



NATIONAL SCIENCE AND TECHNOLOGY COUNCIL, COMMITTEE ON SCIENCE
SUBCOMMITTEE ON FORENSIC SCIENCE

**IMPRESSION AND PATTERN
EVIDENCE SYMPOSIUM
AUGUST 5, 2010**

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...”



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Pre-decisional material of the NSTC

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.”



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National Science and Technology Council (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.



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Introduction: Committee on Science

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

- Lorentz Medal, 1998
- Nobel Prize in Physics, 2001



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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)



Introduction: Subcommittee on Forensic Science (SoFS)

n CO-CHAIRS

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

n EXECSEC

- Robin Jones, Office of the Director, ATF



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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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Nancy	Berthold	Treasury	Tax Administration's Forensic Science Laboratory
Lucinda	Buhse	DHHS	FDA
Howard	Cantor		EPA
Larry	Chelko	Defense	Army Criminal Investigation Laboratory
Tyler	Coplen	Interior	USGS
Dan	Costello	EOP	OMB
Greg	Czarnopys	Justice	ATF
David	Detlor	Commerce	NOAA
Robert	Epstein		Federal Defender
Robert	Fleischer		Smithsonian Institution
Ed	German	US Govt	
Jehanne	Gillo	DOE	
Chris	Hassell	Justice	FBI Laboratory
Marshall	Heeger	DHS	ICE Forensic Document Laboratory
Terence	Hess	Defense	CTTSO
Robin	Hunton	Treasury	National Forensic Laboratory
Rashad	Hussain	EOP	White House Council
Deborah	Leben	DHS	USSS
Rick	Lempert	DHS	S&T
Patricia	Manzolillo		US Postal Service
Kathy	Moore	Commerce	NOAA
Ken	Melson	Justice	ATF
Ben	Page	EOP	OMB
Ira	Reese	DHS	CBP
Laura	Rodriguez	DHHS	NIH
Nelson	Santos	Justice	DEA
Mike	Sheppo	Justice	NIJ
Melissa	Smrz	Justice	FBI Laboratory
Mark	Stolorow	Commerce	NIST - OLES
Tim	Walsh		Smithsonian Institution
Mark	Weiss		NSF



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

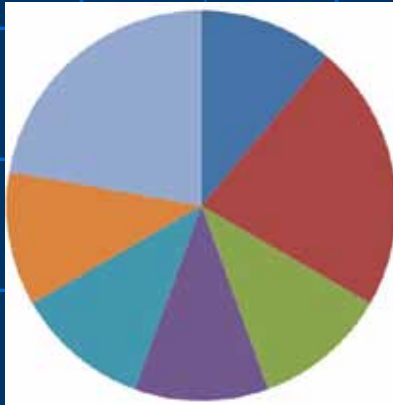
Must be an elected officer or delegated by an elected officer to act on their behalf in the capacity of an IWG member



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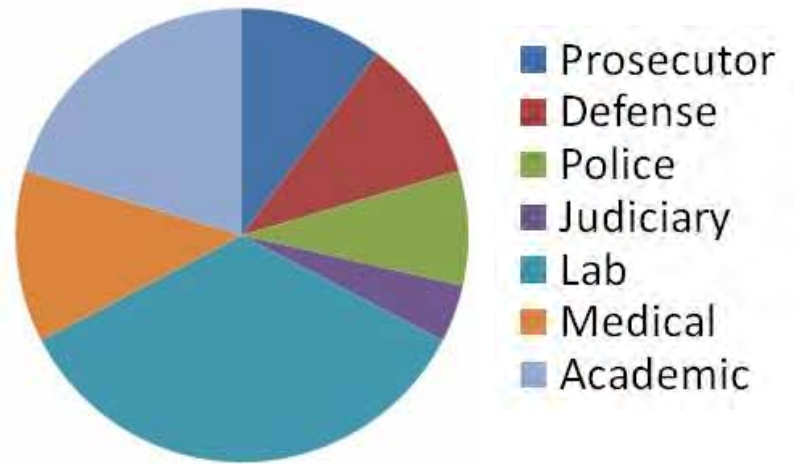
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State & Local Participation on Interagency Working Groups

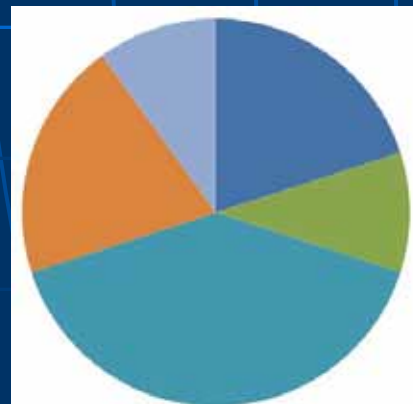


EET IWG

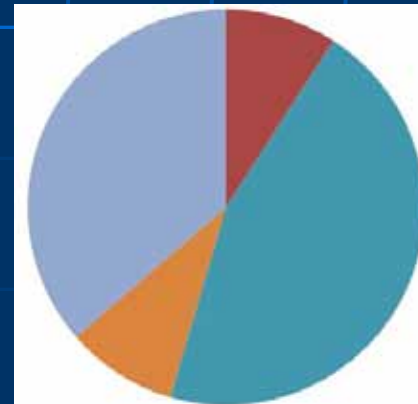
Overall Totals	
Prosecutor	5
Defense	5
Police	4
Judiciary	2
Lab	17
Medical	6
Academic	10
TOTAL	49



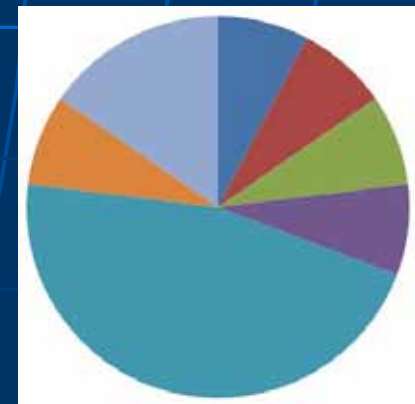
OC IWG



AC IWG



RDT&E IWG



SPP IWG

SoFS Interagency Working Groups (IWG)

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



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Research, Development, Testing, & Evaluation (RDTE IWG)

n Leadership:

- CO-CHAIRS

- n Jeff Salyards, USACIL

- n Mark Weiss, NSF

- n Greg Klees, ATF

- EXECSEC

- n John Paul Jones, DOJ



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Standards, Practices, and Protocols (SPP IWG)

n Leadership:

- CO-CHAIRS

- n Gerald LaPorte, NIJ

- n Susan Ballou, NIST

- EXECSEC

- n Brigid O'Brien, NIJ



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Accreditation and Certification (AC IWG)

n Leadership:

- CO-CHAIRS

- n Patricia Manzollo, USPS

- n Chris Taylor, USACIL

- EXECSEC

- n Danielle Archambault, USSS



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Education, Ethics, and Terminology (EET IWG)

n Leadership:

- CO-CHAIRS

- n Jeff Comparin, DEA

- n Rob Lesnevich, TIGTA

- EXECSEC

- n Kathryn Suchma, FBI



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Outreach and Communication IWG (OC IWG)

n Leadership:

- CO-CHAIRS

- n Eric Steel, NIST

- n Cary Oien, FBI

- EXECSEC

- n Rachel Voiles, USSS



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SoFS: Exploring the Issues



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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).



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National Institute of Forensic Science (NIFS)

- n 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
- n The Innocence Project and NACDL recommend 'NIFS' to be external to DOJ.

Science and Technology Policy Institute (STPI)

- 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.
 - n Identify top ~20 articles in each discipline using bibliometric techniques (i.e. citation maps and impact factors)
 - n Qualitative assessment of this body of literature and research



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**RESEARCH, DEVELOPMENT,
TESTING AND EVALUATION**

RDT&E IWG

Research, Development, Testing & Evaluation IWG (RDT&E IWG)

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

“Those 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 _____?”



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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

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Research, Development, Testing & Evaluation IWG (RDT&E IWG)

Validity

Maturity

Enhancement

The best time to plant a tree is 20 years ago. The second best time is today. Chinese Proverb



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Research, Development, Testing & Evaluation IWG (RDT&E IWG)

- n 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?
- n Maturity – What do we need to do to understand this forensic discipline better?
 - Uncertainty
 - Error rates
- n Enhancement – What would make this discipline so much better, faster, cheaper?



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Research, Development, Testing & Evaluation IWG (RDT&E IWG)

n 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.



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Research, Development, Testing & Evaluation IWG (RDT&E IWG)

n Future Efforts

- Qualitative Review of STPI data
- Prioritized research agenda
- Potential Partners/Centers of Excellence
- Projected Budgets



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**STANDARDS, PRACTICES,
AND PROTOCOLS**

SPP IWG

Standards, Practices, and Protocols IWG (SPP IWG)

- n “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?



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Standards, Practices, and Protocols IWG (SPP IWG)

n How is “Peer Review” defined?

- Journals that publish forensic science articles
- Peer review guidelines/standards
- Parameters for peer reviewers



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Standards, Practices, and Protocols IWG (SPP IWG)

- n What role should Scientific Working Groups (SWGs) play?
 - How do we define, develop, and enforce “standards”
 - Currently no uniform mechanism



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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.



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Standards, Practices, and Protocols IWG (SPP IWG)

SWG Program Management Office

- Department Lead/Director
- Program Managers
- Logistical Support
- Communications Specialist
- Writer/Editor
- Research Support



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Standards, Practices, and Protocols IWG (SPP IWG)

AFIS INTEROPERABILITY

- Funding
- Training
- Legislation
- Tool Kit



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**ACCREDITATION AND
CERTIFICATION**

AC IWG

Accreditation and Certification (AC IWG)

NAS Report References

Certification: 128

Accreditation: 162

Proficiency: 88

n What are the challenges to mandatory accreditation?

- Federal Forensic Service Providers
- State/Local Publicly Funded Forensic Laboratories
- Law Enforcement Forensic Units



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Accreditation and Certification (AC IWG)

- n How should accreditation of Law Enforcement Forensic Units be pursued?
- n What are the issues/impacts of mandatory accreditation?



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Accreditation and Certification (AC IWG)

- n What should be the role of certification and proficiency testing of forensic practitioners?
 - Enforcement through accreditation?
 - What about those who are not accredited?
 - n Law Enforcement Forensic Units
 - n Private Forensic Consultants in Crime Lab Disciplines
 - n Other Forensic Consultants (anthropology, pathology)



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**EDUCATION, ETHICS, AND
TERMINOLOGY**

EET IWG

Education, Ethics, and Terminology IWG (EET IWG)

n National Code of Ethics

- Recommended by the NAS Committee and professional associations

n How shall this be enforced?

- Through accreditation/certification?



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Education, Ethics, and Terminology IWG (EET IWG)

- n How do we enhance undergraduate and graduate educational programs in forensic science?
- n How can we better meet the continuing education needs of forensic practitioners?
- n How do we address educating the legal community?



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**OUTREACH AND
COMMUNICATION**

OC IWG

Outreach and Communication IWG

- n State, local, and tribal participation
 - Notifications have been sent: 46 of 49 members have been confirmed.
- n Rosters will be made available on the website once all confirmations have been received.



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Outreach and Communication IWG

n www.whitehouse.gov/administration/eop/ostp

n www.forensicscience.gov

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



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Contact Us

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Robin.W.Jones@usdoj.gov



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