Why Forensics, Why Now?

Strengthening Forensic Science in the United States: A Path Forward

“Because the work of forensic science practitioners is so obviously wide-reaching and important—affecting criminal investigation and prosecution, civil litigation, legal reform, the investigation of insurance claims, national disaster planning and preparedness, homeland security, and the advancement of technology...”
Why Forensics, Why Now?

Strengthening Forensic Science in the United States: A Path Forward

“The forensic science system, encompassing both research and practice, has serious problems that can only be addressed by a national commitment to overhaul the current structure that supports the forensic science community in this country. This can only be done with effective leadership at the highest levels of both federal and state governments, pursuant to national standards, and with a significant infusion of federal funds.”
Pre-decisional material of the NSTC
Introduction: NSTC

The NSTC was established via Executive Order 12881, issued by President Clinton in 1993

The principal functions of the NSTC are:

- to coordinate the science and technology policy-making process;
- to ensure science and technology policy decisions and programs are consistent with the President’s stated goals;
- to help integrate the President’s science and technology policy agenda across the Federal Government;
- to ensure science and technology are considered in development and implementation of Federal policies and programs; and
- to further international cooperation in science and technology.
Introduction:

Committee on Science

Dr. Carl Wieman, Associate Director for Science, OSTP (nominated 3/22/10)

- Lorentz Medal, 1998
- Nobel Prize in Physics, 2001
Introduction: NSTC Organizational Structure

Executive Office of the President (EOP)

Office of Science and Technology Policy (OSTP)

National Science and Technology Council (NSTC)

Committee on Science (CoS)

Subcommittee on Forensic Science (SoFS)

Pre-decisional material of the NSTC
Introduction: Subcommittee on Forensic Science (SoFS)

- **CO-CHAIRS**
  - Kenneth Melson, Deputy Director, ATF
  - Mark Stolorow, Director, OLES/NIST

- **EXECSEC**
  - Robin Jones, Office of the Director, ATF
Introduction: SoFS Membership

Subcommittee is Chartered Through September, 2011

Federal Agency Representatives:
- Department of Commerce
- Department of Defense
- Department of Health and Human Services
- Department of Homeland Security
- Department of the Interior
- Department of Justice
- Department of Treasury
- Environmental Protection Agency
- National Institutes of Health
- National Science Foundation
- United States Postal Service
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SoFS Membership

95% of all forensic casework is conducted at the state and local level - OSTP has invoked the FACA exception to allow for State, Local, and Tribal membership on the Interagency Working Groups (IWGs).

Non-federal IWG members must be federal, state, local, or tribal government employees

Must be an elected officer or delegated by an elected officer to act on their behalf in the capacity of an IWG member
State & Local Participation on Interagency Working Groups

**Overall Totals**
- Prosecutor: 5
- Defense: 5
- Police: 4
- Judiciary: 2
- Lab: 17
- Medical: 6
- Academic: 10
- **Total**: 49

**Pie Charts**
- EET IWG
- OC IWG
- AC IWG
- RDT&E IWG
- SPP IWG
SoFS Interagency Working Groups (IWG)

- Research, Development, Testing & Evaluation
- Standards, Practices, and Protocols
- Accreditation and Certification
- Education, Ethics, and Terminology
- Outreach and Communication

National Science and Technology Council, Committee on Science
Subcommittee on Forensic Science
Pre-decisional material of the NSTC
Research, Development, Testing, & Evaluation (RDTE IWG)

Leadership:

• CO-CHAIRS
  - Jeff Salyards, USACIL
  - Mark Weiss, NSF
  - Greg Klees, ATF

• EXECSEC
  - John Paul Jones, DOJ
Standards, Practices, and Protocols (SPP IWG)

Leadership:

- **CO-CHAIRS**
  - Gerald LaPorte, NIJ
  - Susan Ballou, NIST

- **EXECSEC**
  - Brigid O’Brien, NIJ
Accreditation and Certification (AC IWG)

Leadership:
- **CO-CHAIRS**
  - Patricia Manzolillo, USPS
  - Chris Taylor, USACIL
- **EXECSEC**
  - Danielle Archambault, USSS
Education, Ethics, and Terminology (EET IWG)

Leadership:

- **CO-CHAIRS**
  - Jeff Comparin, DEA
  - Rob Lesnevich, TIGTA

- **EXECSEC**
  - Kathryn Suchma, FBI
Outreach and Communication IWG (OC IWG)

Leadership:

• CO-CHAIRS
  - Eric Steel, NIST
  - Cary Oien, FBI

• EXECSEC
  - Rachel Voiles, USSS
SoFS: Exploring the Issues
National Institute of Forensic Science (NIFS)

Strengthening Forensic Science in the United States: A Path Forward

To promote the development of forensic science into a mature field of multidisciplinary research and practice, founded on the systematic collection and analysis of relevant data, Congress should establish and appropriate funds for an independent federal entity, the National Institute of Forensic Science (NIFS).
Senate Judiciary Committee draft legislation (5/5/10)

- Establishes an Office of Forensic Science within the Office of the Deputy Attorney General at the Department of Justice
- Identifies interagency partnerships
- Forensics Advisory Board to provide multi-disciplinary input

The Innocence Project and NACDL recommend ‘NIFS’ to be external to DOJ.
The objective of this project is to create a reproducible forensic science research compendium that captures bibliographic information on foundational and applied research published across all forensic disciplines.

- Identify top ~20 articles in each discipline using bibliometric techniques (i.e. citation maps and impact factors)
- Qualitative assessment of this body of literature and research
Research, Development, Testing & Evaluation IWG (RDT&E IWG)

Responses to the NAS Report’s call for more research:

“These guys are wrong; that’s all been done before.”

“What an opportunity to make some very good disciplines even better! Where do you think we should begin?”

“Are you aware of the work by ________?”
Research, Development, Testing & Evaluation IWG (RDT&E IWG)

David Goodstein – *On Fact and Fraud: Cautionary Tales from the Front Lines of Science*

1. Were under career pressure
2. Knew, or thought they knew, what the answer to the problem they were considering would turn out to be if they went to all the trouble of doing work properly
3. Were working in a field where individual experiments are not expected to be precisely reproducible

*The first principle is that you must not fool yourself - and you are the easiest person to fool.***

Richard Feynman Nobel Prize winning physicist
The best time to plant a tree is 20 years ago. The second best time is today. Chinese Proverb
Research, Development, Testing & Evaluation IWG (RDT&E IWG)

Validity – What are the most critical research priorities in forensic science?
- What needs postulates need to be true?
- What studies would support these claims?
- What has already be done?

Maturity – What do we need to do to understand this forensic discipline better?
- Uncertainty
- Error rates

Enhancement – What would make this discipline so much better, faster, cheaper?
Current Efforts

- Science and Technology Policy Institute (STPI) Literature Review – Does the body of research that currently exists demonstrate validity and reliability across the disciplines?

- Discipline Reviews- Respective SME presentation(s) of current foundational and validation studies.

- NSF Workshop on Human Factors and Cognitive Bias- to be hosted in DC later this year.
Research, Development, Testing & Evaluation IWG (RDT&E IWG)

Future Efforts

- Qualitative Review of STPI data
- Prioritized research agenda
- Potential Partners/Centers of Excellence
- Projected Budgets
Standards, Practices, and Protocols IWG (SPP IWG)

“STPI provides the highest quality and rigorously objective technical analytical support for the Office of Science and Technology Policy (OSTP) and other government users.”

• How does the foundational research support the development and implementation of standards being used?
How is “Peer Review” defined?

- Journals that publish forensic science articles
- Peer review guidelines/standards
- Parameters for peer reviewers
What role should Scientific Working Groups (SWGs) play?

- How do we define, develop, and enforce “standards”
- Currently no uniform mechanism
Standards, Practices, and Protocols IWG (SPP IWG)

SWG Program Management Office

Being championed through NIST.

Will serve as uniform infrastructure to provide integrated governance and operational support for the forensic science SWGs.

Will become the federal authority for the appropriate standardization of practices and protocols, to include enforcement.
Standards, Practices, and Protocols IWG (SPP IWG)

SWG Program Management Office

- Department Lead/Director
- Program Managers
- Logistical Support
- Communications Specialist
- Writer/Editor
- Research Support
Standards, Practices, and Protocols IWG (SPP IWG)

AFIS INTEROPERABILITY

• Funding
• Training
• Legislation
• Tool Kit
National Science and Technology Council, Committee on Science
Subcommittee on Forensic Science

Accreditation and Certification

AC I WG
What are the challenges to mandatory accreditation?

- Federal Forensic Service Providers
- State/Local Publicly Funded Forensic Laboratories
- Law Enforcement Forensic Units
Accreditation and Certification (AC IWG)

- How should accreditation of Law Enforcement Forensic Units be pursued?
- What are the issues/impacts of mandatory accreditation?
Accreditation and Certification (AC IWG)

What should be the role of certification and proficiency testing of forensic practitioners?

- Enforcement through accreditation?
- What about those who are not accredited?
  - Law Enforcement Forensic Units
  - Private Forensic Consultants in Crime Lab Disciplines
  - Other Forensic Consultants (anthropology, pathology)
National Science and Technology Council, Committee on Science
Subcommittee on Forensic Science

Education, Ethics, and Terminology

EET IWG
Education, Ethics, and Terminology IWG (EET IWG)

- National Code of Ethics
  - Recommended by the NAS Committee and professional associations

- How shall this be enforced?
  - Through accreditation/certification?
Education, Ethics, and Terminology IWG (EET IWG)

- How do we enhance undergraduate and graduate educational programs in forensic science?

- How can we better meet the continuing education needs of forensic practitioners?

- How do we address educating the legal community?
State, local, and tribal participation
- Notifications have been sent: 46 of 49 members have been confirmed.

Rosters will be made available on the website once all confirmations have been received.
Outreach and Communication IWG

- www.whitehouse.gov/administration/eop/ostp
- www.forensicscience.gov

- We are working to make this site more dynamic
  - Comment Section (currently active)
  - Resources
Contact Us

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