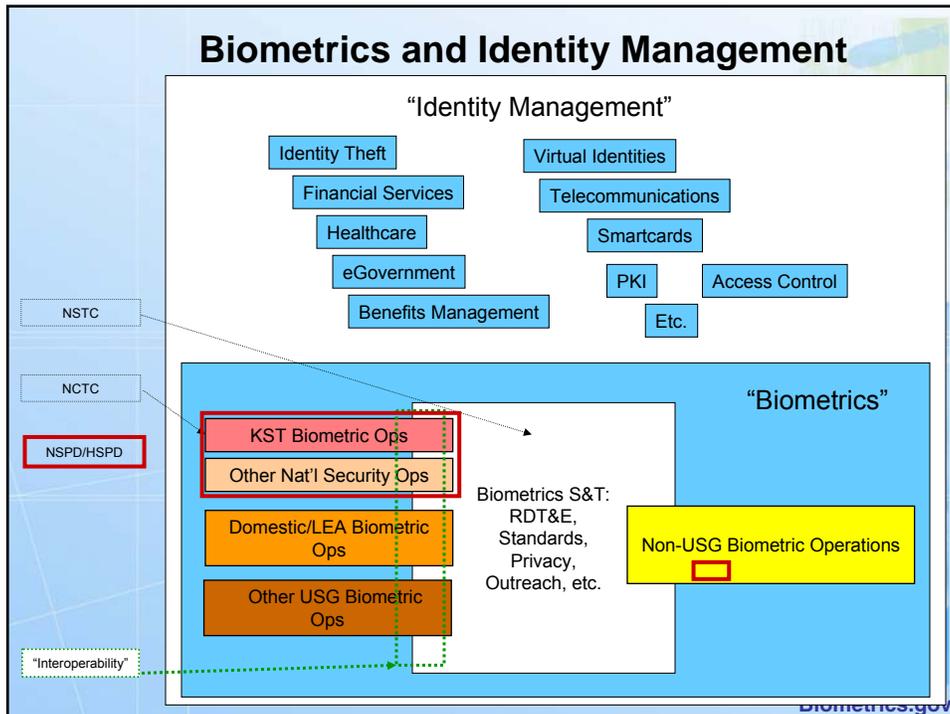Biometrics S&T   KST Operations

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NSPD-59

- ► Presidential approval/reinforcement of existing plans for KSTs
- ► Direction to determine how to handle other national security threats
  - ► Does not apply to other biometric categories
- ► More formalization of operational coordination, which will serve as input to future NSTC activities

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Biometrics and Identity Management

"Identity Management"

Identity Theft		Virtual Identities
Financial Services		Telecommunications
Healthcare		Smartcards
eGovernment	PKI	Access Control
Benefits Management	Etc.	

NSTC

NCTC

NSPD/HSPD

"Biometrics"

KST Biometric Ops

Other Nat'l Security Ops

Domestic/LEA Biometric Ops

Other USG Biometric Ops

Biometrics S&T: RDT&E, Standards, Privacy, Outreach, etc.

Non-USG Biometric Operations

"Interoperability"

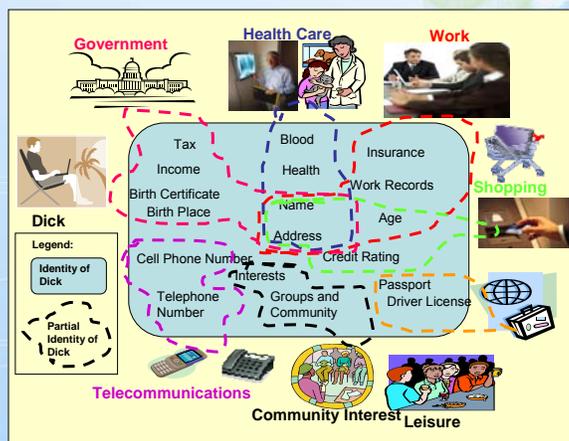Biometrics.gov

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OSTP – What We Do

- Advise the President and others within the Executive Office of the President on the impacts of science and technology on domestic and international affairs;

- Lead an interagency effort to develop and implement sound science and technology policies and budgets;

- Work with the private sector to ensure Federal investments in science and technology contribute to economic prosperity, environmental quality, and national security;

- Build strong partnerships among Federal, State, and local governments, other countries, and the scientific community;

- Evaluate the scale, quality, and effectiveness of the Federal effort in science and technology.

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IdM today: Lots of Interest!

► Identity Theft
► Financial
► Border Control
► Virtual Identities
► Law Enforcement
► Telecommunications
► Computing
► Benefits Management
► eGovernment
► Healthcare
► Defense
► Transportation

Government   Health Care   Work

Dick

Tax   Blood   Insurance
Income   Health
Birth Certificate   Work Records   Shopping
Birth Place   Name   Age
Address
Legend: Credit Rating
Cell Phone Number
Identity of   Interests   Passport
Dick   Driver License
Telephone   Groups and
Number   Community
Partial
Identity of
Dick

Telecommunications
Community Interest   Leisure

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STPI Quick Analysis

- ► 30k' analysis of publicly available Privacy Impact Assessments
- ► Large number of programs (>1500) within the federal government have an IdM component
  - ► Diversity in scale, scope, and application
  - ► Most of these programs have IdM as a means to an end and are not used to manage only an identity
- ► Identity management implementation appears to be principally program oriented
  - ► Initial analysis did not reveal a common foundation for definitions, processes, metrics or security
  - ► Different agencies appear to use different procedures to manage identity throughout the system lifecycle
- ► Program discussion appears to focus on the here & now

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<u>Potential</u> Implications

<u>If</u> initial observations prove true:
- ► Different procedures for IdM could inhibit data sharing
  - ► To detect duplication, fraud, misuse
  - ► Could miss identifying someone
  - ► Could misidentify someone
  - ► Loss of cost sharing benefit
- ► Negative impact on privacy protections
- ► Cross-function analysis would be inhibited
  - ► Difficult to understand/compare/mitigate risks and impacts within or across enterprises
  - ► Difficult to establish expectations and requirements independently of organization
  - ► Can't determine prioritization of IdM program restoration during a crisis
  - ► Can't determine which programs should serve as a model of efficiency (or security, privacy protection, etc.) or which are exemplars of how to manage identity incorrectly
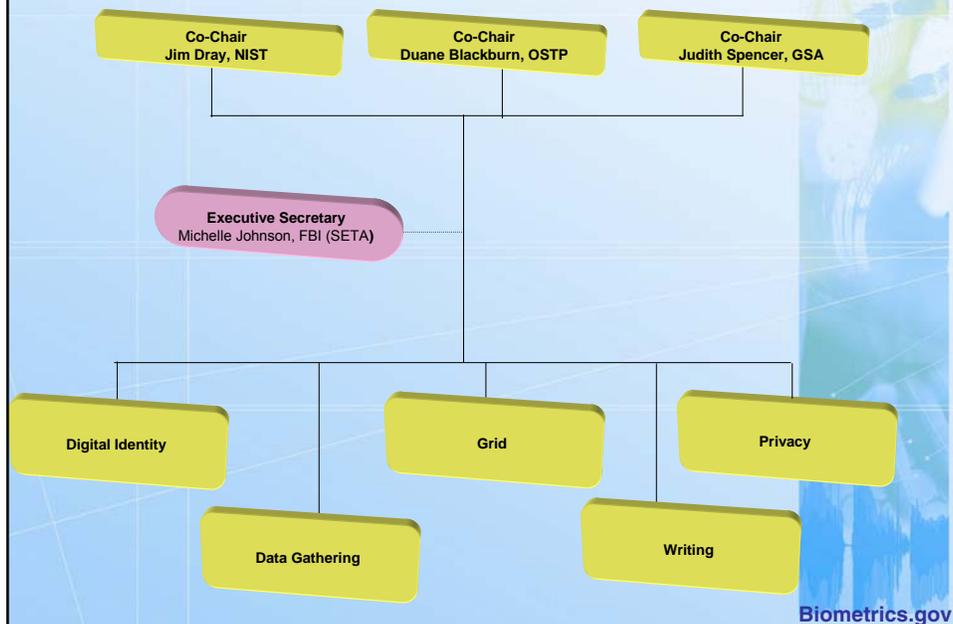
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NSTC Task Force on IdM

► Chartered from January through July, 2008
► Cross-agency (cross-sector) representation
► Tasks:
  ► Inventory and Baseline IdM Activities, Applications, and Challenges
  ► Identify activities that warrant Federal coordination
  ► Develop recommendations for Subcommittee consideration
► Studies USG IdM issues only

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NSTC Task Force on IdM

| Co-Chair Jim Dray, NIST | Co-Chair Duane Blackburn, OSTP | Co-Chair Judith Spencer, GSA |

Executive Secretary
Michelle Johnson, FBI (SETA)

Digital Identity

Grid

Privacy

Data Gathering

Writing

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Task Force Report

► Finalization and approval will take several weeks, and then will be made public

► Will identify S&T issues where work can begin shortly (technology drives the train)

► Provides common ground for numerous discussions and follow-on study/coordination

► Is a *first step* in determining future strategies and policies, not the end result

    ► Effort will take several years, spanning administrations

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