

American Academy of Forensic Sciences

February 22, 2014

Seattle, WA

Overview of NIST Activities in the Forensic Sciences

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AAFS Presentation Overview

- NIST Presentations at AAFS in Seattle – 2014
- Memorandum of Understanding between NIST & DOJ
- National Commission on Forensic Science (NCFS)
- Organization of Scientific Area Committees (OSAC)
- Forensic Science Publications and Research Projects
- Training, Workshops, Symposia, Conferences

NIST Presentations at AAFS – 2014

36 Presentations, including:

- 7 Scientific posters in 3 poster sessions
- 29 Platform presentations in 17 Moderated Sessions in AAFS Sections, including:
 - Criminalistics
 - Questioned Documents
 - Jurisprudence
 - General
 - Digital and Multi-Media

NIST/DOJ Memorandum of Understanding

- MOU between NIST and USDOJ signed Feb 2013
 - Announced at the AAFS Meeting in Washington, DC
 - Established two entities responsive to the NAS Report calling for national leadership in forensic science
 - National Commission on Forensic Science (NCFS)
 - Inaugural meeting held in Washington, DC, Feb 3-4, 2014
 - Organization of Scientific Area Committees (OSAC)
 - Presentation and webcast at AAFS Forum, Feb 18, 2014
 - Slides and webcast posted on www.nist.gov/forensics

National Commission on Forensic Science

- NCFS Charter available at:
 - <http://www.facadatabase.gov/committee/charters.aspx?cid=2461&aid=44>
- 6 Objectives in NCFS Charter:
 - a. To recommend priorities for standards development to the Attorney General;
 - b. To review and recommend that the AG endorse guidance identified or developed by subject-matter experts;
 - c. To develop proposed guidance concerning the intersection of forensic science and the courtroom;
 - d. To develop policy recommendations, including a uniform code of professional responsibility and minimum requirements for training, accreditation and/or certification;
 - e. **To consider the recommendations of the National Science and Technology Council's Subcommittee on Forensic Science;**
 - f. To identify and assess the current and future needs of the forensic scientists to strengthen their disciplines and meet growing demands.

National Commission on Forensic Science

- **NCFS Leadership:**

- Co-Chair: Patrick Gallagher, Director, NIST
- Co-Chair: James Cole, Deputy Attorney General, USDOJ
- Vice Chair for DOJ: Nelson Santos, Director, DEA Laboratory
- Vice Chair for NIST: John Butler, Special Assistant to the Director in Forensic Science
- Designated Federal Official: Brette Steele, USDOJ

- **Applications for NCFS:**

- Notice posted in the Federal Register in 2013
- 330+ applications received for the NCFS

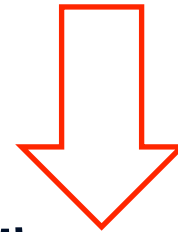
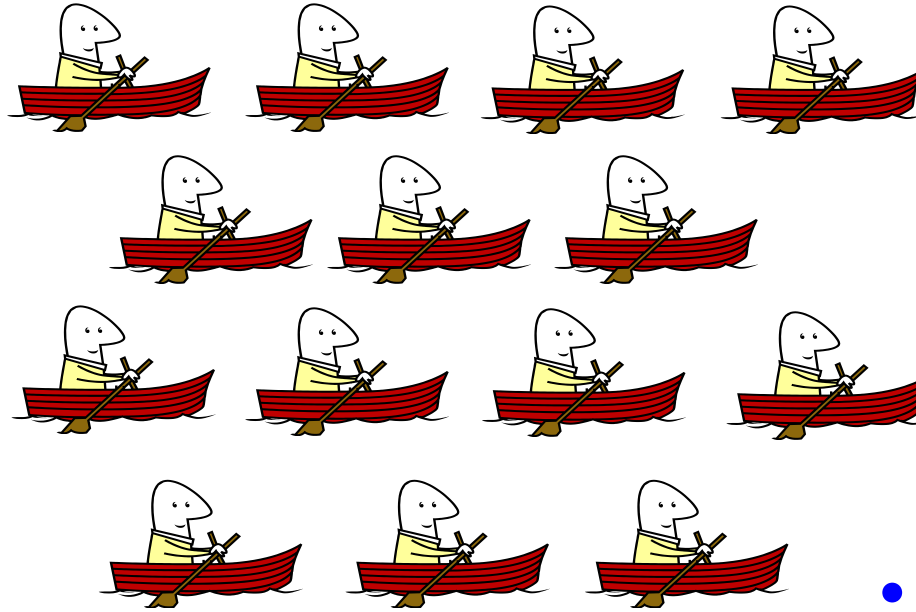
National Commission on Forensic Science

- NCFS membership announced in Jan 2014
 - 30 voting Commissioners
 - 7 ex-officio members
 - (Includes 16 AAFS members)
- NCFS news release announcing Commissioners available at:
 - <http://www.justice.gov/opa/pr/2014/January/14-at-029.html>
- NCFS is a Federal Advisory Committee under DOJ to make policy recommendations to strengthen forensic science

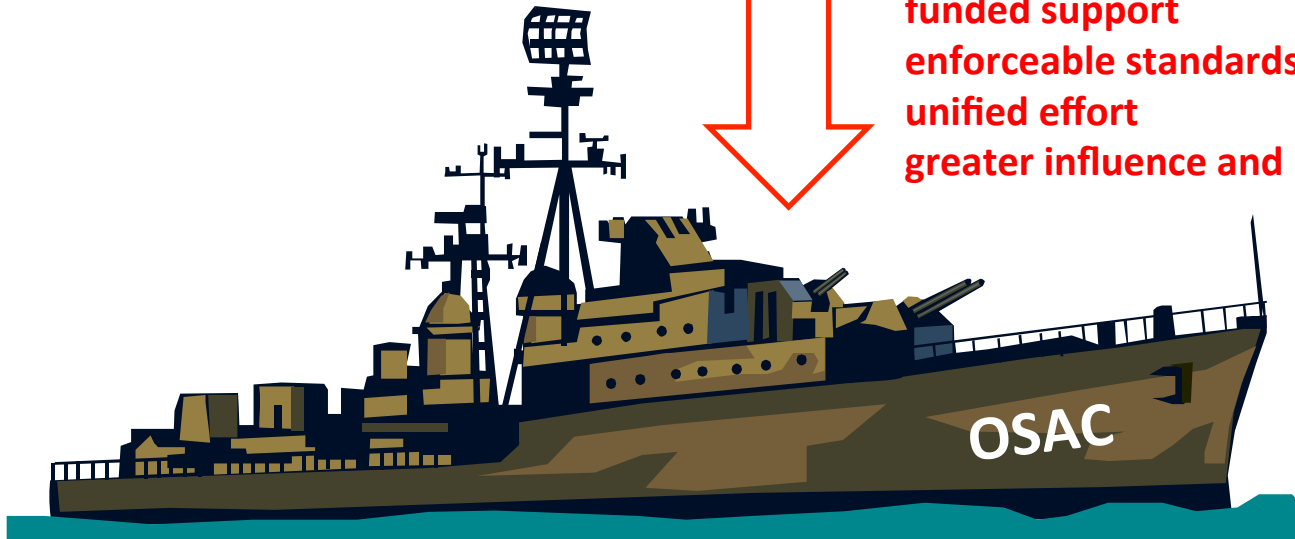
Organization of Scientific Area Committees (OSAC)

- Organizational framework development from 2013 and continuing to evolve
- NIST actively sought public comment (we listen)
 1. June 18, 2013 - meeting with current SWG Chairs
 2. Sep 27 – Nov 26, 2013 – Notice of Inquiry (NOI) published in the Federal Register
 - Received 82 responses and 337 pages of comments
 - Available on NIST website at: www.nist.gov/forensics
 3. Feb 18, 2014 – Open Forum at AAFS Meeting
- OSAC is under NIST guidance and designed for standards development and to improve practice

Individual SWGs vs. Organized Effort



funded support
enforceable standards
unified effort
greater influence and impact



Organization of Scientific Area Committees (OSAC)

Forensic Science Standards Board (FSSB)

Legal Resource
Committee (LRC)

Quality Infrastructure
Committee (QIC)

Human Factors
Committee (HFC)

SAC
Biology/DNA

SAC
Chemistry/
Instrumentation

SAC
Crime Scene/
Death Investigation

SAC
IT/Multimedia

SAC
Physics/Pattern

DNA Analysis Sub1

DNA Analysis Sub2

Wildlife Forensics Sub

Controlled Substances Sub

Fire Debris and Explosives Sub
(lab)

Geological Materials Sub

Gunshot Residue Sub

Materials (Trace) Sub

Toxicology Sub

Anthropology Sub

Blood Stain Pattern Analysis
Sub

Disaster Victim Identification
Sub

Dogs and Sensors Sub

Fire Scene and Explosives
Sub

Medical/Legal Death Invest
Sub

Facial Identification Sub

Imaging Technologies Sub

Speaker Recognition Sub

Friction Ridge Sub

Firearms & Toolmarks
Sub

Footwear
& Tire Tread Sub

Questioned Documents
Sub

SAC = Scientific Area Committee
Sub = Subcommittee

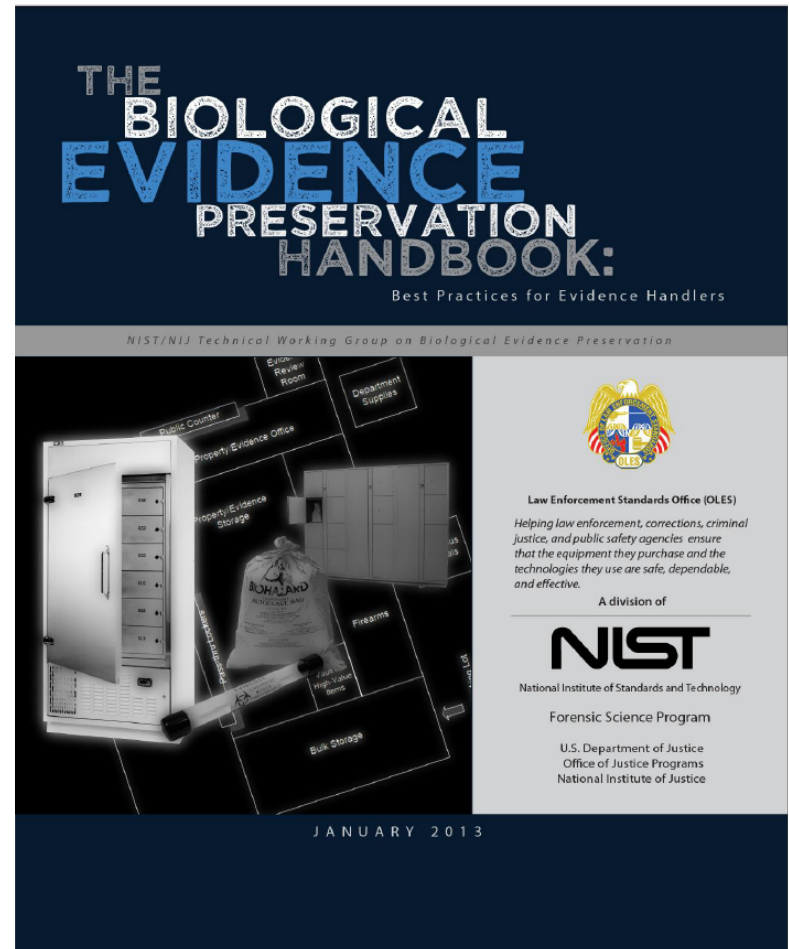
Planned Presentations

April 14 – 17, 2014	Bode West
May 3-8, 2014	ASCLD Symposium
May 5-9, 2014	CAC Spring 2014
May 11-16, 2014	AFTE 2014
May 13-15, 2014	International Crime Scene Investigation Association
May 15-18, 2014	NACDL
May 19-23, 2014	MAAFS
May 19-22, 2014	Bode East
July 28-30, 2014	Green Mountain DNA Conference
Aug. 10-16, 2014	The IAI 2014 Conference
Aug. 31/Sept. 4, 2014	ANZFSS
Sept.19-23, 2014	NAME 2014
Sep. 23-26, 2014	SAFS
Sept. 29/Oct. 2, 2014	International Symposium for Human Identification
Oct. 6-10, 2014	MAFS
Oct. 11-17, 2014	IAFS
Oct. 19-23, 2014	SWAFS
Oct. 19-24, 2014	SOFT
Oct. 20-24, 2014	NWAFS
Nov. 3-6, 2014	NEAFS

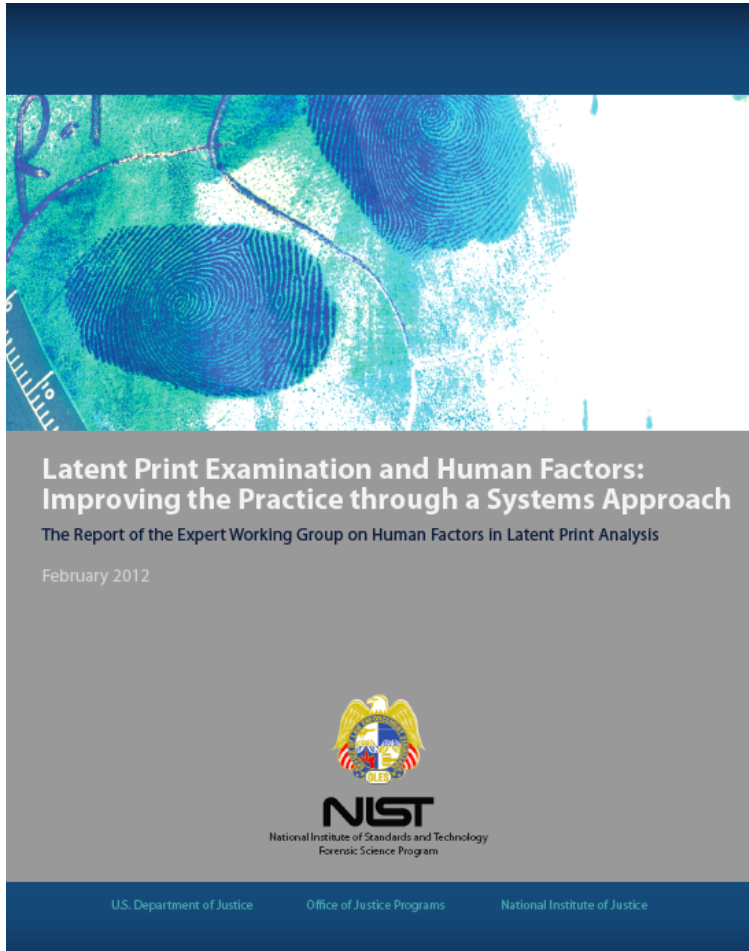
Technical Working Group on Biological Evidence Preservation

• **The Handbook on Biological Evidence Preservation** published January 2013, provides recommendations on:

- Packaging and storage of biological evidence
 - Tracking the evidence
 - Maintaining the chain of custody
 - Practicing biological safety procedures
 - Disposition
- Developing reports that contain recommendations on:
- Legislative issues
 - Increasing technology awareness

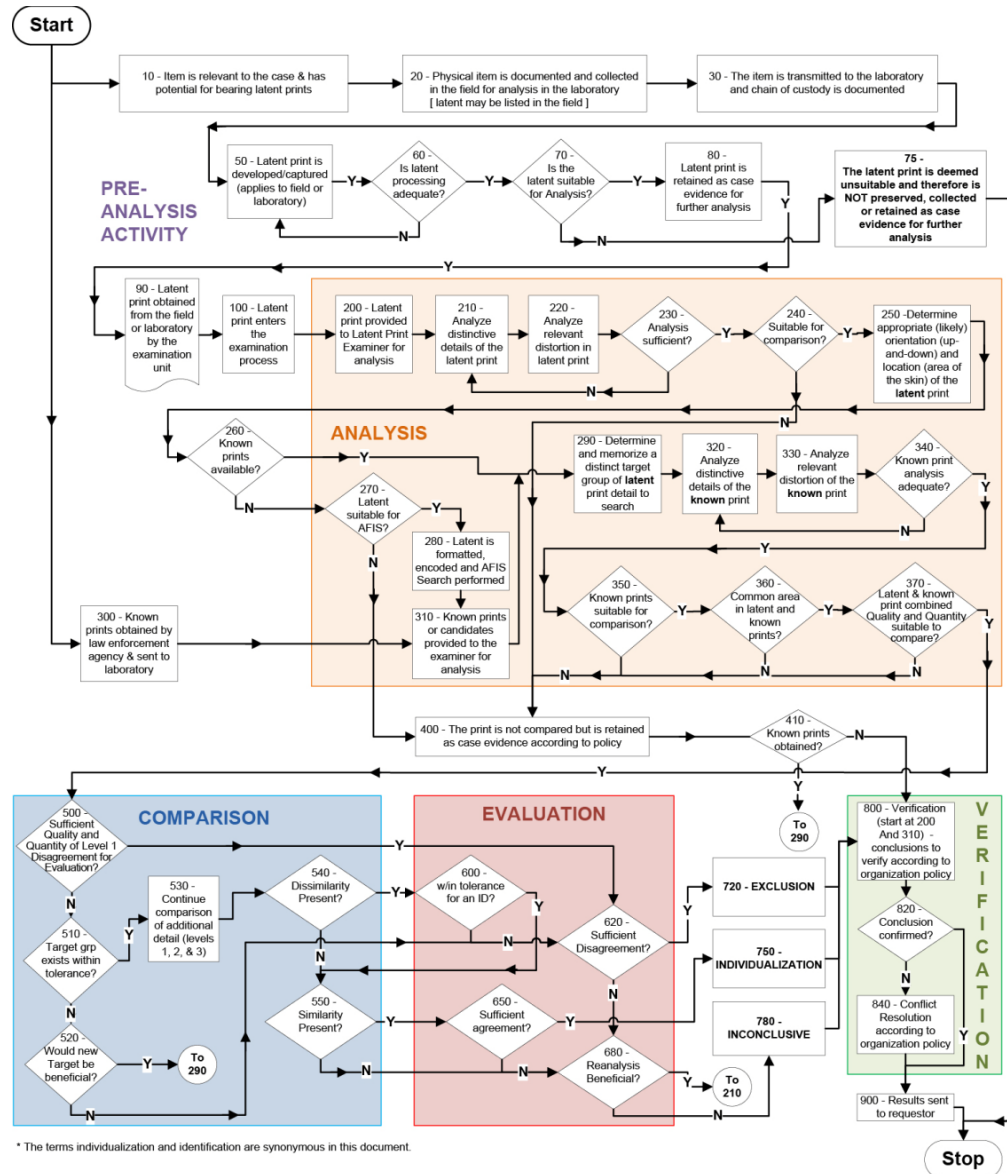


Expert Working Group on Human Factors in Latent Print Analysis

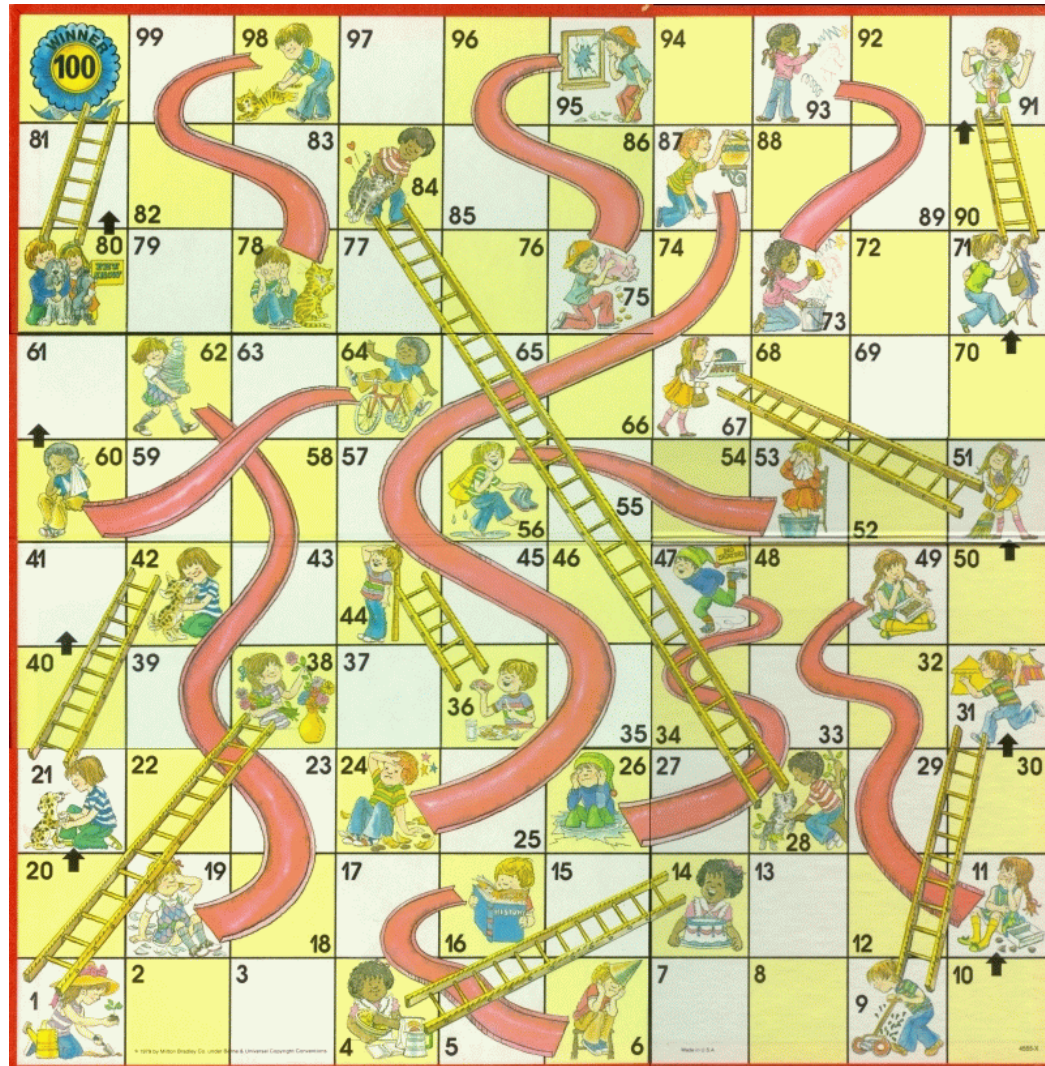


- The Expert Working Group on Human Factors in Latent Print Analysis conducted a scientific assessment of the effects of human factors on forensic latent print analysis and to develop recommendations to reduce the risk of error.
- It provides a comprehensive discussion of how human factors relate to all aspects of latent print examinations including communicating conclusions to all relevant parties through reports and testimony.
- Released Feb 9, 2012
www.nist.gov/oles/

Latent Print Process Map



Latent Print Process Map



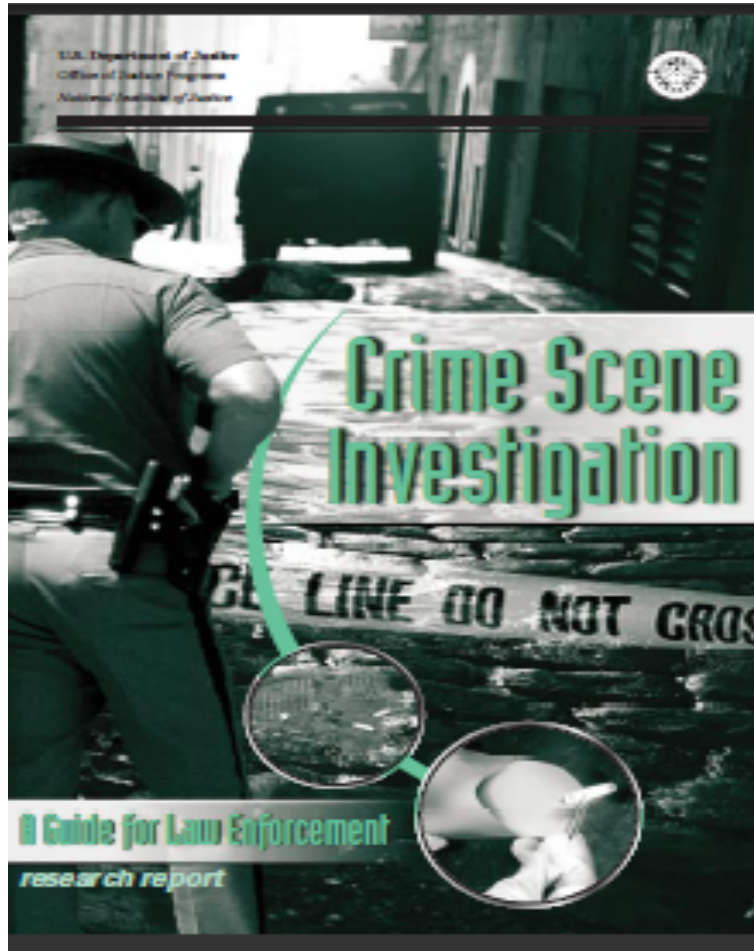
[With permission from Todd Weller]

Updated Forensic Facilities Planning Guide

- NIST OLES partnered with a team of architects, laboratory managers, and consultants to update the NIST/NIJ produced: Forensic Laboratories: Handbook for Facility Planning, Design, Construction.
- Originally published in April 1998.
- **Update Released June 2013**



Updated NIJ Crime Scene Guide

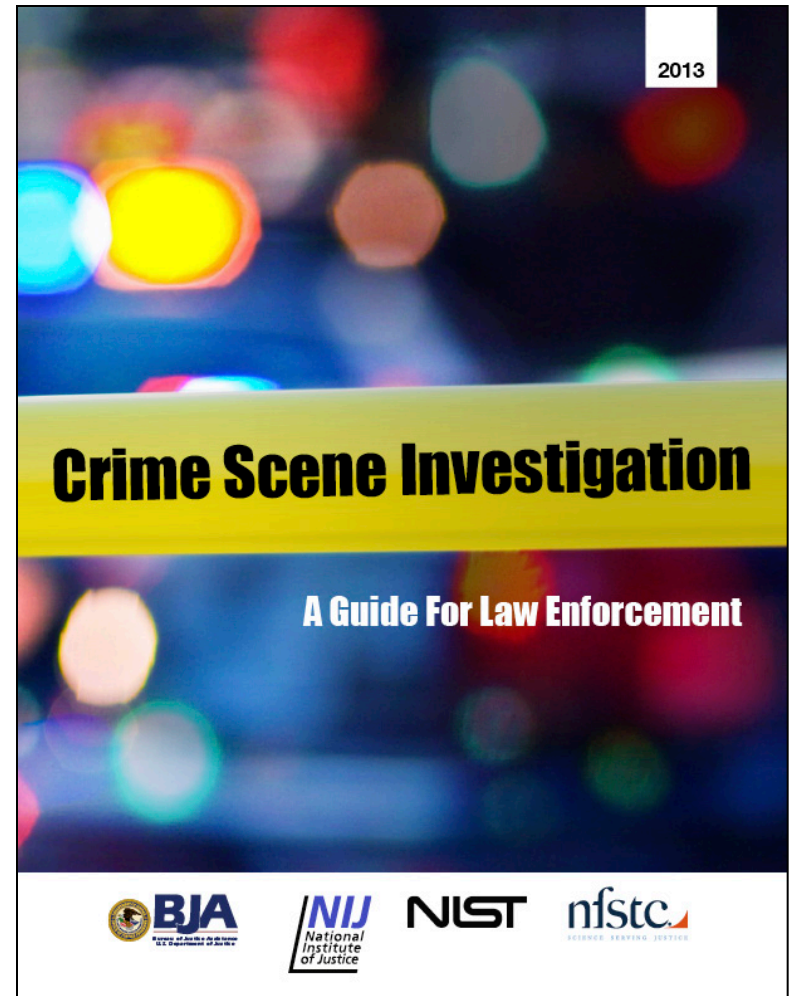


- NIST OLES, NIJ, BJA and NFSTC collaborated to update the NIJ published: Crime Scene Investigation: A Guide for Law Enforcement.
- Originally published in January 2000
- Released:
September 17, 2013

Crime Scene Investigation: Guide for Law Enforcement

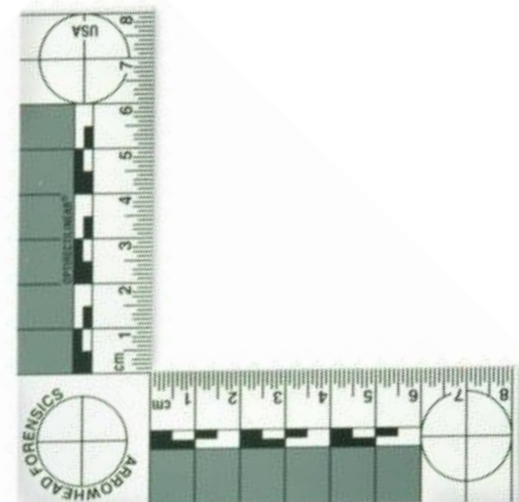
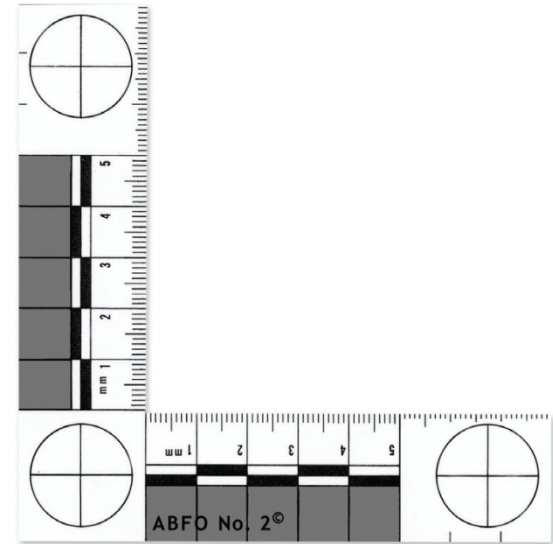
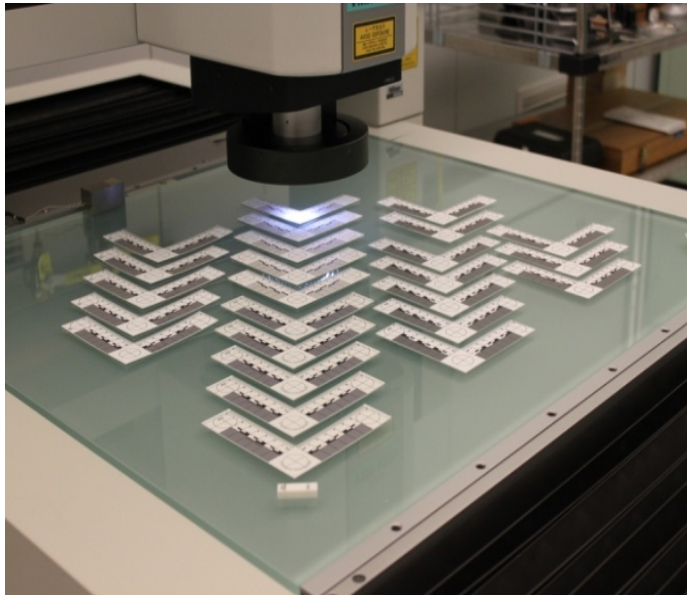
- Arriving at the Scene: Initial Response/ Prioritization of Efforts
- Preliminary Documentation and Evaluation of the Scene
- **Processing the Scene**
- Completing and Recording the Crime Scene Investigation
- Crime Scene Equipment

Principle, Policy,
Procedure, Summary



ABFO #2 Photo Scale Surveillance Testing Report

- Five rulers were purchased from ten distributors to test the accuracy of the ruler against the established tolerances.
- 1988 JFS Article lists measurement specifications
- **Published Report: August 2013**



Working Group on Presenting Forensic Science Evidence Using Quantitative and Qualitative Terms (QQWG)

- **Mission:** To recommend best practices for reporting conclusions of forensic examinations, when expressed using quantitative or qualitative terms.
- **Background:** Forensic science findings are sometimes presented qualitatively and sometimes quantitatively. These include some level of uncertainty. We want to report the findings along with any uncertainty in a fair, transparent, and comprehensible way.
- **Deliverable:** A report with recommendations for forensic scientists, attorneys, and judges on the presentation and comprehension of quantitative and qualitative terminology in the legal system. These recommendations will be useful in standardizing and optimizing the presentation of forensic science evidence to law enforcement and jurors.

Training, Workshops, Symposia, Conferences

- **Measurement Science and Standards in Forensic Handwriting Analysis**
 - Partnered with: AAFS-QD, ASQDE, ABFDE, FBI, NIJ & SWGDOC
 - June 4-5, 2013
- **Emerging Trends in Synthetic Drugs Workshop**
 - Partnered with: DEA
 - April 30 – May 1, 2013

Training, Workshops, Symposia, Conferences

- **DNA Mixture Interpretation Workshop**
 - April 12, 2013 (8 hours)
- **Forensics@NIST 2012 Symposium**
 - November 28-30, 2012
- **Measurement Science and Standards in Forensic Firearms Analysis**
 - Partnered with AFTE & SWGGUN
 - July 10-11, 2012

Save the Date

- **Forensics@NIST 2014 – Symposium
At NIST in Gaithersburg, MD
Dec 3-4, 2014**



Questions?

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www.nist.gov/forensics